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Post Middle Horizon Ceramic Styles in the Lurín Valley of the Central Coast of Peru

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ABSTRACT OF THE DISSERTATION

Post Middle Horizon Ceramic Styles in the Lurín Valley of the Central Coast of Peru

by

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Dr. Thomas C. Patterson, Chairperson

This study is a contribution to the post-Middle Horizon ceramic chronologies for the central coast of Peru in general, and for the Lurín valley in particular. This project contributes to our knowledge of central coast Peruvian ceramics thricely: First, it is a fine-grained stylistic analysis of surface collections from sites in the Lurín valley and its environs from sites which were destroyed by the rapid growth of the city of Lima in the last fifty years; second, it compares the ceramics styles found in the Lurín valley to other published material; and third, it articulates the archeological and ethnohistoric record to address larger questions about socio-cultural evolution of the inhabitants of this central coast valley. The methodology of this analysis is

detailed stylistic and seriation analysis of ceramic collections made in the mid-1960s. A fine-tuned stylistic and seriation ceramic sequence is detailed in chapter 1-4 which is incorporated to other published material in chapter 5-6, and finally the updated ceramic sequence is used to supplement, collaborate, and/or challenge the ethnohistorical record in chapter 7. I conclude that at a local level individual communities were not fundamentally upheaved at certain historical points as some of the ethnohistorical literature suggests. That is to say, large supra-structural changes at various historical points –the presence of the Inca empire at the dawn of the Late Horizon, for example, did not affect every day ceramic production traditions as much as would be implied in the ethnohistorical record. Overwhelming examples of ceramic changes indicate that these are slow, gradual, and local. At any one location throughout the valley, and at any particular time, their local ceramic traditions are reminiscent of the neighboring people's ceramic traditions. These findings suggest a reconsideration on future directions of study for central coast societies post the Middle Horizon.

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Introduction and Thesis Presentation

Introduction

This study is a contribution to the post-Middle Horizon ceramic chronologies for the central coast of Peru in general and for the Lurín valley in particular (Figure 1.1).

For the last ninety years or so archaeologists have been interested in the changing socio-cultural relations of coastal and highlands people in central Peru (Charney 2001; Feltham 2005, 1984, 1983; Kroeber 1926, 1937; MacNeish, Patterson, and Browman 1975; Makowski 2002; Marsteller, Zolotova, and Knudson 2017; Patterson and Lanning 1964; Patterson 1985). Their investigations have typically been cast in the temporal framework proposed initially by Max Uhle at the turn of the last century and modified by John H. Rowe (1960). In this view, periods of cultural unification, *horizons* in his terminology, alternated with *periods* of cultural diversification. These periods are based on the detailed ceramic style seriation of the Ica valley advanced by Menzel (Menzel 1959, 1976), but are often used as proxy for all of Peru (Gaither et al. 2008; Parsons, Hastings, and Matos 1997). The most recent period of cultural unification was the Late Horizon (ca. A.C.E. 1476-1532), which corresponds with the Inca expansion and unification of the Central Andes through conquest and through alliances with already existing societies there. However, it was noted long ago that the Late Horizon archaeological assemblages, in and beyond the Cuzco region, exhibit a great deal of

inter-site diversity as well as intra-site diversity (Feltham 1983; Strong and Corbett 1943).

The Late Intermediate period (ca. A.C.E. 1000-1476) preceded the rapid expansion of Inca influence. The socio-cultural relations of the Late Intermediate period communities and polities were not structured by a single overarching tributary state as seen in the Late Horizon but instead are described as "modest scale [of] socio-political development" in regional areas (Parsons and Hastings 1988, 219; Shimada 1991; Marcone and López-Hurtado 2002). As a result, during the Late Intermediate period there was a greater socio-cultural diversity within and beyond specific regions resulting from the complex disintegration process of earlier tributary or conquest states during the Middle Horizon (ca. A.C.E. 550-1000) and the processes of cultural group formations that emerged afterwards.

The two largest and most important central coast sites around this time are undoubtably the site of Maranga in the Rímac valley and the Pachacamac archeological complex in the Lurín valley. The former, completely engulfed by city of Lima's modern-day encroachment but which was in its zenith during the Middle Horizon. The latter, a monumental coastal site approximately 600 hectares in size and as it is about 17 miles south from Lima, largely spared from the explosive expansion of the capital in the mid-1980s. The term Pachacamac is an Inca (Quechua) name imposed on what had been a deity called Ischma (Rostworowski De Diez Canseco 1999b) —sometimes written

Yschma. Today, Pachacamac is a UNESCO archaeological site which attracts tourist from far and wide. Pachacamac has always attracted foreigners. Of importance and of particular attraction in the past was the oracle and deity which lived there and who gained immense power as the religious head of the Ischma people during the Late Horizon and Late Intermediate period. The oracle was an approximately two-meter-long wooden pole with a representative anthropomorphic double-faced deity at the end. It was likely housed atop the painted temple at the complex (Dulanto 2008). The deity is said to have spoken through mediums, to be able to see both past and future events, and to have power over earthquakes. The oracle was sought out by visiting pilgrims early on and increasingly more so as the sites increased in importance as a religious, ceremonial, political, and economical center after the Early Intermediate Period when the site first becomes permanently occupied.

The sites long recognized importance, proximity to Lima, and excellent preservation has caused it to largely dictate the archaeological narrative of the people living in the Lurín valley. There has been an increasing effort to increase an understanding of the rest of the valley's archeological contributions. The *Lurín Valley Project* directed by Dr. Thomas Patterson in 1966-1970 entailed extensive surveys of central coast drainages. One of the goals of the project was to elucidate the interaction of low-land coastal dwellers with people living in higher elevations on the same drainage. In the Lurín valley, Dr. Patterson's team made extensive surface collections from the approximately three hundred and fifty sites they recorded therein. Patterson's

team collected representative samples of vessel forms, vessel style decorations, and colors from each assemblage they encountered. These collections and the data obtained from the surveys have illuminated the ceramic styles for the Early Horizon (Scheele 1970), the Early Intermediate Period (Patterson 1966; Earle 1972, 1969), and provided material for ceramic styles during the Late Intermediate period in the Lurín (Feltham 1984, 1983). Overall it has advanced and elucidate pre-ceramic and early ceramic occupations in the central coast.

For this study I re-examined the material from the 350 surface collection assemblages made in 1966-1968 in the Lurín Valley for the Lurín Valley Project (Figure 1.2). From the original 350 sites surveyed, 105 sites had ceramic martial dating to the post-Middle Horizon. The site collections ranged from a few potsherds to several hundred pot sherds. Approximately 9,500 ceramics were re-examined of which 6780 sherds with diagnostic features (i.e. rims, bases, handles, or other appendages with decorated surfaces) were recorded, photographed, and numbered c0001-c6780; their surface location was also re-recorded. Where and when appropriate I compare these ceramics to other central coast collections which have been published or which are housed in museum collections. Working from better accepted published typologies I readdress, and at times add detail to, the ceramic typologies for the Lurín Valley sequences for the post Middle-Horizon.

This project has three overarching goals: The first goal consists of the fine-grained stylistic analysis of surface collections from sites in the Lurín valley and its environs made in 1966-68. Most of the sites have been damaged or destroyed by the rapid growth of the city of Lima after a population explosion in the 1980s. This project thus presents data from before the city's' urban expansion and encroachment on their surrounding areas. The goal is to establish a relative fine-grained chronology and to distinguish spatial from temporal differences of the ceramic styles in the valley. Secondly, I look at partial ceramic sequences from these periods in other central coast valleys that have been published in greater or lesser detail. I compare the surface collection to other ceramic sequences at Lurín in relation to those other published ceramic sequences. Thirdly, I articulate archeological and ethnohistoric evidence to see if the ceramics complement each other regarding the socio-political groups that existed post Middle Horizon. This allows investigations into the processes of ethnogenesis, change, and persistence that occurred in the region during the Late Intermediate period, the Late Horizon, and in the early Colonial Period (ca 1000–1580 A.C.E.). The focus on these time periods, in particular the Late Intermediate period, are important as the central coast remains poorly understood, underreported, and understudied for this time (Daggett 1989; Eeckhout and Owens 2008; Feltham 2005; Parsons and Hastings 1988; Shimada 1991; Szpak et al. 2015; Marsteller, Zolotova, and Knudson 2017); an unfortunate commonality shared in the Northern and Southern coasts during this period (e.g. Gaither et al. 2008; Tantaleán 2008).

Ecological zones in the Lurín valley

To understand the inhabitants of the Lurín valley during the Middle Horizon to the early Colonial Period, the geographic distribution of cultural sites along the valley must be understood within the context of the ecological zones of the Lurín, not just chronological ones. First, an overall ecological picture of Peru is warranted.

People in the coastal Andes lived in three major environmental zones running north to south for hundreds of miles in parallel to each other (Quilter 2014); their width is variable. Bordered by the Pacific Ocean to the west is the coastal desert zone. It has a width which ranges from 20 to 100 km depending on the latitude. Inland from the coast, at some points as little as 50 km from it, is where the westward-moving South American continental plate and the eastward-moving Nazca Oceanic plate collide. The Nazca plate under the Pacific Ocean is subducting; as it pushes downward it thrust the South American continental plate ever-upward creating one of the steepest gradients in the world and some of the tallest mountains, the Andes. To the east of the Andean ridge is the tropical forest of the Amazon basin (McEwan 2006). The ecological zone descriptions I provide below focus on the ecological zones in which the ceramic collections were made; ecological zones on the western side of the Andes at less than 3,000 meters above sea level (*masl*, hereafter).

With the exception of the very northern parts of Peru and Ecuador, the entire Peruvian coast is one of the world's richest fishing grounds. This is due to the cold

Humboldt Current which upwells and churns the ocean floors as it nears the shore. The results are massive quantities of sea floor nutrients suspended in stirring tides which support massive microplankton populations. They, in turn, serve as a copious bottom layer to many diverse, abundant food chains ultimately exploited by humans (Koepcke 1961; Schweigger 1964). The abundance in the sea contrasts with the paucity in the coastal desert zone. This is true for the central coast. Their juxtaposition: geographically: meters in proximity; ecologically, leagues apart.

The Lurín river valley, one of several drainages in Peru's central coast, is in one the worlds driest non-polar deserts. Its aridity too is due to a north-flowing cool Humboldt Current which whisks away coastal precipitation and the rain shadow effect of the Andes which blocks moisture and water from eastern Amazonian air (Patterson and Lanning 1968; Rundel et al. 1991). Very little, if any, rainfall is measured in this area during most of the year (Schweigger 1964). The two main sources of water in the Peruvian coast are: (1) during the austral summer, between November and April, a small amount of precipitation from the Amazon basin is able to overcome the rain shadow effect, and as a consequence it precipitates on the western side of the Andean cordillera; and (2) during the austral winter, between August and November, when a saturated layer of mist is blown inland by winds (Beresford-Jones et al. 2015).

The Lurín river gathers most of its water during the austral summer where in the highlands the water precipitates and accumulates in increasing quantity as it travels

downstream through rocky gorges flowing towards the river delta, passing the desert coastal plains, towards the west. During this rainy season the flooding water deposited silts in the river flood zones enriching the soil in the valley bottom and the delta fan. The valley bottom, like the lower slopes, grassland, and scarce woodlands in the past, was irrigated and terraced. In the past there were more trees in these low-valley areas (Rick 1988). Today, with high population concentrations in the Lurín valley, substantial amounts of water is syphoned for local irrigation throughout the valley; at earlier times the water must have had more volume and the river must have flooded more frequently in the lowlands (Lanning 1967, 9–11).

From the coast traveling eastward, much of the inter-valley areas are made up of mesquites, barren hills, sand flats, and sand dunes sometimes referred to as *médanos*. During the austral winter, where the saturated layer of moisture gets blown in from the sea and is intercepted by the land at roughly 300 to 1000 *masl,* precipitation accumulates as cold morning fog (Beresford-Jones et al. 2015). In such areas of frequent winter fogs, grasses and bushes manage to find enough moisture from the air to survive. These areas of vegetations "are known as *lomas*" (Lanning 1967, 10; Rundel et al. 1991) and have been described as "oasis born of mists" (Beresford-Jones et al. 2015, 197). Lomas are delineated vegetation communities of some 850 or so species of plants, most of which are categorized as annuals, perennials, and woody plants (Dillon et al. 2011). *Lomas* sustain much fauna including mammals such as foxes, Peruvian wild cats and guanacos, reptiles such as geckos, snakes and lizards, birds, and amphibians

such as frogs (Zeballos et al. 2000). No assemblage analyzed for this dissertation was higher than ca. 3000 *masl*. Beyond the *lomas* are highland valley macrozones (Rick 1988); these include a patchwork of ecological influences which shape the environs up to the plateaus, *puna* zone, and periglacial zones.

Earle (1972) suggests that the Central valleys be divided into three overall topographical zones: (1) the lowlands —in the Lurín valley, at the river's elevation, these correspond to roughly to 0-18 km distance from the ocean including the river flood zone and valley bottom where the elevation is ca. 0-500 *masl*; (2) the midvalley —between the lowlands and highlands, approximately 18-30 km distance from the ocean including the lower slopes and q*uebradas* where the elevation is ca. 500-2,500 *masl*; and (3) the highlands —approximately 30-35 km distance (or more) away from the ocean and include the highland valley macrozones and *puna*. The elevation there is above ca. 2,500 *masl*.

In Earle's suggested scheme, which echoed Murra's (1972, 1985) vertical archipelago model, not all zones have the same economic opportunities. The lowlands, for instance, get almost no precipitation throughout the year but have rich alluvial soil while the midlands are where the valleys natural *lomas* occur and the highlands are places of where ample fields of grass allowed for ungulate grazing. These ecological divisions, or similar ones, have been used by other authors working in the central coast (e.g. Marcone and López-Hurtado 2002; Segura and Habetler 2008) to explore a sites

socio-political interaction with other sites in the same valleys. In the Rímac valley for example, Segura and Habetler (2008, 4) note that:

> *"As in many other coastal valleys, the middle section of the Rímac Valley was economically very important for its agricultural products (e.g. maize, coca, and aji), hydraulic facilities (the main canals have their intakes in this section), and strategic location as nodes for coastal highland communication."*

Because these distinct ecological regions have different economic opportunities and costs associated with them, it is important to keep them in mind when discussing the distribution of sites along the valleys of Peru; indeed, they become important in my conclusions regarding distribution of sites and site clustering (Chapter 5 and 6).

A three-part valley division has ethnohistorical recognition as well. Though specific elevations and distances from the coast are drainage specific, we know from ethnohistorical sources that indigenous people divided the lower valleys into at least three ecological zones, the *chala*, *chaupiyunga*, and *quishua* zone (Netherly 1988). The *chala* zone is a cool, moist, coastal zone often covered by clouds. The *chaupiyunga* is the zone above the *chala*, it goes to about 2,400 *masl* "and is frequently considered one [ecological] unit" (Netherly 1988, 263). The 16th century description for the *chaupiyunga* was recorded by Vazquez de Espinoza in 1630: it was the land "between hot and cold" (Vázquez de Espinoza 1948 [1630], as cited by Netherly 1988:264); it lay above the *chala* and below the *quishua* zone —the lowland sierra mountainous region. The *chaupiyunga* ecological zone was highly prized for its fertile soil. Rights to its access

often fueled conflict between coastal and highland polities (Rostworowski De Diez Canseco 1975); an idea we will return to in chapter seven.

Thesis presentation

This thesis has three parts. Part one includes chapters one through four. Each chapter, broadly speaking, encompasses the ceramic materials in the Lurín valley for one archaeological time unit: The Middle Horizon, the Late Intermediate Period, the Late Horizon, and the Colonial Period. These chapters can be described as "summary" chapters; their content is drawn from the large ceramic collections examined and other published material from cataloged museum collections. These chapters emphasize the pottery styles, the design features of each pottery style, and the assemblage context in which the pottery styles were found. The materials are compared to other published collections in the literature from the Peruvian central coast for periods post Middle Horizon.

Part two is composed of three chapters, chapters five, six, and seven. These chapters are the most interesting. Chapters five and six are a detailed analysis of the distribution of ceramic styles, ceramic vessel forms, ceramic colors, and ceramic pastes from the collections analyzed. Their summary/conclusion is an interpretive analysis of the ceramic styles presented in chapters one through four. Chapter seven summarizes and concludes chapter five and chapter six. It attempts to incorporate some ethnohistoric data to see how well the archeology collaborates the written record and

vis-a-versa. The work in the second part is more interpretive than just the presentation of the material as laid out in the first part. In part two I review and reinterpret the cultural landscape of people living in the Lurín valley post Middle Horizon focusing on the Late Intermediate period along the dimensions and characteristics aforementioned. The first and second part of the dissertation are informed by the third part.

Part three includes a detailed summary of the assemblages examined and it is presented in the form of appendices and illustrative plates. Five appendices illuminate the assemblages analyzed, the sites in which the assemblages where collected, and specify how the assemblages are described. Appendix A details descriptive characteristics of the jars analyzed; particularly their qualitative and quantitative attributes. Appendix B and Appendix C do the same for ollas and bowls respectively. In Appendix D there is information on each site analyzed for this study. Appendix D includes each site's location in the Lurín, field-descriptions, and summary synthesizes of field notes taken during the Lurín Valley Project. Appendix E explains the color categories used in describing the ceramics throughout the dissertation. It details the modifications implemented to Maerz and Paul's (1950) *A Color Dictionary* as a means to standardize color categories for analytical purposes. Lastly, Appendix F describes the paste and clay matrix attributes of each of the ceramics analyzed. That is to say, the makeup of the ceramic clay itself is described and illustrated there. Lastly, there are 106 illustrative plates showing the range of nearly all sites analyzed.

Thesis outline

In this introduction I have presented the topic of this dissertation, given some background to the purpose area of study, and described the temporal dimensions of which I will follow in my analysis. I have also described the three ecological zones in which Peruvian valleys are most often divided into; ecological zones which will help situate the ceramic distribution of assemblages in later chapters. The rest of the dissertation is outlined below by chapter divisions.

In chapter one I present the various partial ceramic sequences known for the central coast during the Middle Horizon. I present the ceramic styles associated with the Middle Horizon from the assemblages examined in the Lurín valley belonging to this period. Here I looked at the assemblages by dividing the Middle Horizon into four sub-periods, Epoch 1-4. Ceramic styles, vessel forms, and vessel decorations are outlined for each sub-period.

In chapter two I discuss the archaeological understanding of the Lurín valley during the Late Intermediate period. I subdivide the Late Intermediate period into three epochs. I present eight different ceramic assemblages from the Late Intermediate period splitting each to its corresponding temporal sub-divisions. Ceramic styles, vessel forms, and vessel decorations are outlined for each sub-period here as well.

In chapter three I examine the Late Horizon ceramic assemblages in the Lurín valley. The chapter is composed of three sections: In the first section I describe the

Lurín-Inca style ceramics and their distribution throughout the valley. In the second I describe their contemporary pottery styles associated with the Lurín-Inca ceramics at those specific sites.

In chapter four I discuss the archaeological understanding of the Lurín valley during the Colonial Period. In this chapter I present two ceramic styles that are telltale diagnostic of the Colonial Period.

In chapter five I explore large-scale ceramic patterning in the assemblages analyzed. I look particularly at the various ceramic styles recognized in Chapter 1-4 as the foundation for this analysis. I look for geographic and temporal patterns of the ceramic styles during the Middle Horizon, the Late Intermediate Period, the Late Horizon, and the Colonial Period. I argue that these broad stylistic patterns can represent a macro-political understanding of people in the Lurín valley during these times. Ultimately I argue three points: first, that in time there is increasingly "messy" or increasingly "pluralistic" sites in the valley; second, there is an explosion of large and complex sites which begins in the Late Intermediate Period; and third, that the loci or focus of importance in the valley changes from the low-valley during the Middle Horizon to the high-valley by the Colonial Period.

If chapter five is conceptualized as a coarse, macro-political analysis, chapter six can be imagined as a finer, micro-political exploration from a detailed analysis of specific ceramic forms, colors, and clay pastes analyzed. In chapter six I look for geographic and

spatial patterns in vessel form distribution, sherd color distribution, and clay matrix distribution. Here I note the spatial patterns of these characteristics and conclude that there were no sharp or strongly delineated "boundary" between low-valley inhabitants and high-valley inhabitants. The spatial patterns in the assemblages suggests a "be like your immediate neighbors" pattern as many of the assemblages resemble those assemblages immediately adjacent to them. Similarities between distant assemblages far away from each other are not as pronounced.

Lastly, in chapter seven I summarize the conclusions made from Chapter 5 and Chapter 6. I reflect on the conclusions made from the ceramic record and compare it to some of the better-known ethnographic ideas about the socio-political structure of central coast inhabitants made in the early Colonial Period. In this chapter I reflect on some successful points made in the overall thesis and on some of its shortcomings. I finish chapter seven by relaying possible future directions as continuations for the work presented here.

Figure 1. 1. Map of Peru and the Central Coast river valleys.

Figure 1. 2. Map of all sites recorded during the Lurin Valley Project.

Chapter 1

CERAMIC STYLES IN THE LURÍN VALLEY DURING THE MIDDLE HORIZON

Overview

In the central coast of Peru the Middle Horizon is marked by the widespread distribution of Huari and Pachacamac influenced ceramics (Rowe 1960). These are best understood in their relation to other styles at the Ica valley where Menzel argued that the Middle Horizon starts at the beginning of Nazca Phase 9 and ends with the Chulpaca A Phase of the Ica Style (Menzel 1964, 2). Menzel (1958) originally discerned a four-stage sequence of ceramics seriation which she enumerated Epoch 1 through Epoch 4. Later, Menzel (1964) sub-divided Epoch 1 into two parts: Epoch 1A and Epoch 1B. Similarly, she also sub-divided Epoch 2 into two parts: Epoch 2A and Epoch 2B. Patterson (1966, 1962) also suggested that Middle Horizon Epoch 1 and Epoch 2 could be divided into early and late phases each. They both suggest the epochs could be further subdivided, at some future date, by more careful analysis of the ceramic decorations associated within them. The end of the Middle Horizon is marked by the absence of new Huari influenced ceramics styles; this coincides with the abandonment of new architectural construction at Huari in the Ayacucho basin —the Huari heartland. The Middle Horizon dates approximately from 550 A.C.E. to about 1100 A.C.E.

The primary goals of this chapter are twofold: 1) to introduce the jar, olla, and bowl forms observed at various sites for this project. Where possible I add detailed

descriptions of the ceramic vessel forms found at various sites associated with those particular ceramic styles; and 2) I describe the ceramic styles in the Lurín valley associated with each Middle Horizon epoch. I describe the sherds analyzed and illustrate examples of them. I include other published material when appropriate.

Vessel types: Jars, Bowls, and Ollas

Where and when possible, I try to use already published nomenclature for specific ceramic forms. Such terminology can work great with well-established shapes like Rowe's "aryballo" or "double spouted bottles." It works less well with less iconic ceramic forms. In fact, there are problems with conflicting, differing, changing, overlapping, and the application of certain nomenclature for similar vessel forms throughout the literature. There is in fact very little consensus on what and how vessel forms are discussed in academic journals. As a consequence, I have tried to standardize the nomenclature of the vessel forms I have observed. I broadly define three vessel forms and identify their observed differences. The three forms are jars, ollas, and bowls.

Jars are the most common vessel type in all assemblages. Jars are enclosed vessels with necks. Careful and detailed differences in neck shape, thickness, length, and neck-to-body angles allow for the differentiations of seventy-one (71) forms; their cross-cut profiles are illustrated in Figure Appendix A.1. Some of which have previously been published under different names presented here (Discussed in Appendix A).

Qualitative and quantitative differences between jar forms are summarized in Appendix A. Agglomerated jar diameter frequencies are illustrated in Figure Appendix A.2, and agglomerated jar thickness frequencies are illustrated in Figure Appendix A.3.

Ollas are neckless jars. Based on differences in rim shapes there are thirteen different olla forms. Qualitative and quantitative differences between olla forms are summarized in Appendix B and illustrated in Figure Appendix B.1. Agglomerated olla diameter frequencies are illustrated in Figure Appendix B.2 while agglomerated olla thickness frequencies are illustrated in Figure Appendix B.3.

Bowls are ceramic vessels that, when observed from the top, have an unimpeded view of the interior and bottom of the vessel. Based on rim profile there are at least twenty-four different bowl forms. Qualitative and quantitative differences between bowl forms are summarized in Appendix C, their rim profiles are illustrated in Figure Appendix C.1. Agglomerated bowl diameters frequencies are illustrated in Figure Appendix C.2, while agglomerated bowl thickness frequencies are illustrated in Figure Appendix C.3.

Middle Horizon Ceramic styles in the Lurín valley

Below I describe the Middle Horizon styles in the Lurín valley for each epoch. I also describe the vessel forms decorated in those styles, their corresponding sites, and the clay matrix used in their manufacture.

Middle Horizon Epoch 1

Lima pottery style

Lima pottery style gets its name from the work of Patterson (1966) who proposed the revision of the name "Lima" to describe the pottery found in the central Peruvian coast during the Early Intermediate Period and Middle Horizon. He was able to identify nine phases of the style which he enumerated Phase 1 though Phase 9. Dunn (1979) built on Patterson's work; he did substantial work identifying Lima Pottery Style Phase 9 in the Lurín valley. More recently archaeologist are more confidently working with a coarser Early-Middle-Late phase ceramic sequence based on Patterson's initial nine-phase work —the details of which are still being worked out and whose overall synthesis is lacking (Quilter 2014, 182). What is apparent however is that the Lima pottery style followed the Miramar style in the Ancón region and in the lower Chillón valley (Patterson 1966). Lima pottery style Phase 9 is correlated to Middle Horizon Epoch 1A; it had been called "Proto-Lima" by Kroeber(1926; 1954) and Gayton (1927), "Cajamarquilla" by D'Harcourt (1922), "Early Lima" by Strong and Corbett(1943), and "Maranga" by Stumer (1953) and Jijón y Caamaño (1949).

Decorated pottery of the Lima Phase 9 ceramics is found at seven sites I analyzed in the Lurín valley: PV48-2b, 32, 34, 93, 193, 236, and 255. Site PV48-24 also seems to be a late Lima Phase site (Abbott 1963). In addition, Lima Phase 9 style ceramics are found at Pachacamac (PV48-1) —in the Plaza of the pilgrims (Shimada et al. 2004) and at

Pyramid-with-ramp No°3 (Eeckhout 1999b). The Lima Phase 9 styles is not geographically restricted to any one part of the Lurín valley. In fact, Lima Phase 9 style ceramics were present at sites in several different elevations. These include sites: PV48-1, 2b, 193, 236, and 255 —all of which are in the lowlands. Lima Phase 9 style sherds are also found at sites PV48-16, 32, 34, and 93, which are mid-valley and considered in the midlands (Map 1.1).

To identify Lima Phase 9 ceramics, I looked at decorated pottery from the surface collections recovered in the Lurín Valley project. By decorated pottery I mean to say sherds which have painted motifs recognizable as Lima Phase 9. This excludes most undecorated "Brownware" or "terracotta ware" sherds which might correspond to Lima Phase 9 assemblages but based on outward appearance alone are difficult to place into this category with confidence. One exception is worth mentioning: Kroeber (1954, Fig.39, 64-66) illustrates and describes a "heavy sherd" [thick olla] rim sherd with two rounded "ridges or relief molding some 20 to 25 mm wide and 7 to 8 mm high." Based on his description of the sherd and its "brick orange" color, it very much seems to resemble the decorations of sherd c3840 found in site PV48-16 (a sherd from an olla form "OO," see Appendix C). Other than Kroeber's sherd ridges decorating the inner walls of the form, while c3840 decorate the exterior walls, the two seem very similar (Figure 2.1.l). If we include sherd c3840 as possibly belonging to a Lima Phase 9 assemblage, then the site of PV48-16 must also be added to the sites in the Lurín valley having Lima Pottery Phase 9 style.

Outside of the Lurín valley sites with late Lima culture ceramics are reported from the Chancay through the Rímac valley; most, but not all of the sites, from low-land elevations. Patterson (1966) reports Lima Phase 9 ceramics at Huaca Juliana in the lower part of the Rímac valley. Kroeber (1954) describes Lima materials at Maranga; as does Sullca et al. (2015) in Huaca Potosi; as Rosales (1999) and Llanos (2001) at Cajamarquilla; and as does Fulle (2012) at the highland sites of Chaclla and Collata. Huaca Trujillo also has Lima style ceramics. This is not a surprise perhaps as the site of Maranga, Earle (1972)proposed was the heartland of a "state-leveled" entity for the Lima Culture. The possibility of its center at Chillón and Ancón cannot be ruled out however as many ceramics in early Lima Phase sites are recognized therein (Córdova-Conza 2003; Dillehay 1976; Patterson 1966, 1962). There is little Lima Phase 9 ceramic evidence in the valleys south of Lurín. In southern valleys there have been, however, Lima styled-like textiles reported, but rarely any Lima ceramics (see Falcón and Pozzi-Escot 2004).

Ceramics in Lima Phase 9 style are a cultural continuation of earlier Lima style ceramics in vessel forms and have similarities in decorations. Patterson identifies at least ten different ceramic forms in this style (Patterson 1966, 77–78, Fig.21–22, Plt.8). These include two bowl forms, one small and one large, with rounded bottoms. Other forms include an olla that is moderately tall, has concave-curved flaring neck, and a wide constricted mouth. Five jar forms are represented in Lima Phase 9 ceramics. These include vessels with straight flaring, thick walls and rounded lips, straight flaring, thin

walled, flattened, or rounded lip, or tall, concave-curved in-slanting neck and rounded lips. The jars range in size from small to large dimeters at their openings.

The color used for decorating Lima Phase 9 vessel forms are variations of black, white, and red pigments (Lumbreras 1974). Black is the principal pigment and design color for this style; it is used to outline one side of narrow white bands (or off-white or cream-colored) next to the thicker black pigment on a red or light cream-colored background. The pigment is usually thick and evenly applied, except when it is used as a slip color when it appears grayish in color (Patterson 1966, 78, Plt.8 and Plt.9). Unlike the preceding Lima Phase 8 ceramics, black pigment is used less often during Phase 9. The red pigment used for decoration varies in color "from brown orange to a dark brownish red" (Patterson 1966, 78). Red pigments are used as slip color and are sometimes outlined with narrower black or white lines. White pigments vary from white to cream-colored white, and off-white. This pigment is usually used to outline designs painted in black, to outline wide red painted bands, and to flank painted black lines (Patterson 1966, 79–80).

Decorations are usually on the outer body surfaces of the vessel. However, there were few rim sherds recovered so the possibility of having decorated necks cannot be omitted. Black and white bands are geometric (Figure 2.1.a,c,g), curvilinear (Figure 2.1.d,h), or semicircular (Figure 2.1.e,k). Other decorated motifs include upside-down triangles, "diamond"-shaped figures (Figure 2.1.a), concentric bands (Figure

2.1.g), parallel circumferential black lines (Figure 2.1.e), chevrons (Figure 2.1.i), and differently sized bans with differently painted outlines (Figure 2.1.b,f).

The majority of the samples of Lima Phase 9 ceramics recovered at Lurín were manufactures using *Paste J* (see Appendix F). However, there are Lima Phase 9 ceramics made from *Paste D* and *Paste I* also. These pastes have a low concentration of inclusions (from 15 to 25 percent) which range from small to grain size, and are mostly white quartz sand, but also have small, angular dark particles in the well-mixed matrix. The overall colors of the pastes are of a slight orange complexion (Appendix F).

Nievería style

Nievería style pottery derives its name from the Nievería cemetery twenty-two kilometers inland on the north bank of the Rímac River. It is in close proximity to the larger site of Cajamarquilla. At Nievería, sherds in this style are found in the same stratigraphic layer as Lima Phase 9 ceramics suggesting a close temporal and cultural relationship between the two. It is perhaps not surprising then that Nievería style is also referred to as "Lima Terminal" (Goldhausen 2001) —indicating a cultural continuations of preceding Lima styles which, according to Menzel, had innovative fusions "of both local and foreign inspiration" —from the Nazca valley, the highlands (Menzel 1964), and Northern coastal polities (Knobloch 1991). Nievería forms are illustrated by Stumer (1958, Fig.3-10, 1959, Fig.1-5), Gayton (1927, Plt.91a, Plt.93j-l, Plt.94e-i, Plt.95f, and Plt.96g), and D'Harcourt (1922, Plt.III, Plt.IV1-3, Plt.V2-7, and Plt.VII1-4). There is

confusion regarding the validity of this style as separate from Lima style. I have the impression that they are ornate late Lima styled ceramics found in the central coast.

Nievería ceramics are not part of any assemblage I analyzed. However, they possibly show up at Pachacamac (PV48-1) in the Lurín valley (Uhle 1991, 109, Plt.5–Fig.5, 6a-b, 8, 10, Fig.80; Segura and Shimada 2010; Franco and Paredes 2001). They also seem to appear in Catalina Huaca (Vista Alegre), and San Marcos Huaca in the Rímac valley (Jaime 1999).

Middle Horizon Epoch 2

Pachacamac style

Ceramic in Pachacamac style were first reported by Uhle (1991) —he suggested them to belong to an "epigone period." The style was re-named by Menzel (1964) based mainly on the collections made by Uhle in the Lurín valley at Pachacamac and in the Rímac Valley (Gayton 1927). Menzel also relied on other published illustrations for identifying the Pachacamac ceramic style, particularly from Schmidt (1929) who published for the Ethnological Museum in Berlin, and Stumer (1958) who published for *La Revista del Museo National* of Lima, Peru. Consequently, Menzel unfortunately relied heavily on many un-provenienced ceramics. Nevertheless, she argued that two sub-phases of the style can be recognized: Pachacamac Phase A and Pachacamac Phase B. There is greater diversity in the Pachacamac Phase B style ceramic decorations than in the preceding Phase A (Menzel 1964, 56).

There are no Pachacamac ceramics in the surface collections I analyzed. However, Pachacamac ceramic style are represented at the site of Pachacamac (PV48-1) (Uhle 1991, Plt.iv-Fig.4); Their presence is rare in the rest of the valley but it is also found in neighboring valleys. In the Rímac valley D'Harcourt (1922, Plt.iv-Fig.5) illustrates examples of Pachacamac style at Cajamarquilla, Gayton (1927) at Nievería. The style is also found at Ancón where Strong (1925) calls virtually identical pieces as "Middle Ancón I" ceramics. Patterson (1962) re-analyzed the Ancón collection dividing Middle Horizon Epoch 2 into two components noting the similarities between slow changing forms and similarities of styles. The similarity between all these was so obvious that Menzel (1964, 53), when defining the Pachacamac style, wrote: "some of the pottery found in the Rímac Valley and at Ancón is so much like that of Pachacamac that it is included as part of the Pachacamac style proper."

The Pachacamac style carries over some vessel shapes and characteristics from its supposedly preceding Nievería style. It also borrows stylistic elements and thematic similarities from the south. Particularly so for ceramics found in the Nazca drainage which have been attributed to the Middle Horizon Epoch 1B Robles Moqo style and the Epoch 2A Atarco ceramic style which followed Robles Moqo. For example the continuation of thematic similarities is apparent when comparing the "mythical feline" in Atarco style from the Nazca Drainage (Menzel 1964, Plt. IV, Fig.11), to the later derived "Pachacamac griffin" found in the Lurín valley (Shimada 1991, XXVI, Fig.2). Pachacamac style also borrows traits from the central highlands as well: in Viñaque style

decorations in particular which are also associated with Middle Horizon Epoch 2A and Epoch 2B (Menzel 1964, 55–57). Pachacamac Ceramic Style Phase A also includes new imagery sometimes on modeled vessels: the "mythical head of a feline or eagle, a non-mythical human head, or full bodied modeled representations of sea animals such as porpoises, mythical fishes with feline heads, and large shells" become frequent vessel forms (Menzel 1964, 57; see Uhle 1991, [1903], Plt.5-Fig.9).

The most iconic Pachacamac Style identifier is Menzel's "front-faced deity" or "male deity," represented in the central coast as a local, yet recognizable, derivation of the principal mythical figure at the Gateway of the Sun at Tiahuanaco. The figure is often accompanied by "attendants" or "angels" which when viewed sideways these are winged-anthropomorphic figures. (Menzel 1964, 19–21, and Plt.IV-V). These full-bodied figures with profile head are initially depicted carrying a serpent as a staff (Uhle 1991, [1903], 24, Fig.10-13), later a zig-zag serpent-like staff (Menzel 1964, 109, Fig.10a), and later still a straight staff (Schmidt 1929, 282, Fig.2).

The second most iconic Pachacamac style identifiers are the numerous representations of griffins. The "Pachacamac griffin," a hallmark of Pachacamac Style both during Phase A and Phase B, was so named by Menzel (1976). In Phase B, the feline-headed representation preferred during Phase A, is phased out in favor of an eagle-headed figure. It is temporally unclear when, but sometime during the latter part

of the Pachacamac Style Phase B, the griffin is further modified: it is simplified, drawn with less detail, less decorated, more geometrical, increasingly abstract.

The color palate used during both phases include whites, blacks, and off-hue reds. Whites come in a range of colors including egg-shell white, to cream/yellow white. The blacks are usually dark, thickly applied, and used for the outlining of basic shapes. Sometimes black colors are used to fill in geometric spaces as well. The red colors range from dark purples and marrons to brightly colored dark reds.

Common Pachacamac Phase A vessel forms include: Spouted bottles —both double and single spout bottles —spout and bridge bottles, spout and modeled figure bottles, double chambered spout bottles, and single spout bottles. Other ceramic forms comprise deep dishes, tumblers, flask, and variously sized bowls. These forms continued to be used during Pachacamac Phase B remaining unchanged in overall shape but differing slightly in the proportions of their elements. For example, molded double spout bottles with thin ovoid bridge connecting the two long conical spouts remain common. They are often painted in as a feline head (Schmidt 1929, 276–Fig.1, 276–Fig.4, 277–Fig.4), bird head (Schmidt 1929, 278–Fig.3), or human head (Schmidt 1929, 278–Fig.4). Single-spout bottles, both bridged and non-bridged, have these same decorations on the top half of their bodies (e.g. Schmidt 1929, 282–Fig.1, 279–Fig.3) and other spouted bottles have modeled heads at the base of their spout (e.g. Schmidt 1929, 280-Fig.3,4). Other forms in abundance during these phases include face-neck

jars and jars with “anthropomorphic body features” which include modeled arms and legs on the front of the body of the jar, and some with feet that are “stretched out in front” of them (Menzel 1964, 56). In description (it is un-illustrated in her publication) these “anthropomorphic body features” sound much like Chancay face-neck jars with body modifications that resemble shrunken arms and legs not just in form, but also in decoration (see Kroeber 1926). Menzel writes: “The face-necks are often decorated with a narrow arched, cream colored band over each eye which ends in two adjoining triangles on each cheek” (Menzel 1964, 56; see Schmidt 1929, 283-Fig.1). The timing of these forms which resemble Chancay face-neck jars and anthropomorphized jars seems too early here; There might be some problems in assigning these to the Middle Horizon when they feel more comfortably placed in the Late Intermediate period.

Menzel (1964) suggests that the Huari empire fell after Epoch 2B. During the following Epoch there is less evidence for widespread stylistic exchanges in ceramics. Pottery styles increasingly become regionally isolated and the influence of Pachacamac was likely greatly reduced (Menzel 1964, 73).

Middle Horizon Epoch 3

Teatino

Central coast Middle Horizon Epoch 3 ceramics remain poorly defined. However, in the absence for evidence of widespread stylistic exchanges, the ceramics become more regionally isolated and “gradually increasing [in] local differentiation” (Menzel

1964, 62). For example, at Nazca, Menzel proposed to call Epoch 3 styles "Soisongo;" at Ica, the "Pinilla" style. These regional varieties do not infiltrate into the neighboring central coast valleys. North of the Lurín and Rímac valleys there is the Chancay valley which had much cultural contact with Lurín and Rímac in during Middle Horizon Epoch 1 and 2. Bonavia (1962) reports on the Teatino ceramic style first named by the work of Tello in the Quebrada by that name close to Lachay.

There are no Teatino ceramics in the Lurín collections I analyzed. Teatino style seems to be restricted to the norther central coast valleys of Chancay and at Ancón (Patterson 1962; Menzel 1964). However, Stumer (1954b) reports Teatino type tombs at the mouth of Chillón River.

Shapes for this epoch include different jars and bowls. Some jars have horizontal opened handles, others have vertical opened handles. Some smaller jars have wide mouths while others have a more restricted opening; some flare inward giving the appearance of a bottle, others flaring straight upward, and others still flaring outward. Medium sized jars include globular bodies with restricted neck openings and outward flaring necks; these have vertical handles attach to the neck and body of these vessel form. Other medium to large-sized jars have handles midway on the body. Bowls, of numerous sizes, can have either a flat bottom or a rounded bottom. Ornate shapes include double chambered double spouted bridged vessels with modeled decorations (Patterson 1962).

Teatino style ceramics are monochromatic and seems decorated with simple geometric incisions in the neck and body of jars. Teatino ceramics recovered from gravelots at Ancón and Chancay have other ceramics in association with them (Patterson 1962). In all, the decorations of these collections can be described as follows: The neck portion of several jars are decorated with circumferential designs which include incised "zig-zag" lines, vertical lines, or alternating line designs. The body of jars can also be decorated with press molded designs and ornamentations; bumpy, anthropomorphized figures, and geometric patterns appear in this ornamental technique. On medium sized jars, painted designs, usually in the upper half of the body of a vessel, also can adorn jars. Some medium to large bodied jars with restricted openings usually have incised patterns decorating the neck —these are semi-geometric circumferential incisions. On bowls the exterior is usually painted, but so too can the interior be decorated. At times the bowl decorations are simple monochromatic, but they can also show more elaborate figure drawings (Patterson 1962).

Middle Horizon Epoch 4

Epigonal style

During Middle Horizon Epoch 4 Huari's influence on the central coast dissipates. At this time regional variations of earlier stylistics elements were copied but seemingly sloppily remembered, hastily produced. This ceramic style was called "epigonal" by Kroeber (1926) who thought they were poor simulacrums of former, more glorious

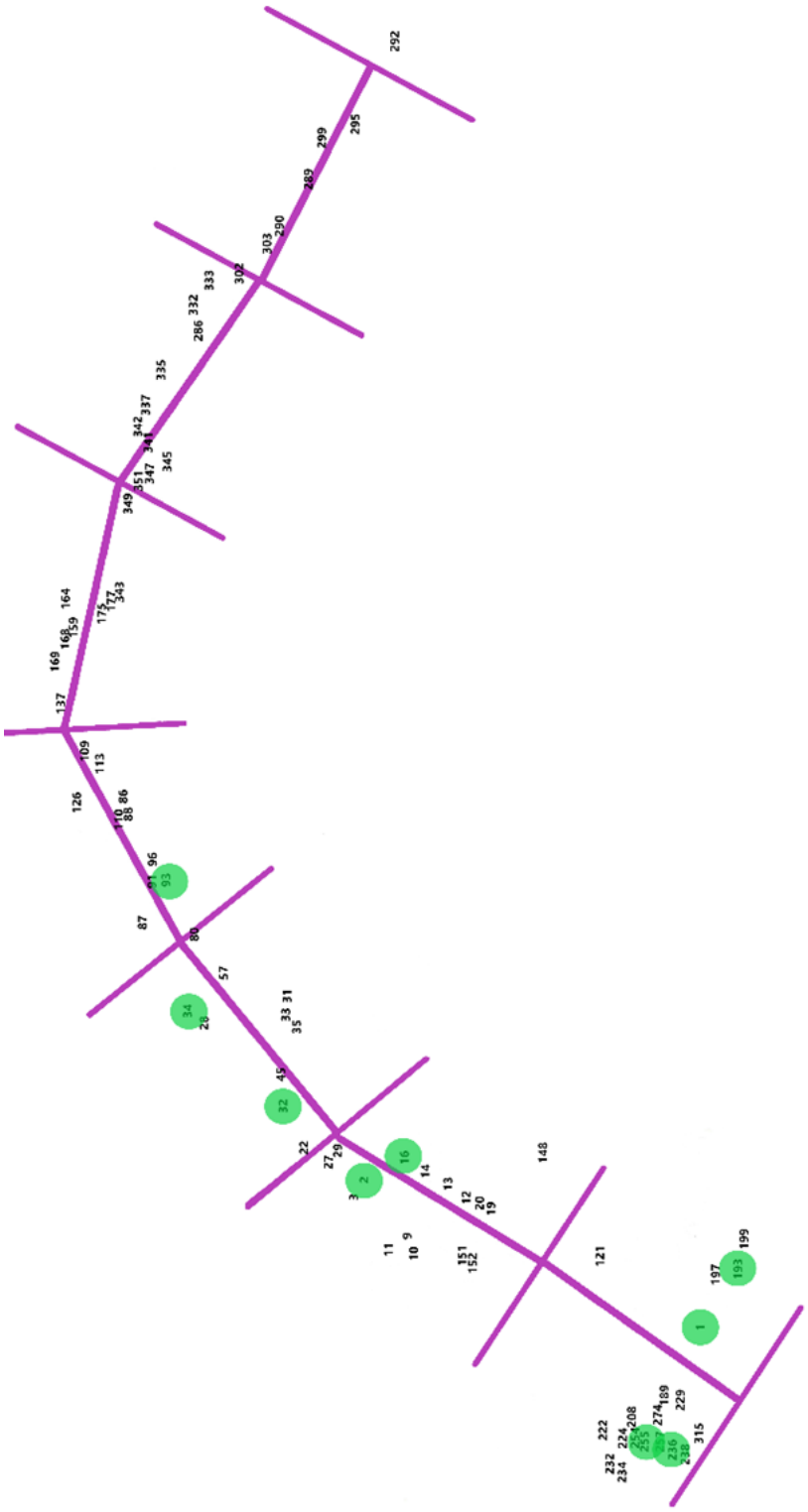
Tiahuanaco influenced ceramics. His sentiment echoed Uhle's earlier observations; who wrote: "For lack of a more fitting term, we designated as the Epigone style that cultural type which, although related to the style of the Tiahuanaco, is inferior to its famous prototype in almost every respect" (1991, [1903], 26). Menzel, who correctly identified Huari —not Tiahuanaco— influence on the style, supplements their observations: the "pottery styles of this ["epigonal"] and the succeeding epoch are manufactured with less care, there are fewer vessel types, less modeling, and designs are fewer, simpler, and often less carefully executed" (Menzel 1964, 62). She calls these ceramics "derivatives of the Huari styles" (1964, 73). These ceramics are identified by different names as well: Isbell (2008, 732) for example suggests the neutral acronym SAIS (South Andean Iconographic Series) to describe the pan Andean similarities in the ceramic decoration styles of "Huari," "Tiahuanaco," and other "Epigonal" assemblages —the name never gained much traction.

In the Lurín valley Epigonal style ceramics are found at the site of Pachacamac (Uhle 1991, Plt.5, Fig.1-4). This is not surprising as Huari-style pottery and textiles appear there for earlier times (Kaulicke 2000). The Huari had an interest in the central coast in general as they had several administrative sites close to it. In the Chillón valley, for example, Isla and Guerrero (1987) report on a Middle Horizon site with rooms of orthogonal cellular construction; a defining characteristic of Huari architecture (Isbell 1991). Epigonal style ceramics are also found at Ancón and Chancay (Patterson 1962).

The ceramic forms of epigonal style and include minor changes to an overall continuity of previous jars, ollas, and bowls forms. These include the Huari vessel shapes of urns, keros, jars, and "oversized offering jars" (Isbell 2008, 737) —which resemble the aryballo forms of later periods. Other forms include wide-mouthed jars, as well as narrow-mouthed and constricted jars —most having a rounded bottom. Jars can have both vertical opened and horizontally opened handles. A Canteen-like vessel also represent Middle Horizon Epoch 4 ceramic forms. Jars with an outward round neck also appear in some of the graves at Ancón (Patterson 1962). Bowls come in various shapes; most are flat bottomed.

The color range of Huari influenced ceramics in the central coast varies. The main color palate includes dark reds, blacks, and variations of whites. Decorations include black outlined anthropomorphized figures with red or deep brown tunics, cream, or beige colored "skin" tones and white painted nails and eyes. Facial features and decorations are highlighted with dark browns and reds —resembling facial tattoos or painted facial decorations of individuals. Wide white-bands are usually outlined in thin black lines over un-colored reddish-paste clay which forms the background. Usually these white bans can be curvy, but they can also be linear and semi-linear. Vertical and parallel striped lines adorn some of the jars. In other jars "zig-zag" vertical lines decorate the vessels body. Other decorations include the continuation of Huari influenced motifs, press modeled textures, and circumferential geometric designs both on the outer surface of jar necks and often on the upper half of a jars body. The outer

wall of bowls can be adorned with circumferential geometric patterns; sometimes vessels also have modeled decorations (Patterson 1962). At times the bowls have an enclosed “frame” of which the interior is painted with geometric patterns.



Map 1. 1. Lima Phase 9 ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.

Table 1. 1. Ceramic styles in the Lurín Valley during the Middle Horizon.

Site	Lima Phase 9	Pachacamac	Epigonal	Distance from Ocean
PV48-1	**.**	X	X	3
PV48-2b	X	.	.	18
PV48-16	X	.	.	16
PV48-32	X	.	.	23
PV48-34	X	.	.	27
PV48-93	X	.	.	34
PV48-193	X	.	.	3
PV48-236	X	.	.	5
PV48-255	X	.	.	5

Chapter 2

CERAMIC STYLES IN THE LURÍN VALLEY DURING THE LATE INTERMEDIATE PERIOD

Overview

In the central coast of Peru the beginning of the Late Intermediate period is recognized by the absence of Huari and Tiahuanaco influenced ceramics, the end by the introduction of Inca influenced ceramics in the Ica valley (Rowe 1960; Menzel 1976). This period is interesting for several reasons: (1) unlike the *horizons* which both preceded and proceeded it, there is little evidence for one central and overarching political structure; (2) there is an increase in the number of local or regional polities, and likely a larger number of ethnic or geographical identities corresponding to these smaller polities —some of which lived in close proximity to one another; (3) there is an increase and intense monumental construction effort during the Late Intermediate period at Pachacamac, and (4) there is an increase in the numbers of fortifications sites —both in the central coast and in the highland. This suggests warfare was a prevalent phenomenon at this time in the central coast in general (McCool 2017; Dillehay 1976); in fact, an overall violent time in most of Peru (Arkush and Tung 2013; Brown Vega 2009; Keatinge and Conrad 1983).

How the decline of Huari influence in the central coast affected and changed the supra-structure and social organization of the inhabitants of the area is not clear. What emerges during the Late Intermediate period after Huari's decline are smaller more

regional clustering of ceramics which in the past have been interpreted as "fragmented kingdoms" or decentralized socio-political groups. Rostworowski (1977) argues that the social landscape of the Chillón, Rímac, and Lurin valleys during this time was organized into two señorios, the Colli and the Ischma señorios which are presented as feudal domains. The Ischma señorio supposedly controlled the Lurin and Rímac valleys after the Huari influence abated but before the Inca took over in the Late Horizon. It is most likely that the Ischma's señorios religious center was that of the oracular site at Pachacamac in the Lurin valley although some scholars have suggested that the political center of the Ischma señorio was at the site of Maranga in the Rímac valley (Earle 1972). Whether the pollical center is at Maranga in Rímac or the religious center is at Pachacamac in the Lurin valley, or some combination of both, what is clearly associated with the Ischma sites are architectural structures called pyramids with ramps (Lobatón 2004; Eeckhout 1999b). These structures are interpreted differently but always associated with the Ischma cultural group and are found in the Lurín, Rímac, and Chillón valleys.

Today still we have a murky picture of the social interactions of people during the Late Intermediate Period in the Lurín valley (Takigami et al. 2014; Marsteller, Zolotova, and Knudson 2017). The ceramic styles associated with Late Intermediate period assemblages also remain unclear. What is known of the ceramics during Late Intermediate period is mostly gleaned from the collections acquired by Max Uhle at the turn of the 19th century. Particularly his excavations at Pachacamac (Uhle 1991) as well

as the reanalysis of his collections throughout the coast of Peru by his students (e.g. Gayton 1927; Kroeber 1925, 1926; Strong 1925). Recently scholars have attempted to elucidate the ceramic sequences in the Lurín during the Late Intermediate period. Notably work by Feltham (1984, 1983), Paredes and Franco (1987), Eeckhout (2004, 1999a, 1998), Makowski (2002), and Shimada et al. (2004) have helped to this end. Other recent efforts, in and around Pachacamac, have added to our picture and understanding of the overall area also (e.g. Eeckhout and Owens 2008; Marcone and López-Hurtado 2002; Franco 1988; Segura and Shimada 2010; Takigami et al. 2014).

The absolute chronology for the Late Intermediate period in the Central Coast is contested. Shimada (1991, 438) and Marsteller et al. (2017) suggest the Late Intermediate period starts at 900 A.C.E.; Lanning (1967, 141) proposes a starting date of 1000 A.C.E.; MacNeish et al. (MacNeish, Patterson, and Browman 1975) suggest 1050 A.C.E.; Lumbreras (1974, 179) and Regulo (1988, 3) place the beginning at 1100 A.C.E. — the most commonly suggested date; Agurto Calvo (1984, 118) argue for a 1200 A.C.E. date; and Bueno Mendoza (1982, 30) suggest a late as starting-date as 1300 A.C.E.. If the absence of Huari influenced ceramic styles marks the beginning of the Late Intermediate period however, it would seem that that the Late Intermediate period began at various times. As Huari's influence waned differently across the landscape, so too must the Late Intermediate period have begun: at different, various times. While this might not account for the hundreds of years of variation suggested above by different scholars, it can account for decades or so of time —that is to say one or two

generations of ceramic decorators. The starting date of the Late Intermediate period is not the only contested matter.

Another contention is how many cultural epochs the Late Intermediate period can and should be sub-divided into. How long those sub-division are, another. Paredes and Franco (1987), Patterson (1962, 1966) and Menzel (1964) suggest at least three temporal divisions are warranted. For some scholars the Late Intermediate Period should only be sub-divided into "early" and "late" (see Dolorier and Salazar 2016). Some sub-division is based on ceramic and architectural differences in site collections. For example, in comparing the ceramics associated with architectural layouts of the pyramids with ramps at Pachacamac to Kroeber's (1926) proposed ceramic sequence from the Chancay valley, Paredes and Franco (1987) suggested that Late Intermediate period inhabitants in the Lurín Valley were the Ischma. For Paredes and Franco the Ischma culture had a ceramic tradition which could be recognized in three distinct phases (which were recognized but called differently by other scholars), from earliest to latest: (a) Ischma-Plain —what Kroeber calls *Epigonal* style (Figure 2.1, see Kroeber 1926, Plt.84b, 1954); (b) Ischma- Biochrome —what Kroeber calls *Three-Color Geometric* style (Figure 2.1, see Kroeber 1926, Plt.83a-c); and (c) Ischma/Yauyos ceramic style — what Kroeber called *Chancay Black-on-White* style (Figure 2.1, see Kroeber 1926, Plt.82e-g). Other scholars have suggest that the Ischma culture extends form the Middle Horizon into the Late Horizon with small cumulative changes to the ceramics during each period which are difficult to discern (Berríos 2004). Shimada et al. (2004)

and Bueno (1982) suggest that at least two sub-periods can be identified during the Late Intermediate Period in the Lurín valley. Shimada et al. (2004) describes the 300-year occupation of Pachacamac by the Ischma polity as having minimally two, but possibly three, distinct ceramic phases. In a test trench in the Pilgrim's Plaza at the site of Pachacamac proper, they suggest an early Ischma ceramics followed by a continuing later Ischma ceramic tradition. The former resemble Strong and Corbet (1943) "punctate" style and seems to be associated with late Lima style sherds (Shimada et al. 2004, 523–24, Fig.7, Fig.9) while the latter are found just above ceramics "epigonal" in style (Shimada et al. 2004, 523–24, Fig.8).

Further complicating the possible chronological sub-divisions are the cultural plurality of the inhabitants of the Lurín valley during the Late Intermediate period. The period saw a fluorescence of local ceramic variation, reaching an apogee during the terminal Late Intermediate period before being "unified" under an Incan occupation in the following period. Makowski (2002) demonstrates this cultural plurality. Utilizing Eeckhout's (1999a, 1998) terminology, he makes a good case for at least three local and contemporary ceramic traditions at the Viejo-Pucara site (just upstream of Pachacamac) which he called "Lurín anaranjado," "Lurín engobe rojo," and "Lurín negro pulido." The plurality of the ceramic styles suggests a similar multiplicity of culturally identities in the valley during the Late Intermediate period. At the very least, any one styles spatial association with another style suggests either (1) that they are contemporary or date to

the same period; (2) that the collections are from multi-component sites and the styles are not contemporary; or (3) that the ceramic styles overlap in time.

The goals of this chapter are to identify the Late Intermediate period ceramic styles found in Lurín valley assemblages. I present at least seven distinct ceramic styles recovered from the Lurín valley associated with Late Intermediate period assemblages. These distinct ceramic styles include, from least to most recent: Epigonal ceramic style (Ischma plain), Tri-colored style (Ischma Bichrome), Ischma/Yauyo ceramic style, Chancay Black-and-White style, Orangeware, Red-Slip, and Smoked-Blackware. Some of these styles are contemporaneous with one another, other are not. The geographical proximity of these various styles to one another, as well as the plurality of their existence in the Lurín valley during the same period –in reference to what it could mean for the people who manufactured them —is further explored in chapters five, six, and seven, after I establish what they look like in this one.

Late Intermediate Period Ceramic styles in the Lurín valley

Below I describe the ceramic styles in the Lurín valley associated with Late Intermediate period assemblages and which are summarized in Table 2.1 by site. In this chapter I divide the Late Intermediate period into three sub-periods. I describe ceramic sherds analyzed for each sub-period and present illustrative examples of each. I include other published material when appropriate. Lastly, I synthesis a defendable time frame for each style.

Late Intermediate Period A

Ischma plain style

The Epigonal ceramic style from Middle Horizon 4 carries over into the first parts of the Late Intermediate period. In the central coast valleys, the ceramics in this style are called "Ischma plain." I have described this style under the style "Epigonal" in Chapter 1.

Red-on-white style

The Red-on-White style was first suggested by Uhle (1991) and corroborated by Strong and Corbett (1943) as preceding the Late Horizon in the Lurín valley.

Red-on-White sherds are found at three sites I analyzed: PV48-32, 137a and 335. These sites are in the mid-valley section of the Lurín as well as up in the highlands (Map 2.1). Assemblages with Red-on-White sherds had assemblages with other ceramic styles also. Red-on-White sherds are found with Lurín-Inca style ceramics at two sites: PV48-32 and 335; with Smoked-Blackware style at one site: PV48-32; with Red-Slip ceramics at two sites: PV48-32 and 335; with Orangeware style at one site: PV48-137a; along with Brownware sherds at two sites: PV48-32 and 137a; and with Chancay Black-and-White sherds at one site: PV48-32 (Table 2.1).

Unfortunately, there is a small sample of sherds decorated in this style and consequently not too many diagnostic vessel forms can be defined. However, two

forms can be discerned. Red-on-White vessel forms do include a jar form "DF," and beaker-shaped ollas (Figure 2.2.a-b).

Red-on-White style are decorative additions to previously similar forms. The decorations usually consist of bright red linear and geometric lines painted over a white background. One sherd, sherd c2746 from site PV48-32, is from a bowl which has decorations on the interior and exterior. The exterior side is decorated with white-on-red semi-circular lines which stem from a white band surrounding the neck of the jar (or base of the bowl); On the other side, there is one sharp red line across a cream-colored background —this type of dual sided decoration is rare (Figure 2.2.c).

Red-on-white pottery was made from at least two paste types: Paste I and Paste K (Appendix F). Both pastes have few inclusions, and both are a light rosy tint in appearance.

Punctate style

The Punctate style derives its name from the mechanical processes the ceramics undergo to acquire their principal decorative characteristic —the clay is punctured when it is wet or semi-wet, leaving the patterned decorations when the clay is hardened after firing. The style was first suggested by Uhle (1991 [1903]), and re-affirmed by Strong and Corbett (1943) at Pachacamac as preceding Incan (Late Horizon) ceramics. It is also called "inciso punzonado" in the literature (Dolorier and Salazar 2016).

From the surface collections I have re-analyzed, Punctate style is found only in three sites: PV48-19g, 29, and 349 (Map 2.2, Table 2.1). Site PV48-19g is 17 km upstream from the ocean, site PV48-29 is 22 km upstream, and site PV48-349 is approximately 55 km inland. There is also Punctate style at Pachacamac, site PV48-1 (e.g. Strong and Corbett 1943), as well as in Armatambo, also a large site next to the coast (Díaz and Berríos 2002). Overall there is little geographical patterning to this ceramic style as it appears at several sites with various elevations throughout the valley.

Assemblages with Punctate style ceramics can also have other ceramic styles associated with them (Table 2.1). Punctate style is found in one assemblage with Lurín-Inca style ceramics at site: PV48-19g; it is found at two sites with Red-Slip style: PV48-19g, and 349; and it is found with Orangeware style at one site: site PV48-349. These associations suggest either some degree of contemporaneity between the styles or a geographical association of the styles.

Punctate style ceramics decorate wide-mouth jar forms and enclosed-mouth jar forms (see Dolorier and Salazar 2016, 237, Fig.3, and 236, Fig.2 respectively). Some punctate designs also decorate face-neck jars. Decorations are usually done inside incised geometric patterns (triangles, "steps," zig-zag lines, or parallel lines) with alternating punctate-to-plain pattering on the outer neck of jars and jar bodies. The sherds from site PV48-9g, are decorated jar form "CE;" a wide-mouth jar form. The sherd from PV48-349, sherd c4765, is a fragment of a wide-mouth jar, although the

possibility of it being from an enclosed-mouth jar should not be ruled out. Both sherds have a vertical puncture pattern which leaves a circular, deep impression on the clay. At site PV48-29, four sherds are decorated in Punctate style. Sherds c1815, c1817, c1818 are vertically punctured, while sherds c1816 is punctured at a slanted angle —leaving a "check" like impression on the clay. All four Punctate designs are in incised triangles of wide-mouth jar forms (Figure 2.3).

At least two pastes were used to manufacture Punctate decorative style: Paste G and Paste L (Appendix F).

Brownware style

Brownware style was first suggested by Uhle from his work at Pachacamac (Uhle 1991). Later Strong and Corbett (1943) noted a "modeled brown style" at Pachacamac as well. They suggested it was common throughout the valley. Eeckhout (1999a) calls this style of ceramics "smooth brown." I call them Brownwares.

Brownware pottery are found in eighteen (18) sites in the Lurín valley: PV48-1, 2b, 28, 32, 34, 35, 45a, 57c, 96, 110, 126, 137a, 164a, 169d, 193, 199, 289, and 342a (Map 2.3, Table 2.1). Sites with Brownware pottery seem to cluster in the lower half of the valley (0-20 km from the ocean) and at sites more than 40 km upstream. Assemblages with Brownware ceramics also had sherds decorated in other ceramic styles. Brownware ceramics are found with Lurín-Inca style ceramics at nine sites: PV48-1, 28, 32, 45a, 110, 164a, 342a, 35, and 169; with Smoked-Blackware ceramic style at

five sites: PV48-1, 32, 110, 35, and 96; with Red-Slip ceramic style at ten (10) sites: PV48-1, 2b, 28, 32, 45a, 57c, 110, 164a, 193, and 342a; with Orangeware ceramic style at nine sites: PV48-1, 28, 34, 57c, 96, 137a, 164a, 193, and 342a; with Brown-cream ceramic style at three sites: PV48-1, 164a, and 199; with Red-on-White ceramic style at two sites: PV48-32 and 137a; and with Chancay Black-and-White at two sites: PV48-32 and 110 (Table 2.1).

Brownware vessels are distinguished by their undecorated, general smooth, exterior walls that —might show in some instances polishing marks but retain a matte brown appearance. Brownware sherds come from small and medium jars, small bowls, and ollas. The latter are rare (Figure 2.4). Judging by rim shapes, Brownware jars are similar to other and preceding styles —as in jar form "DC" (Figure 2.4.d-e), a frequent found form though the valley in various styles. Brownware styled jars also include form "CE," form "CL," form "CN," and form "CW1." One uncommon vessel shape is the triple-segmented jar form "BO," which looks like two semi-globular chambers stacked one on top of the other, and a third chamber, opened to the mouth of the vessel (Figure 2.4.h and Figure 2.4.g). Brownware styled bowls come in the following forms: form "LT," and form "LY1," (Figure 2.4.a-k). There are some other uncommon and unique forms of ceramic vessels in Brownware. A unique form, for instance, is the narrow bottle neck form "LZ" which has a very thin walled constricted neck with an "opening" or "outward" flaring bottle top (Figure 2.4.j); A unique small, thinned-walled bowl with an outward flaring lip is illustrated in Figure 2.4.i – form "LT."

While most of the Brownware vessels are undecorated, there are rare examples of some forms adorned with paint. One example is the illustrations of a "net" or a cross-hatched pattern in which the formed triangles are painted with white pigment and whose decoration covers a large part of the jars body (c3236, Figure 2.4.e).

Five paste types are used to manufacture Brownware vessels: Paste B, Paste C, Paste D, Paste I, and Paste J (Appendix F). Noteworthy is the observation that all pastes have a low frequency and amount of inclusions in their matrix.

Late Intermediate Period B

Ischma Bichrome style

The White-on-Red, or Ischma Plain, preceded the Ischma Bichrome style (Bueno 1982). Ischma bichrome style has previously been called *Three Colored Geometric* (Kroeber 1926). It was suggested based on collections from the work of Uhle (1991 [1903]); particularly the reanalysis of his collections by Kroeber (1926) at Chancay, Strong (1925) at Ancón, and by Strong and Corbett's (1943) trench excavations at Pachacamac.

There are no Ischma Bichrome ceramics found in the assemblages analyzed for this project. There are some ceramics in this style at PV48-1, at Pachacamac (Uhle 1991). The distribution of this style extends as far south as a Mala valley, Cañete, and Chincha valleys (Shimada 1991) but is much more common in the norther central coast valleys like Chillón and at Ancón (Patterson and Lanning 1964).

Brown cream style

Brown-cream style is a local ceramic tradition in the Lurín valley. Brown-creme style pottery are characterized by large swaths of brown-and-white-cream color decorated jars and bowls (Figure 2.5). Their decorations are painted in two colors: brown and variations of off-white, yellow-white, and cream color. However, on rare occasions a third color could be added– this is usually a red hue (Figure 2.5.a).

Assemblages with Brown-cream sherds were recovered from seven sites: PV48-1, 12, 164a, 164c, 199, 208, and 290. These sites seem to cluster in the mid-valley, 30-40 km upstream from the ocean and further upstream at locations more than 50 km from the ocean (Map 2.4, Table 2.1). Some assemblages with Brown-Cream ceramics had sherds with other ceramic styles. Brown-Cream sherds are also found with sherds decorated in Lurín-Inca style at five sites: PV48-1, 12, 164a, 208, and 290; with Smoked-Blackware sherds in three sites: PV48-1, 12, and 164c; with Red-Slip sherds at five sites: PV48-1, 12, 164a, 164c, and 208; with Orangeware style sherds at three sites: PV48-1, 12, and 164a; with Brownware styled sherds at three sites: PV48-1, 164a and 199; and with Chancay Black-and-White sherds at one site: PV48-12 (Table 2.1).

The sherds in the Brown-creme style are from jars and bowls; notably bowl form "LD" (Figure 2.5.a-g). A few fragments of face-neck jars were collected in this style as well (Figure 2.5.h). Their appearance closely resembling biological shaped ears–as opposed to ear-plugs in face-neck jars of other styles —which suggests a local flare to

this tradition. Other face-neck jars usually have ear plugs or "shields" as decorated ears —hardly an actual ear shape.

The decorative motifs of Brown-cream ware are similar to other contemporary "art" motifs. For example, we get a fringe brown band which runs circumferentially around bowls and is decorated with cane-like stamped circles with red dots (Figure 2.5.a). Also, we frequently note the cream-colored band around the handles of jars (Figure 2.5.d) which are decorated in a similar fashion to those of Red-Slip jars. We also note interchanging stripes of brown and white on several unidentified jars form is common (Figure 2.5.e and Figure 2.5.g). One similarity is to sherds with molded snakes with white dots —a decorative motif of other styles as well which can be seen in ceramic c5080 (Figure 2.5.f) which shows brown semi-rhombus shaped "dots" decorating a white painted modeled ridge on a sherd.

The paste used to manufacture Brown-Cream style vessels are: Paste C, Paste D, Paste I, Paste J, and Paste K (Appendix F). None of these pastes have many heavy inclusions in their matrix composition.

Chancay black-and-white style

The Chancay Black-and-White ceramic style follows the *Three Colored Geometric* style identified by Kroeber (1926) at Chancay, the central hub of their production, the birthplace of their namesake.

Chancay Black-and-White styles are found in the following seven sites: PV48-10, 12, 13, 19f, 32, 110, and 224 (Map 2.5, Table 2.1). With the exception of site PV48-110 which is about 35 kilometers from the ocean and at an elevation of about 500 *masl*, all of the sites are within 25 km of the pacific and less than 200 *masl*. That is to say, Chancay Black-and-White ceramic style is a coastal ceramics style, or at least is largely reflected in sites that are in the low valley. Chancay Black-and-White ceramic styles are rare in the Rímac and Lurín (Patterson and Lanning 1964); they are much more prolific in the northern central valleys, and are found as far north as Huacho Valley, Chancay Valley, and the Chillón Valley.

Chancay Black-and-White style ceramics are found in assemblages with other ceramic styles as well (Table 2.1). Chancay Black-and-White style is found at four sites with Lurín-Inca style ceramics: PV48-12, 32, 110, and 224; The same four sites contain Smoked-Blackware style ceramics also; it is found with Red-Slip style ceramics at four sites: PV48-12, 13, 32, and 110; it is found with Orangeware style at two sites: PV48-12 and 224; at two sites with Brownware: PV48-32 and 110; at one site with Brown-Cream style: PV48-12; and at one site with Red-on-White style sherds: PV48-32.

Chancay Black-and-White ceramic forms include jars, bowls, ollas, and figurines. Jars are often decorated with molds, models, and stamps. Chancay jar forms include tall ovoid jars with larger flaring necks (see Lothrop and Mahler 1957, Plt.5), effigy jars, double-chambered whistling bottles, and zoomorphic vessels. The most recognizable

form are the face-neck jars with either modeled arms and feet, or painted arms and feet —the limbs disproportionately small, often articulate-less. Other forms include tall pedestal-based vases, vases with straight out sloping walls, plates, and semi-spherical bowls of various sizes. Lumbreras (1974, 191) reports an interesting form: a plate having an "annular-base." This form seems unique as it is not found in much of the literature. I have previously called similar-in-description bowl forms as form "LF" (Loffler 2016). Alternatively, Lumbreras could have bene mistaken in his report as he does not illustrate an example of these type of bowls.

Many Chancay Black-and-White ceramics are decorated firstly with a white slip or cream colored off-white and then decorated with geometric and anthropomorphized designs painted in dark-brown to black slip; this overall bichrome decoration gives this style its name (Bueno 1982; Shimada 1991). If a third color is added it is often the uncolored clay ceramic's matrix underneath the white slip, left undecorated, almost always reddish in color, and exposed on the outer surface. The painted designs vary greatly. They range from simple broad brush strokes covering much of a vessels surface to very detailed, fine lined, geometric, and repeating parallel patterns of zig-zag, triangles, and dots (Figure 2.6; also see Lothrop and Mahler 1957, Plt.5).

Scholars have noted that on the majority of Chancay ceramics little or no effort was made to smooth or burnished decorated surfaces; often resulting in a clay ridden surface that feels dull and gritty. Examples of this observed phenomenon include shape

warping of ceramics occurring during firing processes, poor painting application which is uneven or allowed to run when wet, and vitrification of ceramics from excess heat during the firing process (Donnan 1992; Lumbreras 1974). The overall impression from Chancay ceramics is that they are manufactured in a hurry, in large quantity, seemingly uncaring. In this impression they parallel "epigonal" ceramics characteristics.

The following pastes are used in the manufacture of Chancay Black-and-White ceramics found in the Lurín valley: Paste D, Paste E, and Paste L (Appendix F).

Ischma/Yauyo style

The Ischma ceramic style refers to ceramics made by locals living in the Lurín and Rímac valleys sometime prior to their Incan annexation —a distinction is made between "ceremonial Ischma" and "domestic Ischma;" the former ill defined, the latter previously called "Huancho" (Córdova 1935; Stumer 1954a, 1954b, 1958) and renamed "Ischma" by Bazan (1990) after the work of Paredes and Franco (1987). Kroeber (1926) would likely call these "Chancay Black-and-White" style. I present Chancay Black-and-White style in the previous section. Casting Chancay Black-and-White ceramics as "Ischma" implies a political allegiance/unity between people in the Chancay valley and Lurín valley that may be better suited during the Late Horizon; a time the central coast came under Incan meddling machinations.

The distribution of Ischma ceramics? Its name suggests a wide and plentiful distribution up and down the Lurín valley and the Rímac valley. While this is most-likely

the case, the style's distribution is more difficult and nuanced to pinpoint from an archaeological perspective. Difficulty arises from the ceramic's conflicting style descriptions. Guerrero (1999) suspects that ceremonial Ischma style might be a continuation and development from Menzel's (1964) Pachacamac style earlier during the Middle Horizon. Some of the more elaborately decorated Ischma ceramics, possibly ceremonial Ischma ceramics, include face-neck jars, zoomorphic jars, and phytomorphic jars. Domestic jars, ollas, and bowls are common. These include jars in from "CE," form "CO," form "CN," form "BB," form "BE," form "BZ," canteen jars, and wide mouthed jars. Small ollas, and small bowls are rarely present in this style. Again, many of the vessel shapes resemble Chancay Black-and-White ceramic vessel forms.

Our understanding of the decorations of Ischma style ceramics are muddled. Guerrero notes that during the Late Intermediate period ceramics assemblages often have both local and Inca components; He writes: "In tombs domestic Huancho or Ischma vessels are found decorated with wide white stripes, applique snakes on opposite sides of the vessel, and molded into fruit forms. These are associated with Inka provincial and ceremonial Ischma pots" (Guerrero 1999, 48). His descriptions of Ischma ceramics resemble descriptions of "Orangeware" or "Red-Slip" jars at times; while his illustrations seem Chancay style derived ceramics (see Guerrero 1999, 244, Fig.80). Paredes and Franco (1987) on the other hand, who also discuss Ischma style, describe it as Chancay "Black-on-White" style (see Kroeber 1926, Plt.82e-g). Neither of these hint at Menzel's (1964) presumed Pachacamac style antecedents. One walks

away with the impression that Ischma style is a catch-all, safe-bet, ceramic name for "before Inca influence" in the Lurín and Rímac.

Late Intermediate Period C

Orangeware style

Orangeware style ceramics are found in many central coasts Late Intermediate and Late Horizon assemblages. It is a descriptive nomenclature for the orange colored paste these ceramics are made from. Eeckhout (1999a, 1998) referees to these "Lurín-anaranjado" emphasizing their geographical association with the Central coast in general, the Lurín and Rímac valleys in particular.

Orangeware is widely distributed in the Lurín valley. It is found at in the following twenty-two (22) sites I have analyzed: PV48-1, 9, 12, 16, 28, 34, 57b, 57c, 93, 96, 121c, 137a, 137d, 164a, 193, 224, 229, 274, 342a, 343b, 347, and 349 (Map 2.6, Table 2.1). Orangeware pottery does not cluster in any particular area along the valley nor does it appear to have a simple clear geographical spacing to its distribution. Instead, Orangeware is found throughout the valley. Orangeware is often found in association with other ceramic styles (Table 2.1). In nine sites it co-occurs with Inca-Lurín ceramics: PV48-1, 9, 12, 28, 164a, 224, 229, 342a, and 347; At five sites it is found with Smoked-Blackware ceramics: PV48-1, 12, 57b, 96, and 224; In twelve (12) sites it is found with Red-Slip ceramics: PV48-1, 12, 16, 28, 57b, 57c, 137d, 164a, 193, 342a, 347, and 349; in nine sites it is found with Brownware ceramics: PV48-1, 28, 34, 57c, 96,

137a, 164a, 193, and 342a; in three sites it is found with Brown-cream wares: PV48-1, 12, and 164a; at one site with Punctate style: PV48-349; and at one site it is found with Red-on-White styled ceramics: PV48-137a.

There are Orangeware ollas, jars, bowls and even bottles —the latter being extremely rare (Figure 2.7). Some forms resemble Inca vessels; an example is the beaker shaped olla in Figure 2.7.i. Jar forms in Orangeware style also include: form "BB," form "CE-Small," form "CI1," and form "DF." Two Orangeware bowl forms were found: form "LZ1" and form "LZ5." Olla forms in Orangeware style include form "OI," form "OL," form "ON," and form "OO" (Figure 2.7.a-n).

Orangeware vessels have little decorations (Figure 2.7). On occasion the exterior surfaces of Orangeware vessels may be decorated with either white or cream-colored washes that may be outlined with reddish-brown, or brown-black bands. The white and cream-colored bans are often thick and spacious, often outlined by thin well demarcated black lines (Figure 2.7.o and Figure 2.7.p). The same is true for bands that are painted red (Figure 2.7.r), although red bands are not always outlined by black lines (Figure 2.7.q and Figure 2.7.y). Jars, ollas, and bowls may have a red- lip on their opening (Figure 2.7.c and Figure 2.7.f-g), some of which may be painted in deep dark red/maroon colors. One jar fragment of unknown shape has red dots as decoration on its exterior (Figure 2.7.x). Others have fine parallel brown or black lines on their exterior surface (Figure 2.7.s).

Four paste types were used to manufacture Orangeware pottery: Paste A, Paste J, Paste M, and Paste N (Appendix F). All of these pastes have very little inclusions in their matrix.

Red-slip style

Max Uhle (1991) first suggested the Red-Slip style when he excavated at Pachacamac; he used the descriptive name to referred to the otherwise mostly undecorated ceramics associated with Late Intermediate period and Late Horizon assemblages. Strong and Corbett (1943) confirmed the presence of red-slip pottery in their excavations at the temple of the sun where they referred to it as "plain red painted style." Peter Eeckhout (1999a) calls the style "engobe rojo."

Red-Slip vessels are found through the valley with no particular spatial pattering to their distribution. The distribution of this ceramic style is summarized in Table 2.1. Forty-one (41) sites I looked at have Red-Slipped sherds: PV48-1, 2b, 2c, 12, 13, 14, 16, 19, 19f, 19g, 20, 20a, 20d, 20e, 22, 28, 31, 32, 45a, 45b, 45c, 57b, 57c, 80, 87, 88, 109a, 110, 113d, 137b, 137d, 164a, 164c, 175, 193, 208, 286, 299, 335, 342a, 342b, 343a, 345b, 347, and 349 (Map 2.7, Table 2.1). Red-Slip ceramics are found in assemblages with other ceramic styles as well. They are found in assemblages with Inca-Lurín ceramics in sixteen (16) sites: PV48-1, 12, 28, 32, 45a, 109a, 110, 137b, 164a, 208, 286, 299, 335, 342a, 343a, and 347; with Smoked-Blackware at twelve (12) sites: PV48-1, 12, 14, 20a, 22, 32, 45b, 45c, 57b, 88, 110, and 164c; with Orangeware at twelve (12) sites:

PV48-1, 12, 16, 28, 57b, 57c, 137d, 164a, 193, 342a, 347 and 349; with Brownware styles at ten (10) sites: PV48-1, 2b, 28, 32, 45a, 57c, 110, 164a, 193, and 342a; with Brown-Cream ceramics at five sites: PV48-1, 12, 164a, 164c, and 208; with Punctate ceramics at two sites: PV48-19g and 349; and at two sites with Red-on-White ceramics: PV48-32 and 335 (Table 2.1).

The characteristic feature of the Red-Slipped style is the thick Red-Slip pigment which covers most, if not all, of the exterior walls of the vessels. The color range of the red pigment varies. It ranges from dark deep hues of red to lighter hues of red; they can be grouped around colors 5G, 6H, 6J, 7J, 7K, 8J, and 8K (see Maerz and Paul 1950, Plt.5-8). Sometimes white or Cream-colored decorations are added to the jar necks and handles; usually around handles, or circumferentially around the neck of the vessel. When they do occur, the lines seem hastily painted.

There are Red-Slipped jars, bowls, and ollas, examples of which are illustrated in Figure 2.8. Both small and large vessels forms may be Red-Slipped. Constricted jars openings (Figure 2.8.r) or wide-mouths jars (Figure 2.8.q), as well as face-neck jars are also found in Red-Slip style (Figure 2.8.z and Figure 2.8.aa). A common shape which is red-slipped is the jar form "BJ," which often comes with a snake like applique (Figure 2.8.k and Figure 2.8.t). The snake like applique can further be decorated with cream colored dots (Figure 2.8.k and Figure 2.8.y). Other jar forms include: "Aryballoid" form, form "BC," form "BF," form "BW," form "BZ4," form "BZ5," form "CE," form "CE-Small,"

form “CH,” form “CN,” form “CO,” form “C-Shortneck,” and form “DM”. Red-slipped style bowl forms include: form “LC,” form “LR,” and form “LY” (Figure 2.8.a-t).

The following pastes are used in the manufacture of these ceramics: Paste B, Paste C, Paste D, Paste I, Paste J, and Paste M (Appendix F).

Smoked-Blackware style

Smoked-Blackware style pottery derives from the North Coast and are a characteristic feature of many Chimú assemblages. They span from the Late Intermediate period to the Colonial Period. The ceramics are fired in extremely low oxidation environments, surfaces are entirely black and usually externally polished. This style has been called by several names: "Smoked-Blackware" (Menzel 1966, 112), "polished black style" (Strong and Corbett 1943, 56), “buchero” (Jijón y Caamaño 1949), and more recently "negro pulido" (Makowski and Vega 2004; Makowski 2002).

Surface collections from twenty (20) assemblages I looked at have Smoked-Blackware fragments: PV48-1, 12, 14, 20, 22, 32, 35, 45b, 45c, 57b, 86, 88, 96, 110, 164a, 164c, 222, 236, 257, and 341 (Map 2.8, Table 2.1). Smoked-Blackware sherds are found throughout the valley; they have no clear geographical pattern or distribution to the sites in which they were re-discovered. Smoked-Blackware ceramics are found in association to other ceramic styles (Table 2.1). Surface collections from eight assemblages have both Smoked-Blackware and Lurín-Inca style sherds: PV48-1, 12, 32, 35, 86, 110, 164a, and 224. This suggests their contemporaneity during the Late Horizon

(next chapter); furthermore, it cements at least some Smoked-Blackware style during the latter parts of the Late Intermediate period and early Late Horizon. Smoked-Blackware ceramics are found in twelve (12) assemblages which also contained ceramics in Red-slipped style: PV48-1, 12, 14, 20a, 22, 32, 45b, 45c, 57b, 88, 110, and 164c; at five sites also with Orangeware style: PV48-1, 12, 057b,096, and 224; at five sites with Brownware: PV48-1, 32, 35, 96, and 110; at three sites with Brown-Cream styles: PV48-1, 12, and 164c; and at one site with Red-on-White ceramics: site PV48-32. Their association with Smoked-Blackware style suggest some level of contemporaneity between them as well.

Smoked-Blackware pottery may be locally manufactured, imported from the North Coast, local imitations of Chimú pottery, or, during the Late Horizon, innovative Chimú-Inca vessels like those described at Chincha (Menzel 1966, 1976). At least some of the Smoked-Blackware ceramics are imported into the Lurín. For instance, at site PV48-57b, jar c3593(Figure 2.9.i) is decorated with an avian-stamped motif around its exterior surface. Fragments with this and similar decorations have been called “fineware” at sites in the north coast. Menzel reports that imported Chimú forms to the South coast are often “fineware” which are probably not used for utilitarian purposes. Forms like the "double bodied whistling" jars, or "Blackware stirrup-spout bottles" which were imported south to Chincha made their way to gravelots and are associated with non-utilitarian assemblages (Menzel 1966, Plt.XV, Fig.66-67). The labor-intensive molded monkey face-sherd recovered from site PV48-35, piece c5855, is another

example of an import (Figure2.6.ee). It looks a lot like other monkey decorated shapes made Chimú stir-up bottles (Wauters 2016, 247, Fig.5). Similar monkey faces decorate Chimú ceramics are dated to 1000-1350 A.C.E., to the first half of the Late Intermediate period (Martínez 1986, 271, Fig.211-12). Together they demonstrate the long-lived continuation of the Smoked Blackware ceramic style and its presence in the Lurín.

Not all Smoked-Blackware was imported. There is evidence suggest that some Smoked-Blackware sherds in the Lurín valley are imitation Chimú. At site PV48-22 for example, sherd c3055 (Figure 2.9.b) strongly resembles a "domestic ollas" sherds in profile and color (Cutright 2015); but local manufacture is betrayed by its paste. Unlike other Smoked-Blackware sherds, sherd c3055 seems to be made of a local paste which did not fully darken during the firing process. We can infer therefore that this piece was not fired in a reduced oxygen environment as other Smoked-Blackware vessels whose entire paste matrix is black. The strong resemblance in form however, as well as the deliberate blackening of the outside of the vessel to make it look like Smoked-Blackware, suggests a local imitation of a Smoked-Blackware design. Makowski (2002) differentiates locally manufactured Smoked-Blackware style from imported ones, calling the former "Lurín Negro".

Smoked-Blackware sherds come from jars, ollas, bowls–which from the bulk of the surface collection finds —and several non-utilitarian ceramics of complex shape (Figure 2.9). Bottles are also found in the surface collections although these are rare.

Double-chambered jars and other “fancy ware,” that is to say other non-utilitarian ceramics, are more frequently encountered than might be imagined (aforementioned) but are uncommon overall; perhaps suggesting a larger “fineware” import operation than an “common ware” import operation. Recognizable Smoked-Blackware jar forms include form “BC,” form “BE,” form “BZ5,” form “DF,” and also a “Kero” form. Bowl shapes are found in form “LD,” form “LW-Unique,” form “LX,” and form “LZ.” An olla in form “OI” was also recovered in this style (Figure 2.9.a-o).

Smoked-Blackware, at times, were decorated with various stamped motifs (Figure 2.9.i) and there is at least one example of a face-neck jar (Figure 2.9.v). The former resembles Chimú styled fancy ware pottery from the North Coast, the latter is similar in style as other Late Intermediate period face-neck jars from the central coast. In addition to the Late Intermediate period and Late Horizon Smoked-Blackware, there are also Early Horizon Smoked-Blackware pottery sherds found in the surface collections. In fact, at least seven sherds looked like Late Horizon Smoked-Blackware but are more likely related to the Early Horizon component. Their inclusion in their corresponding assemblages suggests a geographical proximity to later (Late Intermediate period and Late Horizon) styles. These earlier pieces include: Sherd c1082, a small bowl in Form “LD” from site PV48-45b, which has an incised circular and linear decoration on the lip (Figure 2.9.e) —probably an Early Horizon north coast vessel; Sherd c1230, a bowl in Form “LZ” from site PV48-224 and with an incised lip decoration resembling an imprint of a wild grass or reed (Figure 2.9.n); Sherd c2808, a jar in Form

“BZ5 from site PV48-295 with a “chevron” impression (Figure 2.9.o) —this “chevron” form is identified as Robles Moqo (Menzel 1964, 56); Sherd c6390 and sherd c3860, two unknown ceramic forms from site PV48-1b (Figure 2.9.q-r) are globular incised and leaf like inclusion related to the Early horizon; Sherd c3912, an unknown ceramic form from site PV48-14 with a protruding circle with an impression in the middle, resembling an eye (Figure 2.9.z); and sherd c6071, an unknown ceramic form from site PV48-86, but similarly resembling a protruding “eye” (Figure 2.9.aa) —both of these probably dating to ceramic styles frequently used in the Early Horizon. The presence of these seven sherds in the surface collections suggests a geographical affinity to later ceramics; if nothing else it suggests a long history of North coast influence in the Lurín valley —at least at those sites; and hints at the slow evolution of some specific vessel forms which are also found in later period assemblages.

The majority of the manufactured Smoked-Blackware is limited to darker colored pastes including: Paste E, Paste K, and Paste L (Appendix F).

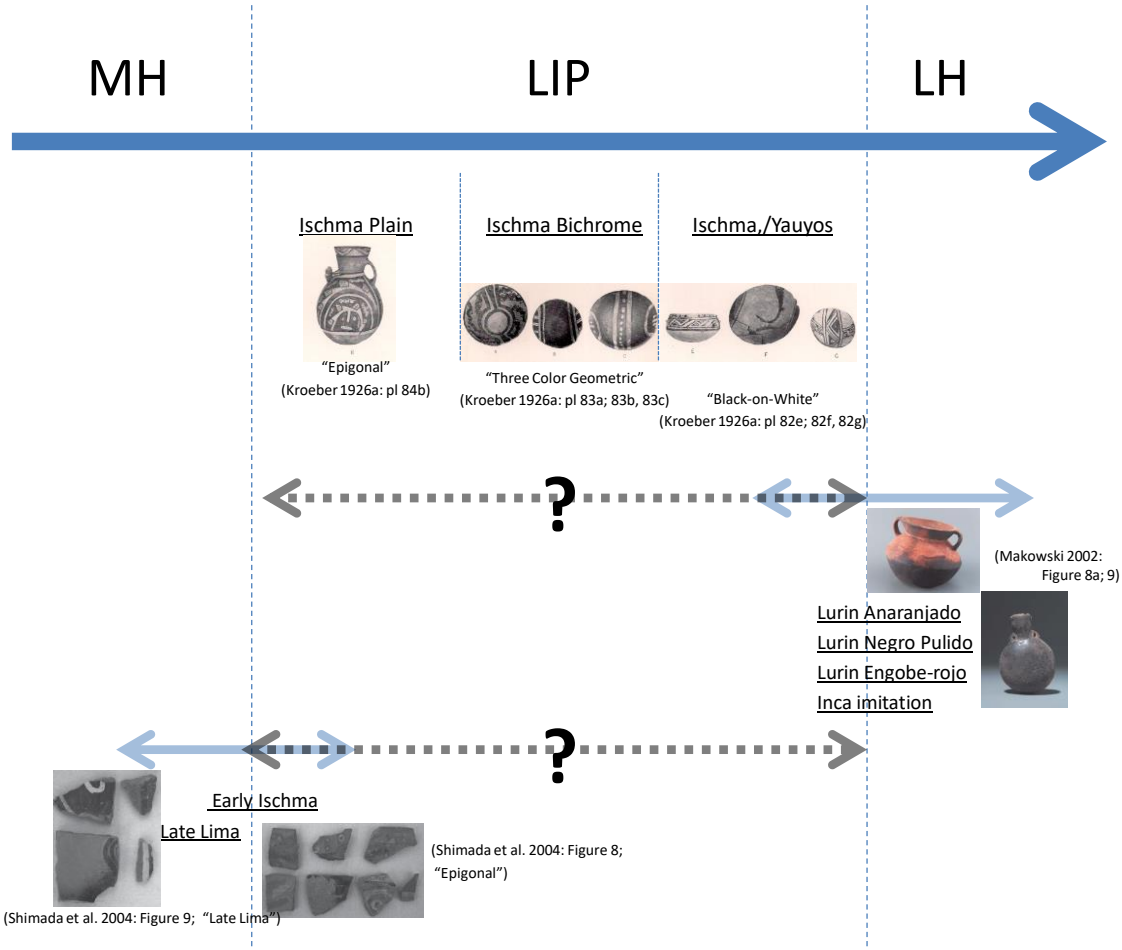


Figure 2. 1. Schematic of Middle Horizon, Late Intermediate Period, and Late Horizon ceramic styles based on the work of Paredes and Franco (1987), Makowski (2002), and Shimada et al. (2002).

Figure 2.2. RED-ON-WHITE FORMS AND EXAMPLES

a) Form DF: PV48-137a; Surface collection; c5723; Paste K; Diameter 12cm
b) Form Beaker Shaped Olla: PV48-335; Surface collection; c2379; Paste I; Diameter 16cm
c) Unknown Form: PV48-32; Surface Collection; c2746; Paste C

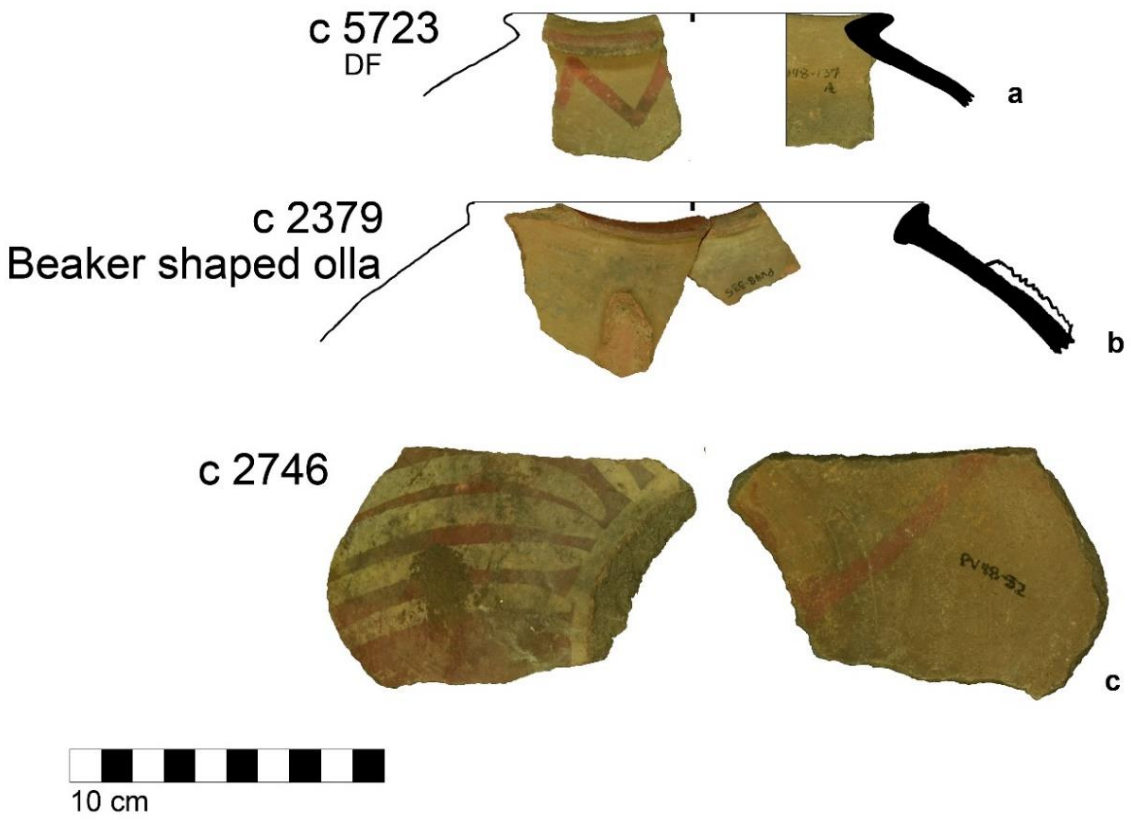


Figure 2. 2. cont.

FIGURE 2.3 PUNCTATE STYLE FORMS AND EXAMPLES

a) Form “CE;” PV48-19g; Surface collection; un-numbered; Paste G
b) enclosed-mouth jar; PV48-29; Surface collection; c1815; Paste L
c) wide-mouth jar; PV48-29; Surface collection; c1816; Paste L
d) enclosed-mouth jar; PV48-29; Surface collection; c1817; Paste G
e) enclosed-mouth jar; PV48-29; Surface collection; c1818; Paste L
f) wide-mouth jar; PV48-349; Surface collection; c4765; Paste L

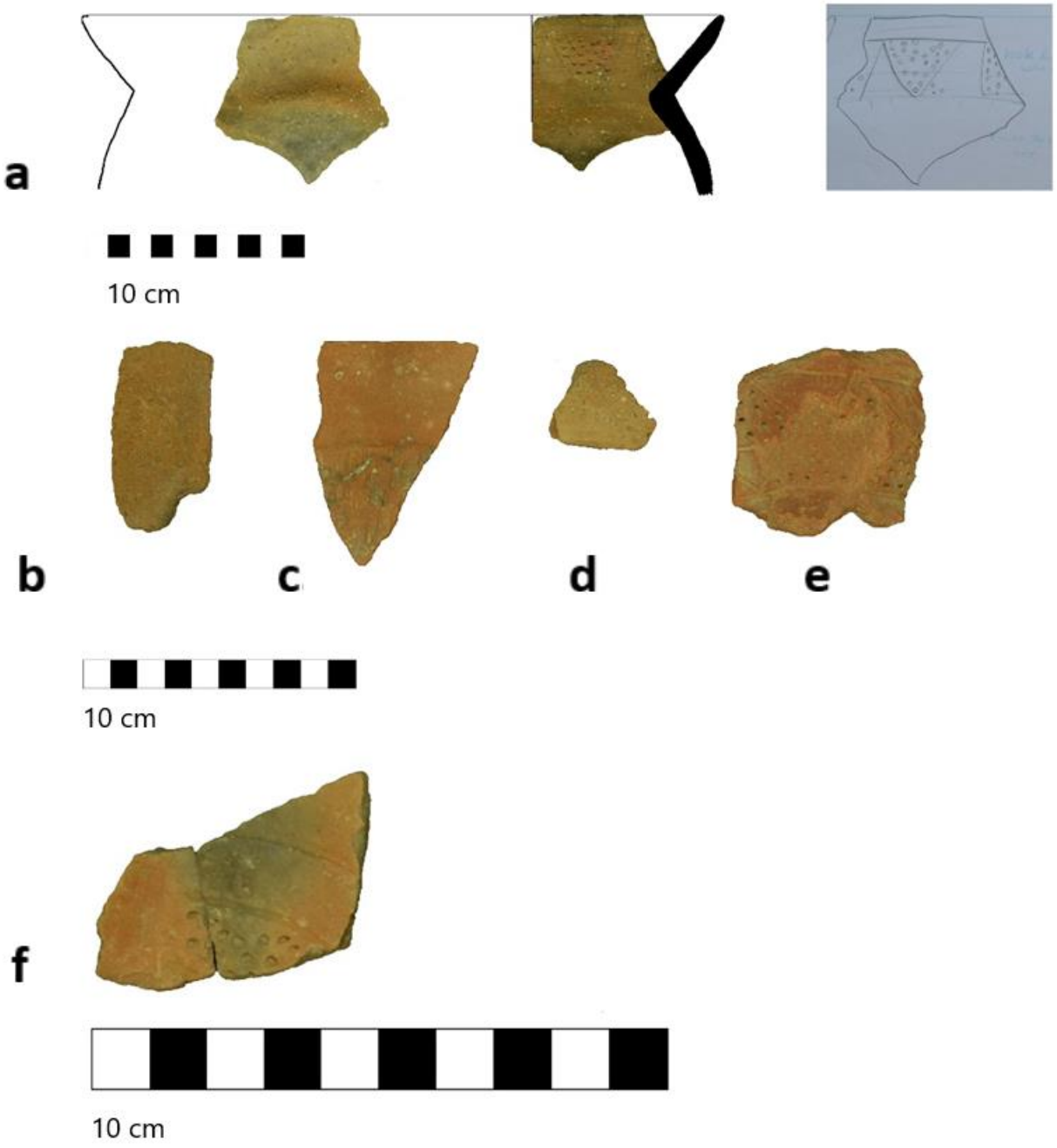


Figure 2. 3. cont.

Figure 2.4. BROWNWARE FORMS AND EXAMPLES

a) Form CW1: PV48-2b; Surface collection; c2106; Paste B; Diameter ?cm
b) Form CN: PV48-345b; Surface collection; c4656; Paste J; Diameter 27cm
c) Form LY1: PV48-302; Surface collection; c5324; Paste J; Diameter 22cm
d) Form DC: PV48-286; Surface collection; c1033; Paste J; Diameter 14cm
e) Form DC: PV48-164a; Surface collection; c3236; Paste C; Diameter 9cm
f) Unknown Form: PV48-197; c6007; Paste I
g) Form CE: PV48-12; Surface collection; c5947; Paste I; Diameter 13cm
h) Form BO: PV48-12; Surface collection; c5949; Paste D; Diameter 11cm
i) Form LT: PV48-164a; Surface collection; c906; Paste J; Diameter ?cm
j) Form LZ-UNIQUE: PV48-29; Surface collection; c861; Paste J; Diameter 19cm
k) Form CL: PV48-32; Surface collection; c2655; Paste I; Diameter 18cm

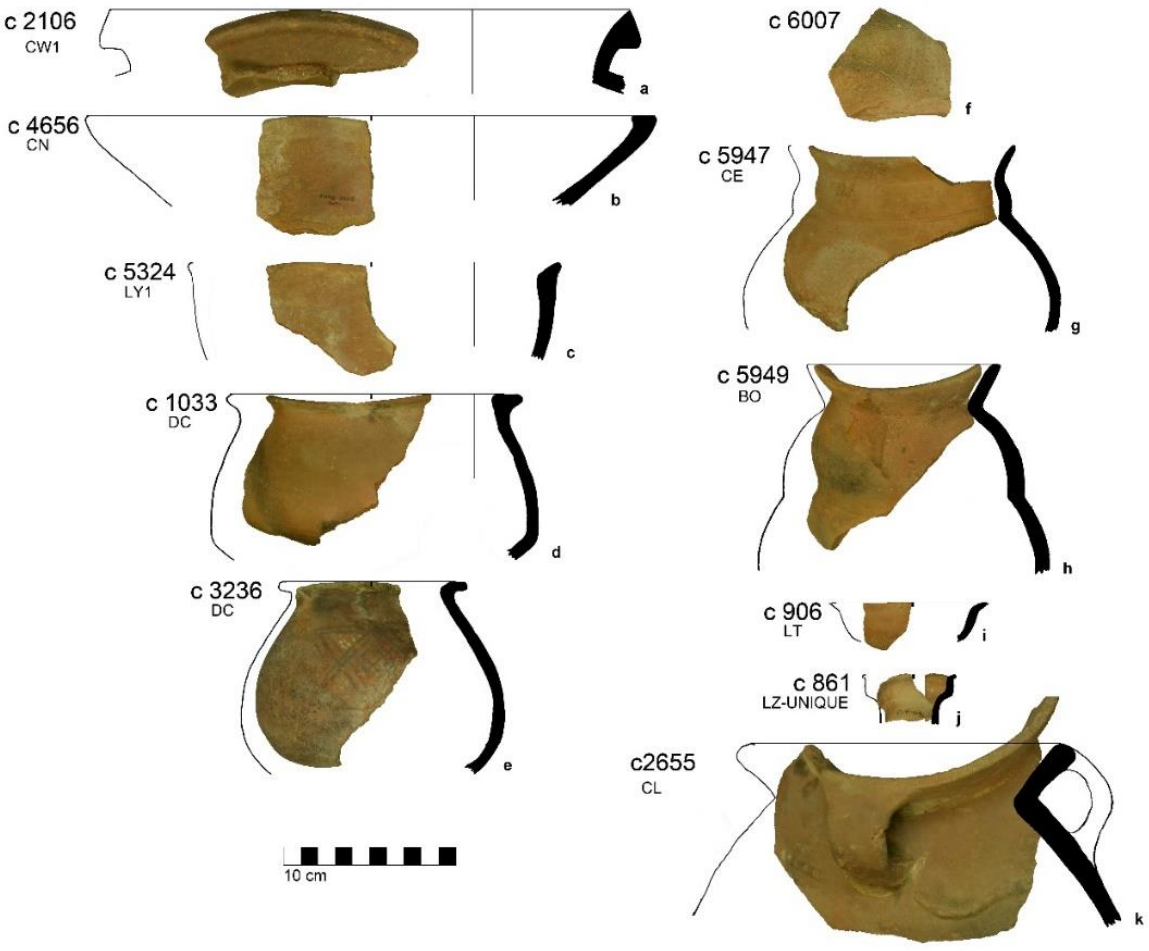


Figure 2. 4. cont.

Figure 2.5. BROWN-CREAM FORMS AND EXAMPLES

a) Form LD: PV48-290; Surface collection; c2851; Paste K; Diameter 15cm
b) Unknown Form: PV48-208; c4385; Paste J
c) Unknown Form: PV48-199; c1255; Paste I
d) Unknown Form: PV48-1; c5983; Paste D
e) Unknown Form: PV48-199; c1261; Paste D
f) Unknown Form: PV48-164c; c5080; Paste K
g) Unknown Form: PV48-164a; c5152; Paste C
h) Unknown Form: PV48-12; c2605; Paste I

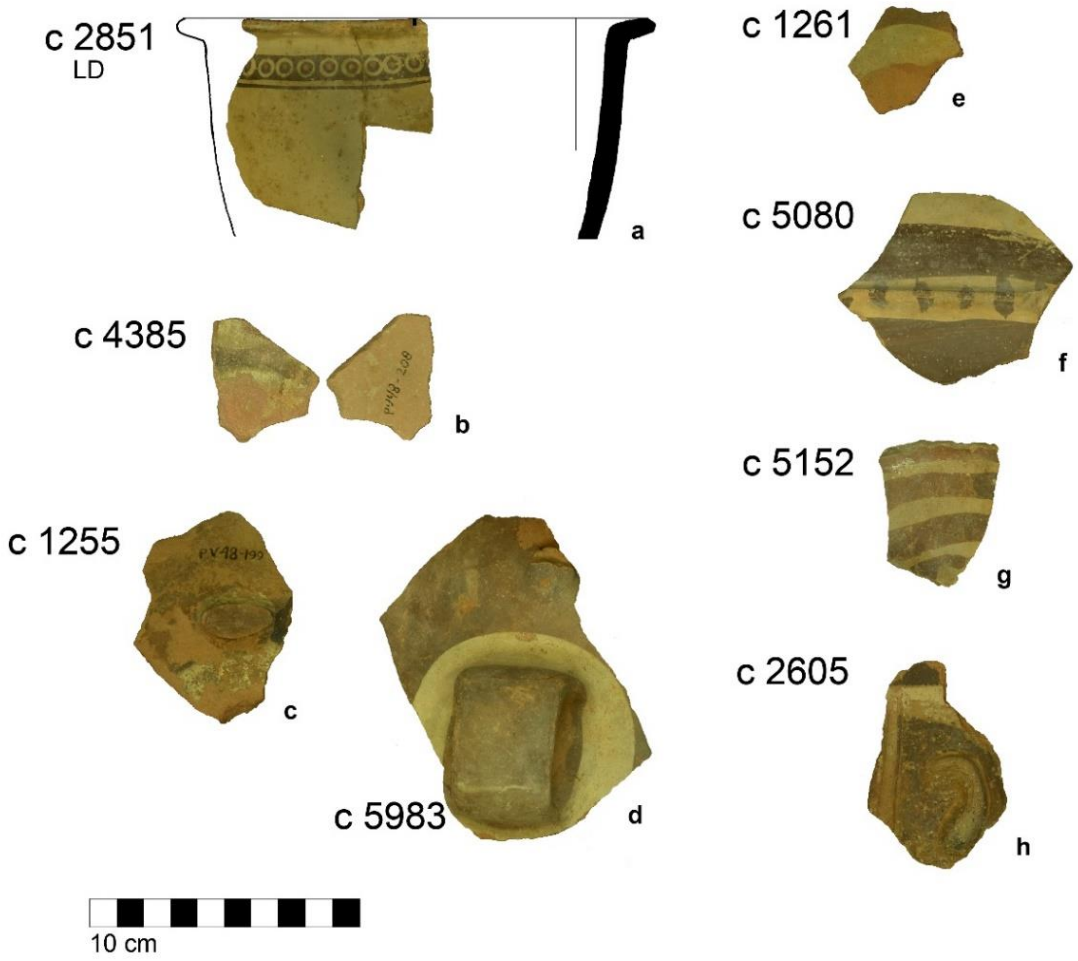


Figure 2. 5. cont.

FIGURE 2.6 CHANCAY BLACK-AND-WHITE FORMS AND EXAMPLES

a) jar; PV48-10; Surface collection; c3630; Paste L
b) jar; PV48-12; Surface collection; c2607; Paste D
c) jar; PV48-12; Surface collection; c2606; Paste D
d) jar; PV48-13; Surface collection; c3769; Paste L
e) jar; PV48-19f; Surface collection; c4003; Paste E
f) jar; PV48-32; Surface collection; c2750; Paste D
g) jar; PV48-110; Surface collection; c5216; Paste D
h) jar; PV48-224; Surface collection; c1228; Paste E

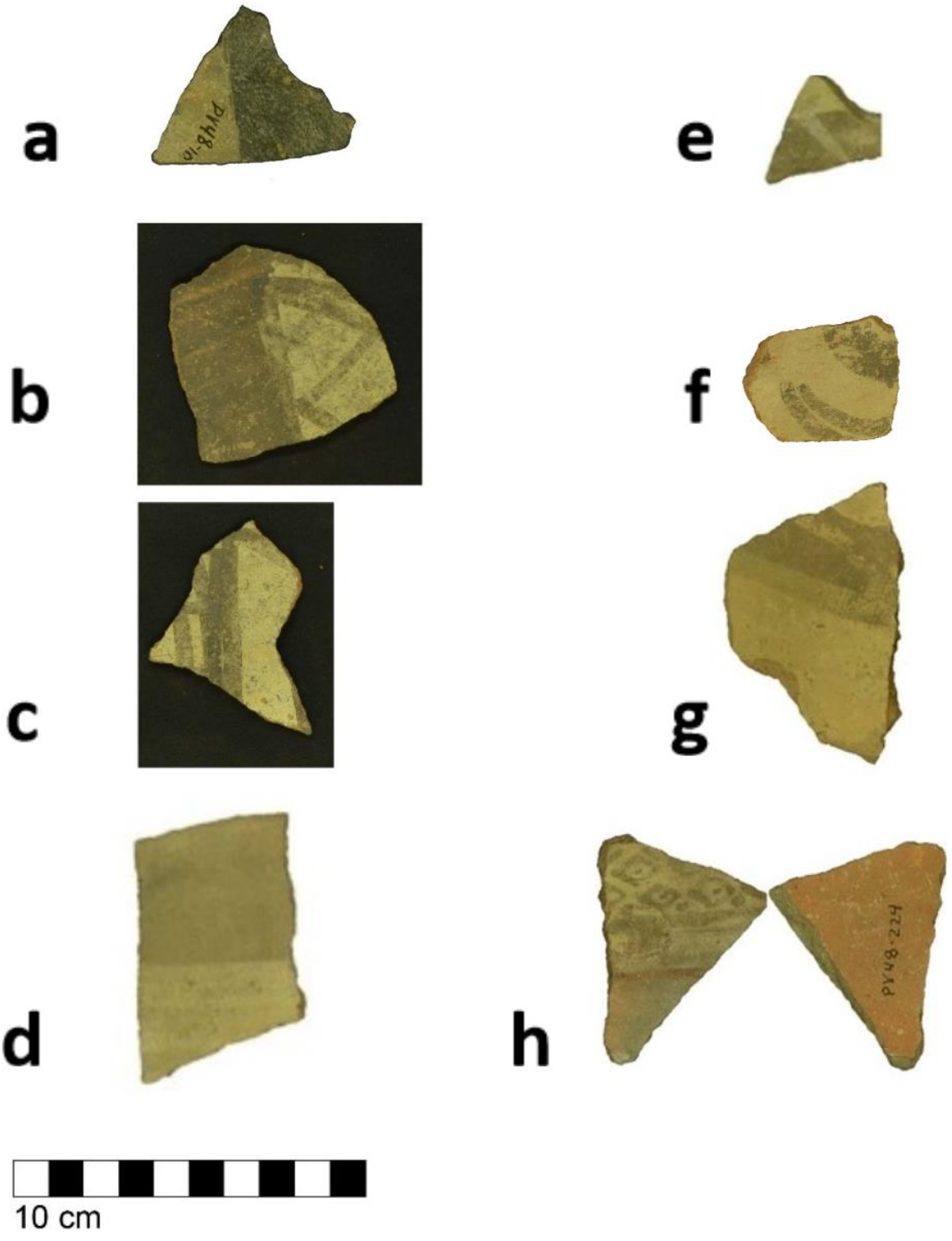


Figure 2. 6. cont.

FIGURE 2.7 ORANGEWARE FORMS AND EXAMPLES

a) Form ON: PV48-57c; Surface collection; c4130; Paste A; Diameter 41cm
c) Form OI: PV48-28; Surface collection; c1475; Paste A; Diameter 11cm
d) Form OL: PV48-164a; Surface collection; c3245; Paste A; Diameter 13cm
e) Form CE PV48-342a; Surface collection; c6162; Paste M; Diameter 15cm
f) Form DF: PV48-137d; Surface collection; c5696; Paste A; Diameter 17cm
g) Form Beaker Shaped Olla: PV48-164a; Surface collection; c3238; Paste A; Diameter 10cm
h) Form Beaker Shaped Olla: PV48-347; Surface collection; c4717; Paste A; Diameter 11cm
i) Form Beaker Shaped Olla: PV48-9; Surface collection; c3777; Paste A; Diameter 18cm
j) Form BB: PV48-229; Surface collection; c5493; Paste N; Diameter 3.1cm
k) Form LZ5: PV48-1; Surface collection; c6364; Paste J; Diameter 8cm
l) Form CE-Small: PV48-93; Surface collection; c3706; Paste J; Diameter 10cm
m) Form CI1: PV48-12; Surface collection; c31; Paste J; Diameter 15cm
n) Form LZ1: PV48-274; Surface collection; c4998; Paste M; Diameter 17cm
o) Unknown Form: PV48-57b; Surface Collection; c6689; Paste J
p) Unknown Form: PV48-34; Surface Collection; c5452; Paste A
q) Unknown Form: PV48-343b; Surface Collection; c6245; Paste A
r) Unknown Form: PV48-137a; Surface Collection; c5739; Paste A
s) Unknown Form: PV48-193; Surface Collection; c4875; Paste M
t) Unknown Form: PV48-96; Surface Collection; c6482; Paste M
u) Unknown Form: PV48-193; Surface Collection; c4885; Paste M
v) Unknown Form: PV48-343b; Surface Collection; c6239; Paste A
w) Unknown Form: PV48-349; Surface Collection; c4767; Paste A
x) Unknown Form: PV48-121c; Surface Collection; c1554; Paste J
y) Unknown Form: PV48-224; Surface Collection; c1223; Paste J

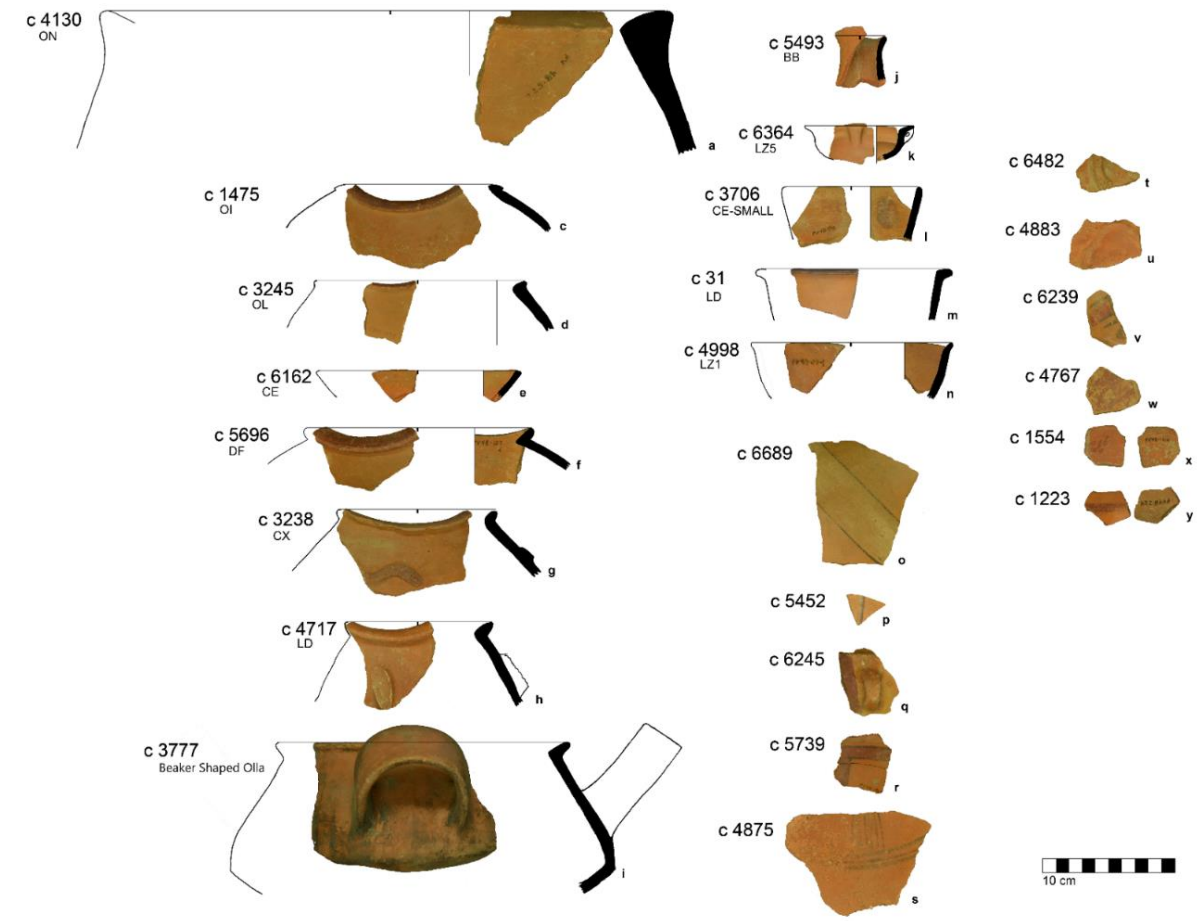


Figure 2. 7. cont.

FIGURE 2.8 RED-SLIP FORMS AND EXAMPLES

a) Form CO: PV48-343b; Surface collection; c6126; Paste B; Diameter 17cm
b) Form CN: PV48-332; Surface collection; c2277; Paste B; Diameter 14cm
c) Form BZ5: PV48-289; Surface collection; c2842; Paste B; Diameter 15cm
d) Form BW: PV48-164e; Surface collection; c830; Paste D; Diameter 17cm
e) Form Aryballoid: PV48-164c; Surface collection; c6561; Paste C; Diameter 10cm
f) Form Aryballoid: PV48-137b; Surface collection; c5704; Paste B; Diameter 10cm
g) Form C-Shortneck: PV48-121f; Surface collection; c1582; Paste M; Diameter 12cm
h) Form LC: PV48-113d; Surface collection; c4471; Paste C; Diameter 11cm
i) Form LY: PV48-113c; Surface collection; c5659; Paste I; Diameter 8cm
j) Form CN: PV48-113b; Surface collection; c5651; Paste I; Diameter 10cm
k) Form BJ: PV48-1; Surface collection; c430; Paste B; Diameter 9cm
l) Form LR: PV48-164c; Surface collection; c854; Paste B; Diameter 30cm
m) Form BC: PV48-45a; Surface collection; c1185; Paste B; Diameter 22cm
n) Form CH: PV48-29; Surface collection; c1831; Paste C; Diameter 16cm
o) Form CE: PV48-13; Surface collection; c3786; Paste D; Diameter 26cm
p) Form DM: PV48-164b; Surface collection; c6540; Paste B; Diameter 21cm
q) Form BZ4: PV48-32; Surface collection; c1702; Paste C; Diameter 30cm
r) Form BF: PV48-28; Surface collection; c3492; Paste C; Diameter 14cm
s) Form CE-Small: PV48-19h; Surface collection; c3960; Paste M; Diameter 10cm
t) Form BJ: PV48-12; Surface collection; c3960; Paste I; Diameter 9cm
u) Unknown Form: PV48-208; Surface Collection; c4380; Paste J
v) Unknown Form: PV48-179; Surface Collection; c3461; Paste D
w) Unknown Form: PV48-164c; Surface Collection; c3261; Paste I
x) Unknown Form: PV48-164c; Surface Collection; c3262; Paste I
y) Unknown Form: PV48-45a; Surface Collection; c1161; Paste I
z) Form CX: PV48-20e; Surface collection; c4209; Paste M; Diameter ~11cm
aa) Form CX: PV48-32; Surface collection; c527; Paste J; Diameter 20cm
bb) Form BZ: PV48-32; Surface collection; c2666; Paste D; Diameter 14cm
cc) Form CX: PV48-32; Surface collection; c529; Paste B; Diameter 16cm

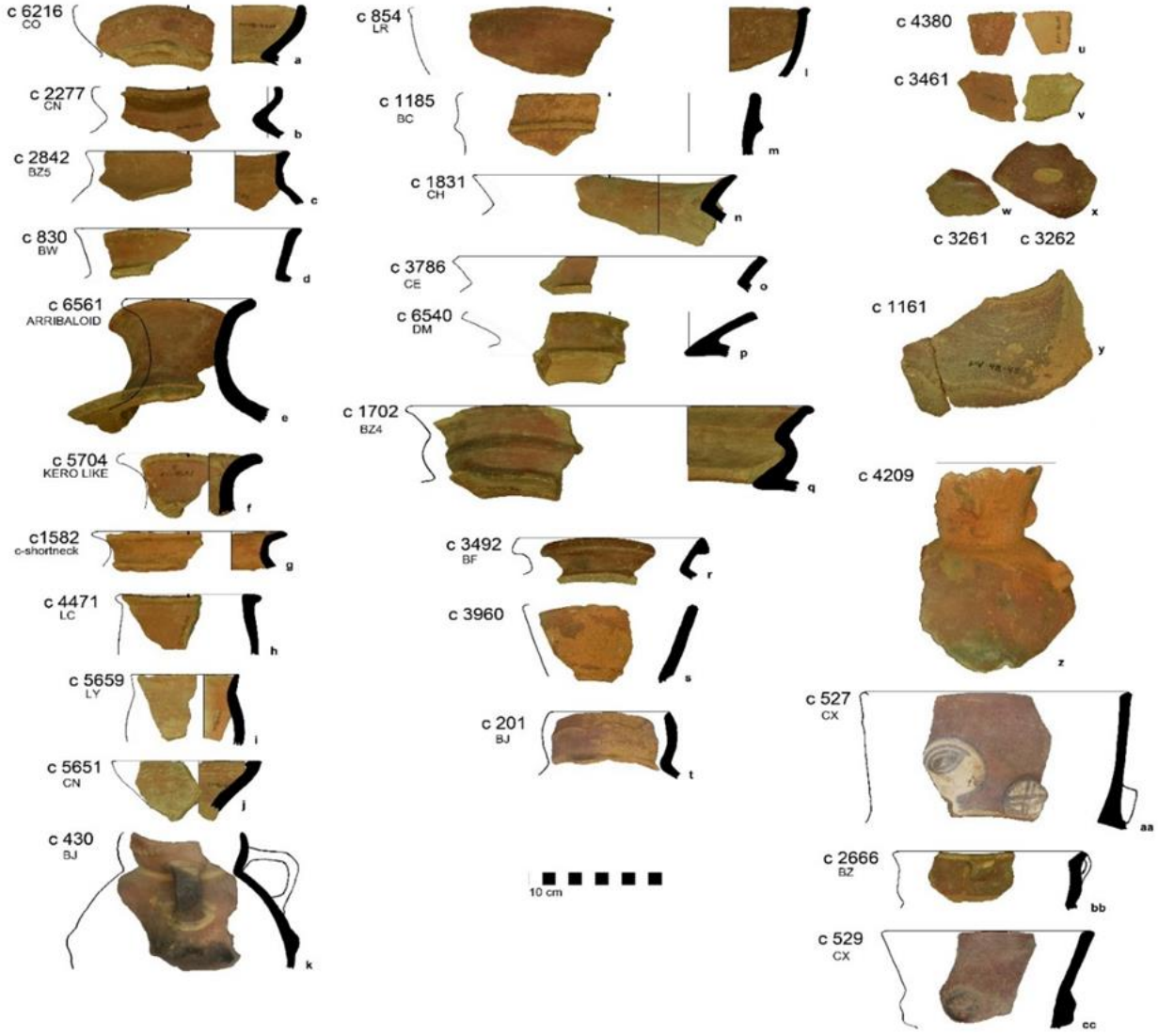


Figure 2. 8. cont.

FIGURE 2.9 SMOKED-BLACKWARE FORMS AND EXAMPLES

a) Form OI: PV48-12; Surface collection; c33; Paste L; Diameter 22cm
b) Form BC: PV48-22; Surface collection; c3055; Paste L; Diameter 20cm
c) Form KERO-LIKE: PV48-12; Surface collection; c164; Paste L; Diameter 16cm
d) Form LD: PV48-35; Surface collection; c5583; Paste E; Diameter 17cm
e) Form LD: PV48-45b; Surface collection; c1082; Paste E; Diameter 20cm
f) Form LD: PV48-45c; Surface collection; c1121; Paste E; Diameter 20cm
g) Form LD: PV48-45c; Surface collection; c1122; Paste E; Diameter 14cm
h) Form LD: PV48-164c; Surface collection; c5079; Paste L; Diameter 15cm
i) Form BE: PV48-57b; Surface collection; c3594; Paste L; Diameter 16cm
j) Form BE: PV48-57b; Surface collection; c 3593; Paste L; Diameter 14cm
k) Form LW-Unique: PV48-45a; Surface collection; c 1205; Paste L; Diameter 25cm
l) Form DF: PV48-45b; Surface collection; c1084; Paste L; Diameter 17cm
m) Form LX: PV48-96b; Surface collection; c6461; Paste L; Diameter 21cm
n) Form LZ: PV48-224; Surface collection; c1230; Paste E; Diameter 20cm
o) Form BZ5: PV48-295; Surface collection; c2808; Paste K; Diameter 15cm (This "chevron" form is mentioned for Robles Moqo (Menzel 1964: 56).
p) Unknown Form: PV48-1b; Surface Collection; c6392 K; (Early Horizon)
q) Unknown Form: PV48-1b; Surface Collection; c6390 L; (Early Horizon)
r) Unknown Form: PV48-1b; Surface Collection; c3860 E; (Early Horizon)
s) Unknown Form: PV48-1b; Surface Collection; c3861 E; (Early Horizon)
t) Unknown Form: PV48-; Surface Collection; Un-numbered; Paste E
u) Unknown Form: PV48-; Surface Collection; Un-numbered; Paste E
v) Unknown Form: PV48-; Surface Collection; Un-numbered; Paste E
w) Unknown Form: PV48-12; Surface Collection; c2601; Paste E
x) Unknown Form: PV48-88; Surface Collection; c3197; Paste K
y) Unknown Form: PV48-12; Surface Collection; c165; Paste L
z) Unknown Form: PV48-14; Surface Collection; c3912; Paste L
aa) Unknown Form: PV48-86; Surface Collection; c6071; Paste K
bb) Unknown Form: PV48-20; Surface Collection; c6188; Paste E
cc) Unknown Form: PV48-35; Surface Collection; c5583; Paste E
dd) Unknown Form: PV48-35; Surface Collection; c5584; Paste E
ee) Unknown Form: PV48-35; Surface Collection; c5585; Paste E
ff) Unknown Form: PV48-164a; Surface Collection; c3251; Paste E
gg) Unknown Form: PV48-164a; Surface Collection; c3252; Paste E
hh) Unknown Form: PV48-164a; Surface Collection; c3253; Paste E
ii) Unknown Form: PV48-341; Surface Collection; c2236; Paste E
jj) Unknown Form: PV48-341; Surface Collection; c2237; Paste E
kk) Unknown Form: PV48-341; Surface Collection; c2238; Paste E
ll) Unknown Form: PV48-341; Surface Collection; c2239; Paste E

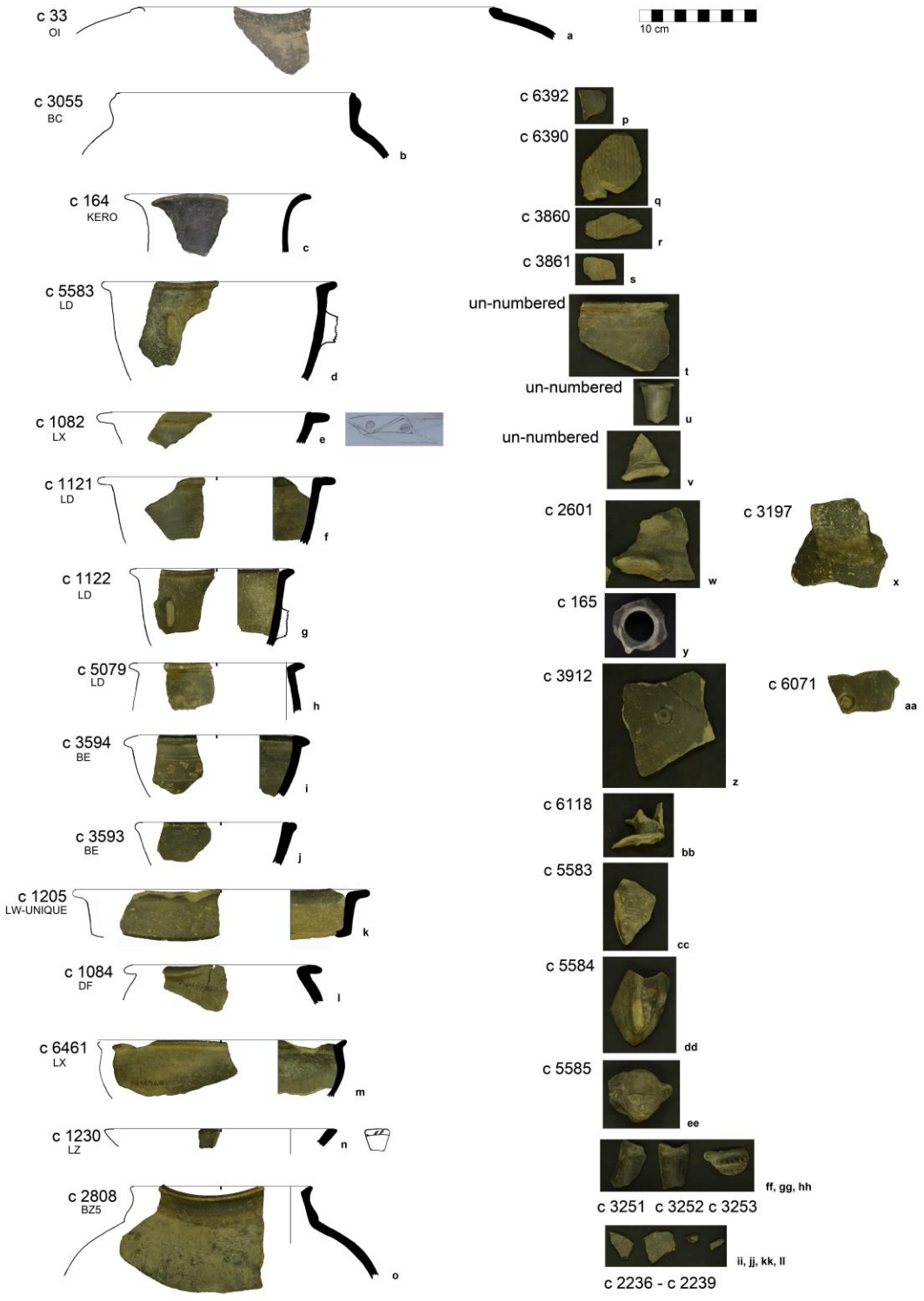
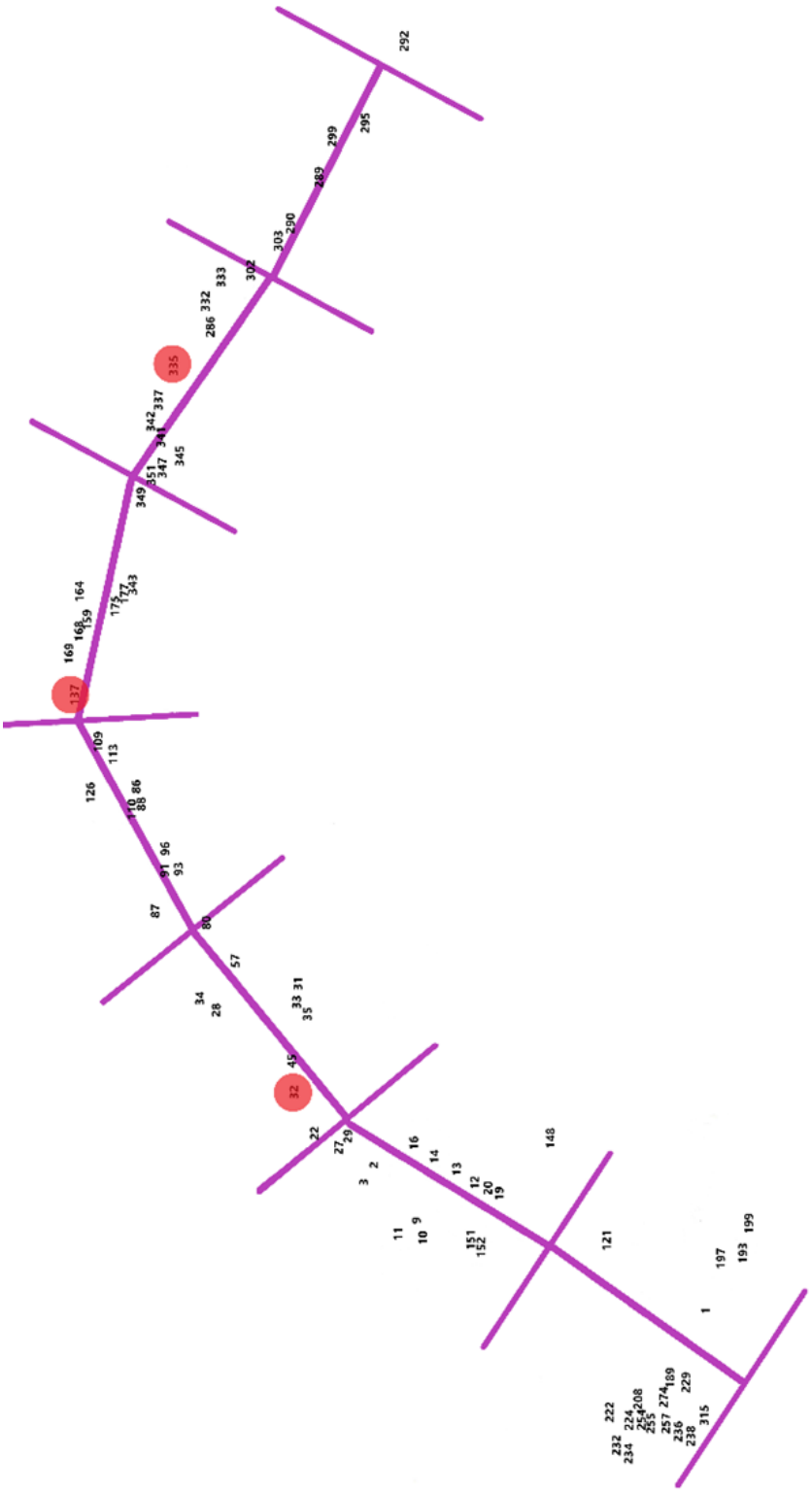
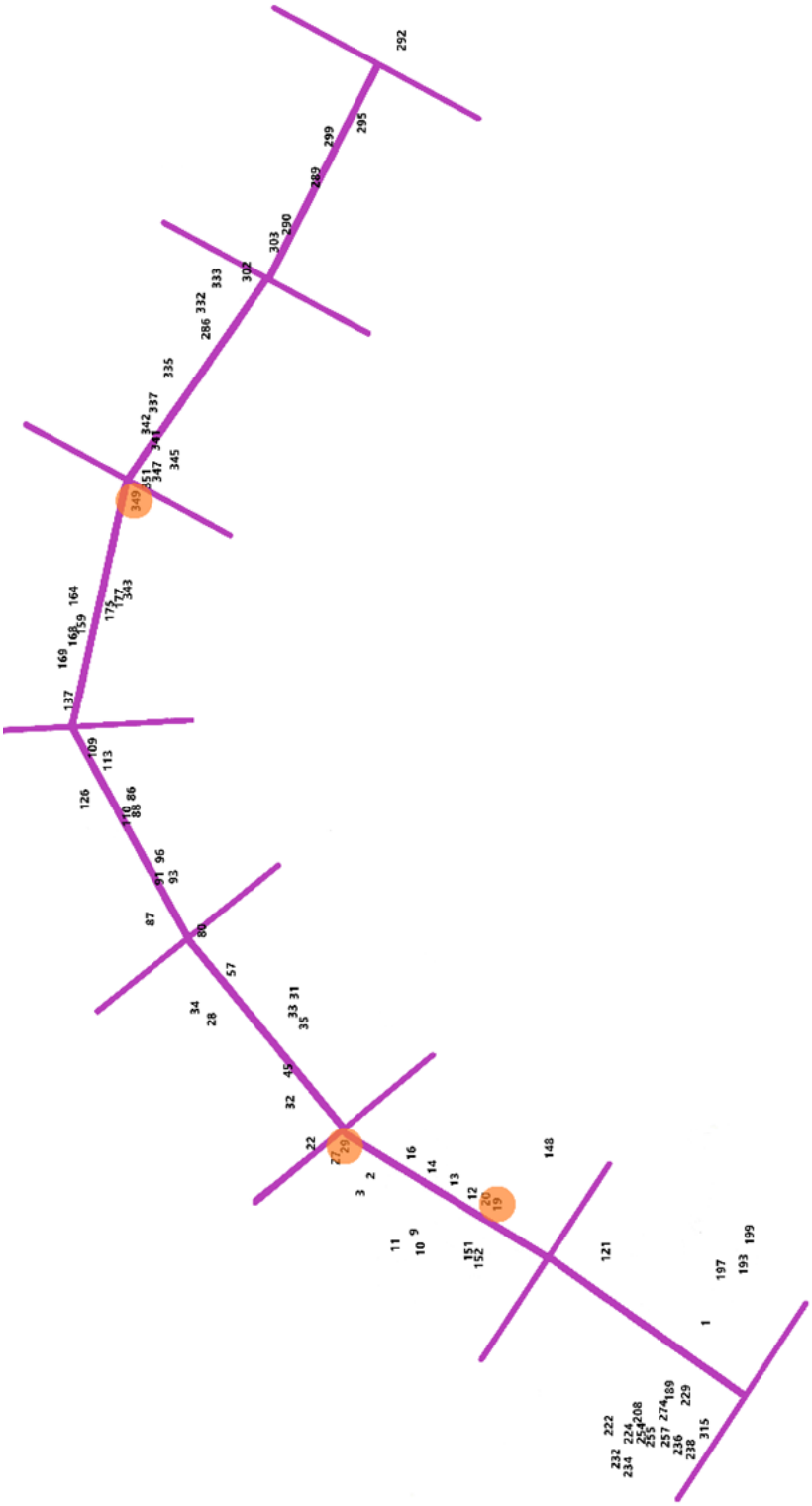


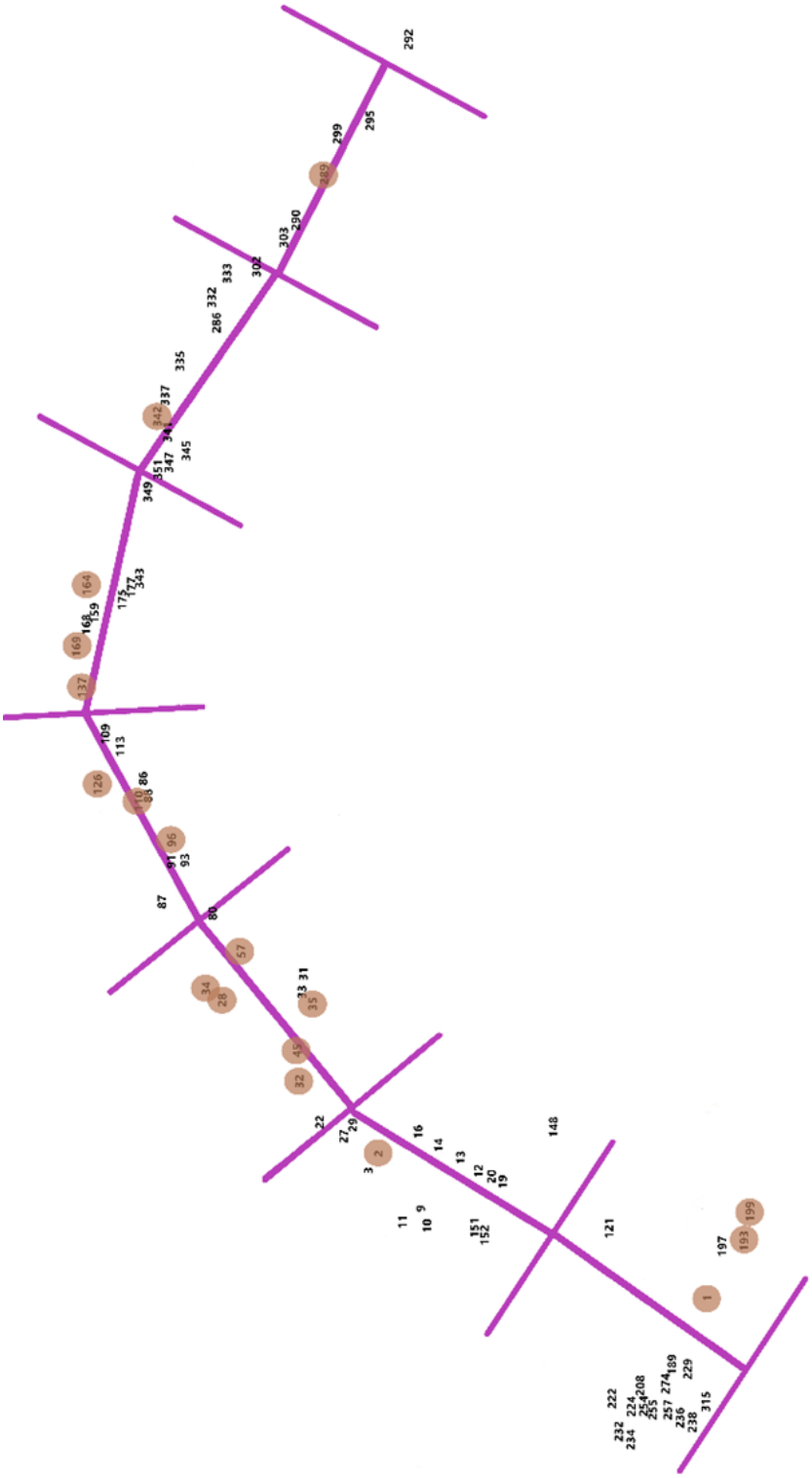
Figure 2. 9. cont.



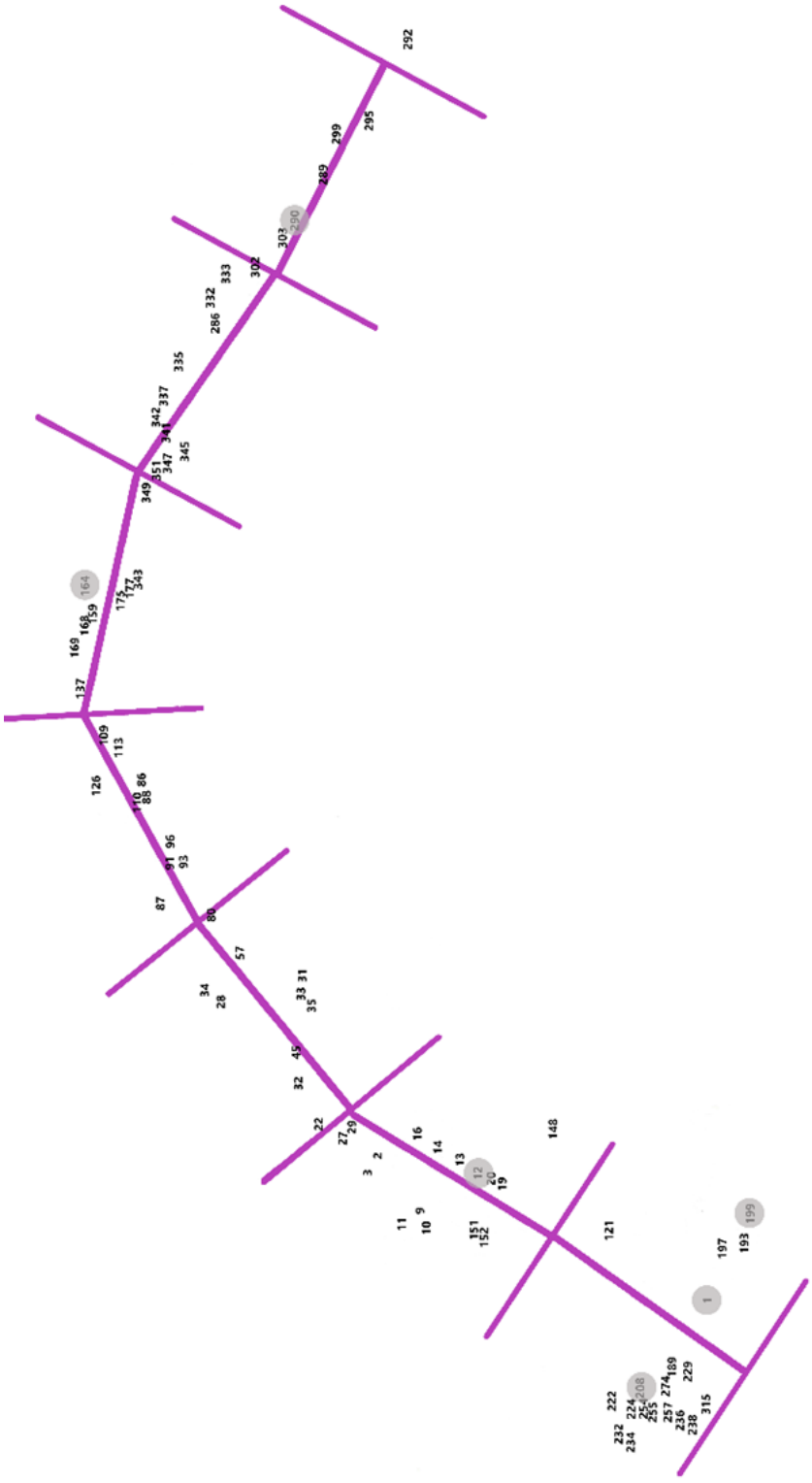
Map 2. 1. Red-on-White ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



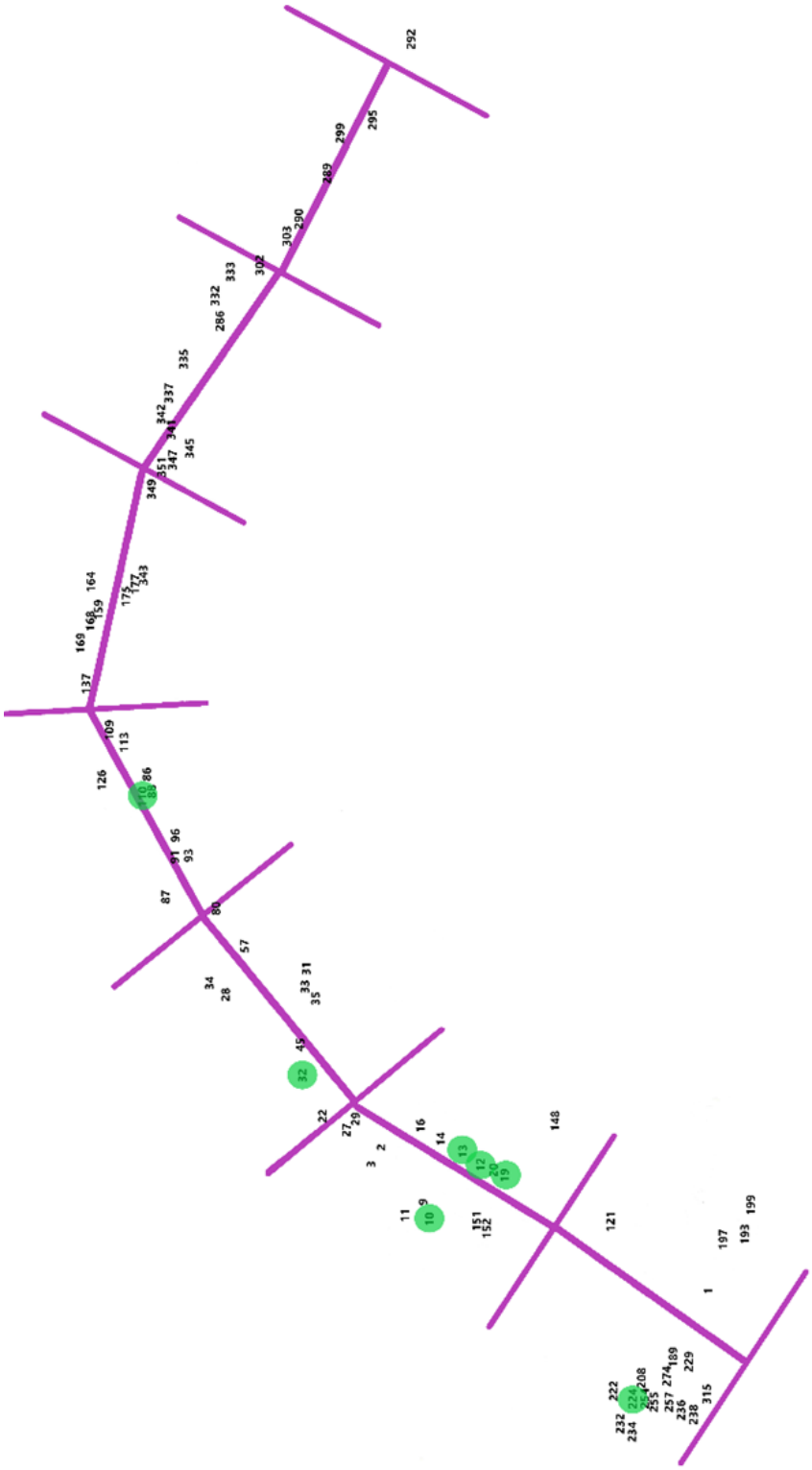
Map 2. 2. Punctate ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



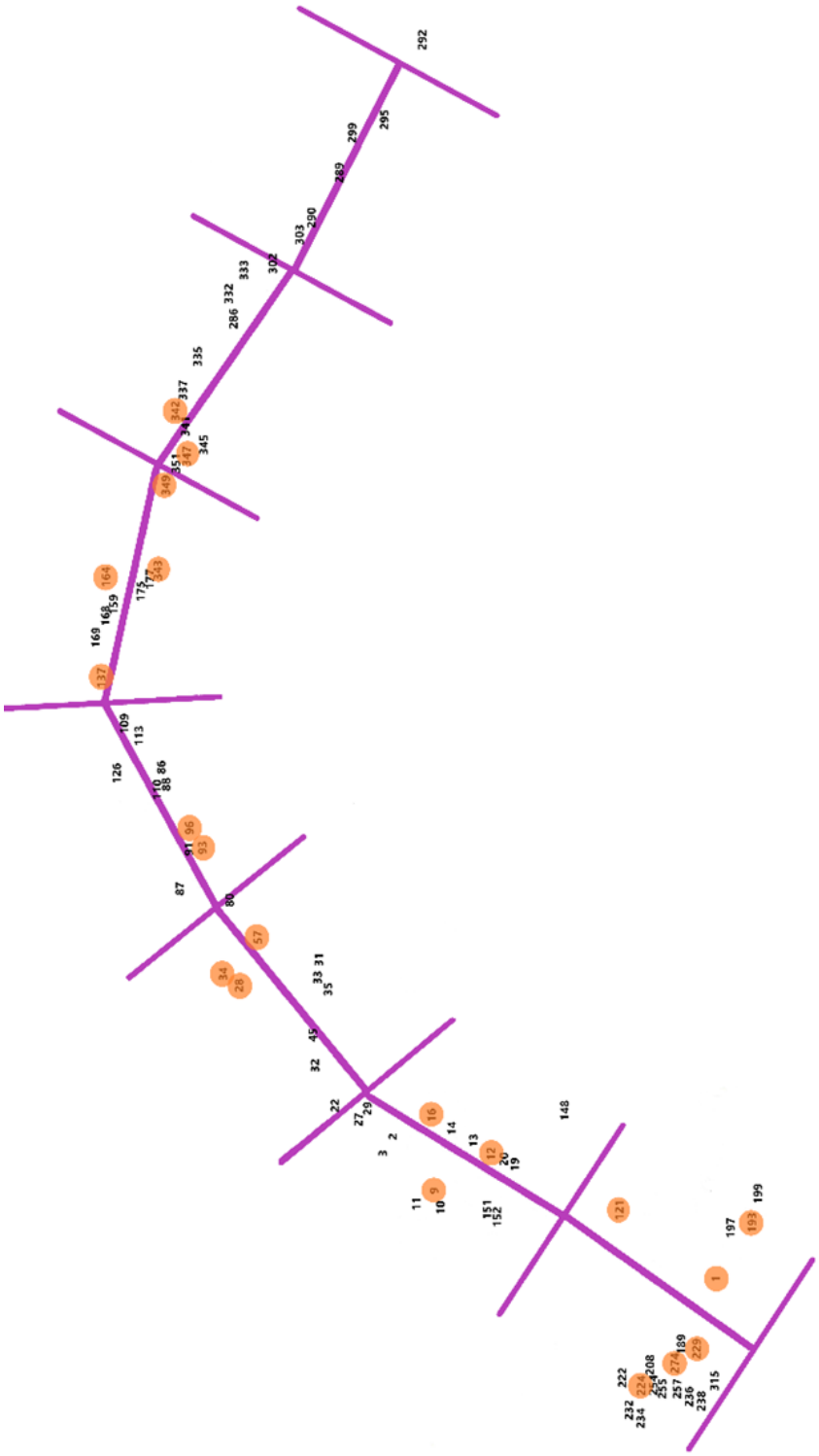
Map 2. 3. Brownware ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



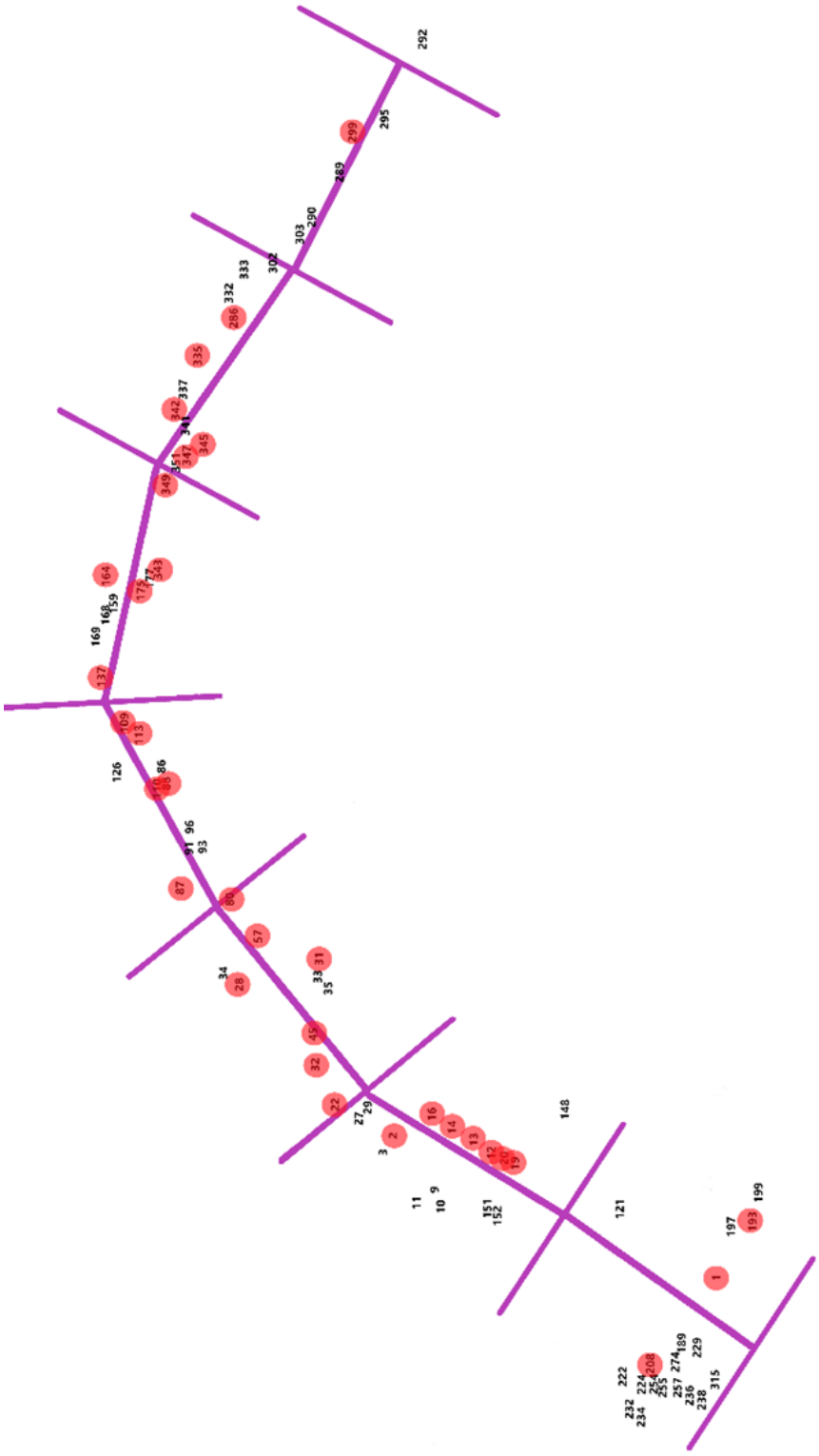
Map 2. 4. Brown-creme ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



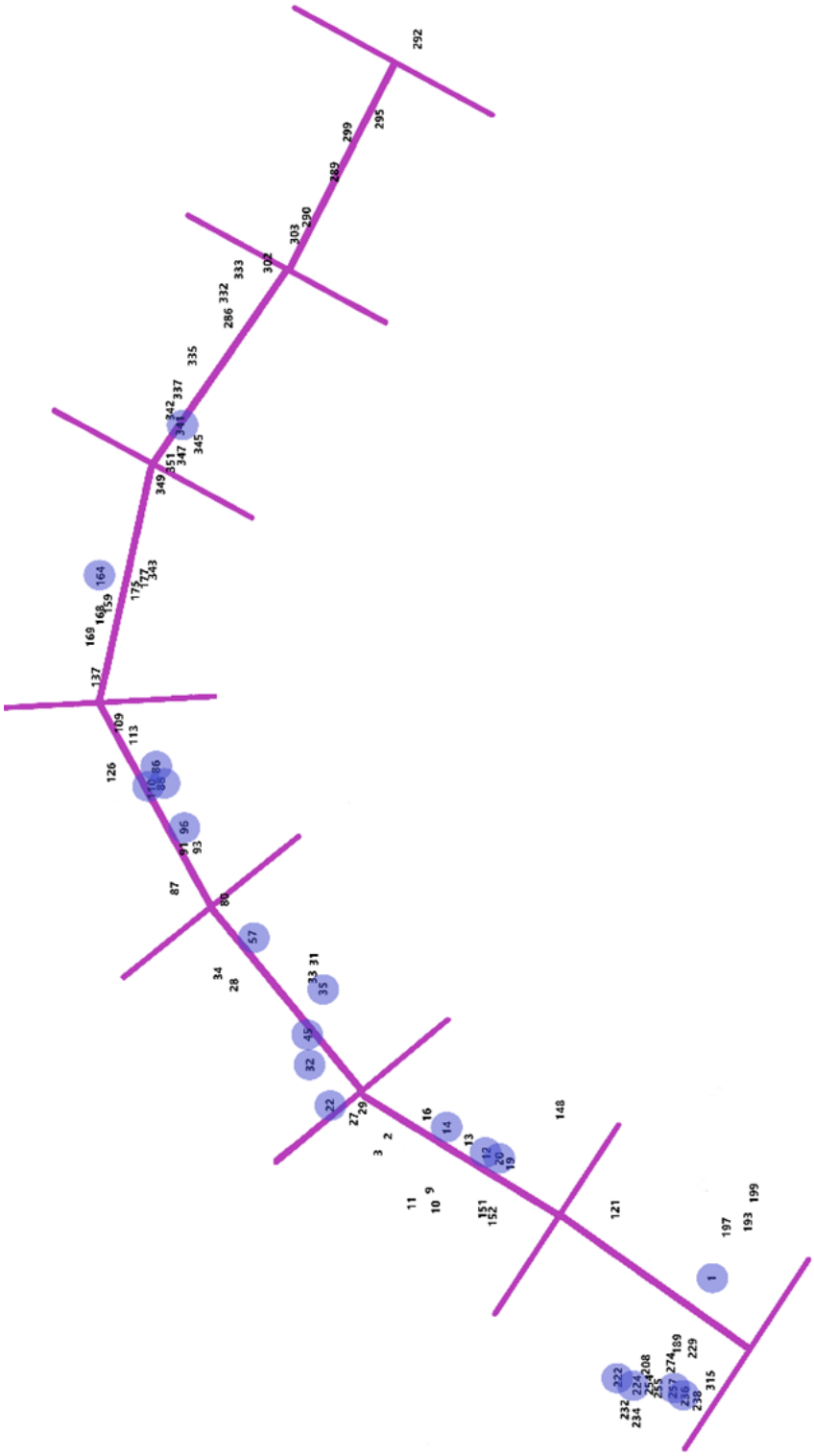
Map 2. 5. Chancay Black-and-White ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



Map 2. 6. Orangeware ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



Map 2. 7. Red Slip ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.



Map 2. 8. Smoked Blackware ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.

Table 2. 1. Ceramic styles in the Lurín Valley during the Late Intermediate Period.

Site	Inca-Lurín	Smoked Black ware	Red-Slipped	Orange-ware	Brown-ware	Brown-Cream	Red-on-white	Punctate	Chancay black-and-white	Distance from Ocean
PV48-1	X	X	X	X	X	X	.	.	.	3
PV48-2b	.	.	X	.	X	.	.	.	.	18
PV48-2c	.	.	X	.	.	.	.	.	.	14
PV48-9	X	.	.	X	.	.	.	.	.	14
PV48-10	.	.	.	.	.	.	.	.	X	15
PV48-12	X	X	X	X	.	X	.	.	X	14
PV48-13	.	.	X	.	.	.	.	.	X	15
PV48-14	.	X	X	..	.	.	.	.	.	15
PV48-16	.	.	X	X	.	.	.	.	.	16
PV48-19f	.	.	.	.	.	.	.	.	X	14
PV48-19g	X	.	X	.	.	.	.	X	.	14
PV48-20a	.	X	X	.	.	.	.	.	.	14
PV48-20d	.	.	X	.	.	.	.	.	.	14
PV48-20e	.	.	X	.	.	.	.	.	.	14
PV48-22	.	X	X	.	.	.	.	.	.	22
PV48-28	X	.	X	X	X	.	.	.	.	26
PV48-29	.	.	.	.	.	.	.	X	.	20
PV48-31	.	.	X	.	.	.	.	.	.	25
PV48-32	X	X	X	.	X	.	X	.	X	23
PV48-34	.	.	.	X	X	.	.	.	.	27
PV48-35	X	X	.	.	X	.	.	.	.	25
PV48-45a	X	.	X	.	X	.	.	.	.	24
PV48-45b	.	X	X	.	.	.	.	.	.	24
PV48-45c	.	X	X	.	.	.	.	.	.	24
PV48-57b	.	X	X	X	.	.	.	.	.	26
PV48-57c	.	.	X	X	X	.	.	.	.	26
PV48-80	.	.	X	.	.	.	.	.	.	30
PV48-86	X	X	.	.	.	.	.	.	.	36
PV48-87	.	.	X	.	.	.	.	.	.	32
PV48-88	.	X	X	.	.	.	.	.	.	35
PV48-93	.	.	.	X	.	.	.	.	.	34
PV48-96	.	X	.	X	X	.	.	.	.	35
PV48-109a	X	.	X	.	.	.	.	.	.	38
PV48-110	X	X	X	.	X	.	.	.	X	36

PV48-113d	.	.	X	.	.	.	.	.	.	37
PV48-121c	.	.	.	X	.	.	.	.	.	37
PV48-126	.	.	.	.	X	.	.	.	.	37
PV48-137a	.	.	.	X	X	.	X	.	.	41
PV48-137b	X	.	X	.	.	.	.	.	.	41
PV48-137d	.	.	X	X	.	.	.	.	.	41
PV48-164a	X	.	X	X	X	X	.	.	.	47
PV48-164c	.	X	X	.	.	X	.	.	.	47
PV48-169	X	.	.	.	X	.	.	.	.	45
PV48-175	.	.	X	.	.	.	.	.	.	47
PV48-193	.	.	X	X	X	.	.	.	.	3
PV48-199	.	.	.	.	X	X	.	.	.	1.5
PV48-208	X	.	X	.	.	X	.	.	.	5
PV48-222	.	X	.	.	.	.	.	.	.	5
PV48-224	X	X	.	X	.	.	.	.	X	5
PV48-229	X	.	.	X	.	.	.	.	.	5
PV48-236	.	X	.	.	.	.	.	.	.	5
PV48-257	.	X	.	.	.	.	.	.	.	5
PV48-274	.	.	.	X	.	.	.	.	.	5
PV48-286	X	.	X	.	.	.	.	.	.	60
PV48-289	.	.	.	.	X	.	.	.	.	65
PV48-290	X	.	.	.	.	X	.	.	.	64
PV48-299	X	.	X	.	.	.	.	.	.	69
PV48-335	X	.	X	.	.	.	X	.	.	58
PV48-341	.	X	.	.	.	.	.	.	.	53
PV48-342a	X	.	X	X	X	.	.	.	.	55
PV48-342b	.	.	X	.	.	.	.	.	.	55
PV48-343a	X	.	X	.	.	.	.	.	.	55
PV48-343b	.	.	.	X	.	.	.	.	.	55
PV48-345b	.	.	X	.	.	.	.	.	.	53
PV48-347	X	.	X	X	.	.	.	.	.	53
PV48-349	.	.	X	X	.	.	.	X	.	52

Chapter 3

THE CERAMIC STYLES IN THE LURÍN VALLEY DURING THE LATE HORIZON

Overview

In the Central coast the Late Horizon starts at 1476 A.C.E. This date was first suggested by Rowe (1945) based on his readings of several historical accounts. It was later supported by the presence of strong influenced from Inca style on cultural materials in the Ica valley uncovered in the detailed seriation analysis by Menzel (1976), although its absolute accuracy has been questioned (see Julien 2008). The Late Horizon is associated with the widespread distributions of Inca Polychrome ceramics in the central coast. Their distribution is often interpreted as proxy for the direct expansion of the Incan polity or an Incan direct influence over those areas in where their ceramics are found.

In this chapter I discuss surface collections from the Lurín Valley having sherds decorated similar to Cuzco Polychrome pottery vessels. Rowe (1944) described Inca pottery based on ceramic collections recovered from buildings at Sacsayhuaman in the Cuzco Basin. He called those ceramics "Cuzco Polychrome." Sacsayhuaman is dated by historical accounts left by the Spanish and has been associated to Inca Pachacuti who started its' construction project and to his two descendants, Topa Inca and Huayna Capac, who continued work on it. The pottery found at Sacsayhuaman was largely

uniform in type and decorations, and “may be considered the typical pottery of the later or Imperial Inca Period” (Rowe 1944, 47).

From his excavations, Rowe (1944) identified eight Cuzco ceramic types: (1) Cuzco Polychrome, (2) Cuzco Buff, (3) Cuzco Red and White, (4) Cuzco Polychrome Plated, (5) Qoripata Polychrome, (6) Huantanay Polychrome, (7) Urcusuyu Polychrome, and (8) Chanchón types. Additional ceramic styles with Inca decorated motifs found in the Cuzco area include (9) Sillustani ceramics (described by Tschopik 1946; Bauer 2004, 92) and (10) Pacajes ceramics (Bauer 2004, 92). These styles are well illustrated at the site of Machu Picchu which was built and occupied during the Late Horizon and is considered a type-site for defining Cuzco Polychrome (Bingham 1979; Salazar and Burger 2004).

However, Inca pottery style was not uniform throughout the empire. Rowe (1944) argued that in the past, natives across the Inca Empire had manufactured their Inca ceramics in specialized towns. For this reason, among others, there has been much confusion in the identification of proper “Incan ceramics” (from Cuzco) as opposed to “Inca in style” ceramics. Identifying sherds as “Cuzco polychrome” has caused confusion in archeological interpretations up to today (Bauer 2004). Pottery produced outside of the Cuzco region, as well as pottery from far-flung corners of the Inca Empire, has been identified as Cuzco Polychrome even though there are often discernible and important stylistic differences between the local styles and that of those found at the Cuzco Basin.

Rowe (1944, 43) made the same observation early on: “The Inca Empire included so many diverse people with different traditions, [it would] be most surprising if all the pottery produced in it conformed to any single style.” Similar observations have been made by other scholars over confusion of Inca Style pottery with local variations (e.g. D’Altroy 1992; Miller 1987; Salazar and Burger 2004).

I refer to the Inca-style pottery found in the Lurín Valley as Lurín-Inca to acknowledge that the vast majority of the fragments are from vessels probably manufactured locally rather than in Cuzco or its environs. By definition the Lurín-Inca style dates to the Late Horizon. They are spatially associated with sherds of assorted styles at a number of sites. I argue that some of the other styles are contemporary to Lurín-Inca (i.e., the collections are from a single-component site that was deposited during the Late Horizon), and that those styles have a temporal association to Lurín-Inca sherds; other collections have materials that were deposited before or after the Late Horizon and their association with Lurín-Inca sherds is spatial rather than temporal.

My primary goals in this chapter are (1) to describe the Lurín-Inca style and its similarities and differences from Cuzco Polychrome; (2) to associate it with other ceramic styles in the Lurín valley during the Late Horizon; (3) to describe the vessel forms that are demonstrably associated temporally with Lurín-Inca materials (e.g., gravelots or from the same strata at excavated sites); and (4) to note the clustering and

geographical distribution of the styles and their associations in space. The ceramic styles in the Lurín valley during the Late Horizon are summarized in Table 3.1.

Late Horizon ceramic styles in the Lurín valley

Lurin Inca style

The Lurín-Inca ceramic style is characterized by the imitation of Incan forms and Incan designs made in a local manner. That is to say, and as the name implies, the Lurín-Inca style has close similarities to contemporary Inca (Cuzco) polychrome ceramics. It is important to compare the similarities and difference of the Lurín-Inca style and the Inca pottery found in the Cuzco Region, as although there are many similarities there are also discernible differences between Cuzco manufactured vessels and locally manufactured-in-Cuzco-style vessels (Miller 1987).

Thirty surface collections I analyzed had Lurín-Inca styled pottery: PV48-1, 2, 9, 12, 19, 19g, 28, 32, 35, 45a, 57a, 86, 109a, 110, 113a, 137b, 164a, 169, 208, 224, 229, 286, 290, 299, 332, 335, 342a, 343a, 345a, and 347 (Table 3.1, Map 3.1). These thirty sites are up and down the valley with no geographical restriction or particular geographical association. They do concentrate on the upper half of the river valley somewhat —but that might be explained by urban sprawl in the lower half of the valley as Lima's borders grew and civilians encountered archeological surface finds, obliterating them from the archeological surveys. Further Interpretation of this distribution are developed later. The Lurín-Inca style was never found alone in any

assemblage. There are at least seven other pottery style that are contemporary with the Lurín-Inca materials. On several occasions they are found in the same sites and in the same assemblage. Their spatial association with Lurín-Inca sherds suggests either (1) that they are contemporary or date to the Late Horizon; (2) that the collections are from multi-component sites and the styles are not contemporary; or (3) that they overlap in time.

The Lurín-Inca style co-occurred with other ceramics styles. At seven sites, Lurín-Inca style is found in assemblages that also have Smoked Blackware styled ceramic sherds: PV48-1, 12, 32, 35, 86, 110, and 224; it is found with Red-Slip style at seventeen (17) sites: PV48-1, 12, 19g, 28, 32, 45a, 109a, 110, 137b, 164a, 208, 286, 299, 335, 342a, 343a, and 347; it is found with Orangeware at nine sites: PV48-1, 9, 12, 28, 164a, 224, 229, 342a, and 347; it is found with Brownware at nine sites: PV48-1, 28, 32, 35, 45a, 110, 164a, 169, and 342a; it is found with Chancay Black-and-White style at four sites: PV48-12, 32, 110, and 224; it is found with Brown-Creme style at five sites: PV48-1, 12, 164a, 208, and 290; it is found with Red-on-White at two sites: PV48-32 and 335; it is found with Punctate style at one site: PV48-19g; and it is found at one site with Colonial sherds: PV48-208 (Table 3.1). Their co-occurrence with so many different ceramic styles will be discussed in Chapter 5.

Bingham (1979) identified a dozen vessel shapes from Machu Picchu which he attributed as “pure Inca”, but it was Rowe’s work in Cuzco that laid the foundation for

what today are the most widely accepted Inca pottery forms. Rowe distinguished between eleven basic forms which he labeled with alphabetical letters (Rowe 1944, Fig.8.a-k, 48). These are: *Form "a"* – an aryballoid shaped vessels; *Form "b"* – a "handled jar" or "pelike-shaped jug" as described by Bingham (1979, Fig.71, 119); *Form "c"* – a "two handled jar" (Salazar and Burger 2004, cat.No.38, 138); *Form "d"* – "jug" shape (Bingham 1979, Fig.72, 120) or also called "short-neck jar" shape (Salazar and Burger 2004, cat.No.28, 136); *Form "e"* – a "wide mouth" aryballoid; *Form "f"* – a "two handed bowl" (Salazar and Burger 2004, cat.No.41, 140), sometimes referred to as a "two handled dish" (Bingham 1979, Fig.70, 118); *Form "g"* – a "deep plate" (Bingham 1979, Fig.72, 120); *Form "h"* – a "bottle" (Salazar and Burger 2004, cat.No.21, 133); *Form "i"* – a Kero or a "cup" shape (Bingham 1979, Fig.72, 120); *Form "j"* – a "beaker shaped olla" (Bingham 1979, Fig.70, 118) or "pedestal olla" (Salazar and Burger 2004, cat.No.59, 146); and *Form "k"* – a "three legged brazier" (Bingham 1979, Fig.72, 120) or just plain "brazier" (Matos 1999). Each of these eleven vessel forms, with the possible exception of braziers, are found in surface collections containing Lurín-Inca style styled pottery. Some shapes are more readily recognized and are more prolific in their presence in the archeological record than others (Figure 3.1). For example, aryballoid shaped vessels are present at site PV48-28 , 164a, 164c, 347, and 286. Examples of "beaker shaped olla" are somewhat uncommon; they are present at only four sites: PV48-9, 164a, 347, and 335. Examples of "two-handed bowls" on the other hand, are prolific. These forms are present at sites PV48-1, 2c, 11, 12, 16, 19h, 27, 28, 32, 34, 35,

45a, 45c, 57b, 86, 96, 109a, 110, 113a, 113d, 137b, 164a, 164b, 199, 208, 289, 290, 229, 342a, and so on. The full content of each site's artifact assemblage is in Appendix D.

Lurín-Inca style vessels share similar decorative motifs with Incan (Polychrome) ceramics, not just morphological similarities in ceramic forms. There are many examples of very similar, if not identical, Lurín-Inca decorative motifs in the collections analyzed. Incan style decorative motifs are described in detail elsewhere (Strong and Corbett 1943) and are well illustrated in several publications (e.g. Schmidt 1929; Bingham 1979; Matos 1999; Salazar and Burger 2004). Here I discuss those similarities observed in the assemblages I analyzed.

There are at least eight recognized Incan style decorative motifs found in the assemblages analyzed. These include decorations in "fern pattern" (Figure 3.1.q-v), "serrated pattern" (Figure 3.1.j-l), "serried diamond pattern" (Figure 3.1.a-b and Figure 3.1.h-i), "hatched zone pattern" (Figure 3.1.f, Figure 3.1.m-o, and Figure 3.1.y), and "banded borders" decorated vessel sherds (Figure 3.1.c-e, and Figure 3.1.f). Other decorative motifs include an "Andean cross" or "step mountain" pattern on thin in black line over a red ban also outlined in thin black lines (Figure 3.1.w). If one examines that ceramic closely, a double row of checkered pattern is clear; the first layer of checker is in black squares, while a second row above it is in red squares —presumably followed by a third row of black checkers again as this is a seen pattern elsewhere for this

decoration. Another Incan motif is illustrated in Figure 3.1.x; this one is two thin black lines with a thickly applied red fill between them.

The main color palette for Lurín-Inca style ceramics are reds, whites, and blacks (Figure 3.1). In the Lurín-Inca examples these colors are often applied to an orange colored clay matrix used for the manufacture of these vessels. Red pigments are usually thick and carefully applied; they range from a dark robust maroon color (Figure 3.1.a), slightly less robust reds, to darkish reds (Figure 3.5.w, Maerz and Paul 1950, Plt.7.J). White pigments also have a color range. They are at times carefully and thickly applied in vibrant white color (Figure 3.1.c), but can also range to more cream-white or "off white" (Figure 3.5.u, Maerz and Paul 1950, Plt.9.A). The blacks are almost always applied in thin, well-defined highlighting or outlining lines which range in thickness depending on their purpose. When the color black delineates a colored band or is used as a pattern it is carefully and thickly applied (e.g. Figure 3.1.d and Figure 3.1.m). When the color black is used as a filler (of shapes) it is more thinly applied and can take on the appearance of dark gray or "cub" gray (e.g. Figure 3.5.b and Figure 3.5.j, Maerz and Paul 1950, Plt.15).

The most common clay matrix and paste used to manufacture Lurín-Inca styled vessels is Paste K. However, Paste A, Paste D, Paste I, Paste J, and Paste N are also used in the manufacture of Lurín-Inca ceramics (Appendix F).

Other vessel forms at Lurín-Inca sites

In addition to variations of Rowe's eleven basic forms there are also additional forms in Lurín-Inca assemblages. Broadly defined these shape categories are: jars, ollas, and bowls. Within each shape category there are significant variations in rims as well as differences in reconstructed diameters. There is a bimodal distribution for reconstructed rim diameters for ollas, suggesting that olla size was important to the makers. While there is a normal distribution for jar and bowl reconstructed diameters, there are similar shapes which come in varied sizes (big and small) —a point I will come back to later —but which also suggest size of jars and bowls was important to the makers. Sometimes they made the same form in two distinct sizes (see Miller 1987). However, the various vessel form and sizes suggest an absence of standardized rim shapes. In turn we can infer that local ceramic production, perhaps at the level of the settlement, community, or household, was common for the Late Intermediate Period.

Nuanced differences in the rim profiles suggests a total of sixty-nine (69) different jar forms associated with assemblages that have Lurín-Inca sherds; their profiles are illustrated in Figure Appendix A.1, the frequency of their dimeters and thickness are illustrated in Figure Appendix A.2 and Figure Appendix A.3, respectively. The sixty-nine jar forms are as follows —some of which resembled previously published forms: (1) form BB; (2) form BC –"domestic olla" form elsewhere (Cutright 2015, Fig.4, 72); (3) form BD; (4) form BE; (5) form BF –resembling Menzel's Late Horizon "jars"

(1966, Plt.XVII, Fig.85); (6) form BF1; (7) form BG; (8) form BH; (9) form BJ; (10) form BK; (11) form BK2; (12) form BO; (13) form BR; (14) form BU; (15) form BV; (16) form BW; (17) form BY –which resembles Menzel's Ica style, Phase 6 jar rim from Chincha and which she calls "complex-rim bowl" (1966, Plt.XIII, Fig.42 and Fig.46) and Kroeber and Strong's "heavy lip with beveled edge" bowl (Kroeber and Strong 1924, 16–17); (18) form BZ; (19) form BZ1; (20) form BZ3; (21) form BZ4; (22) form BZ5; (23) form BZ6; (24) form CA1; (25) form CC; (26) form CE —these are called "olla con cuello" by Makowski (2002 Fig.8a) and "collard jar" by Menzel (1966, Plt.X, Fig.14); (27) form CF; (28) form CG; (29) form CH; (30) form CH1; (31) form CI; (32) form CJ; (33) form CK1; (34) form CL; (35) form CM; (36) form CN; (37) form CNQ1; (38) form CO; (39) form CP; (40) form CQ; (41) form CR; (42) form C-squash; (43) form CT; (44) form CU; (45) form CW; (46) form CW1 – this form resembles Kroeber and Strong's "beveled-lip bowl"(Kroeber and Strong 1924, 17); (47) form CW2; (48) form CX; (49) form CZ; (50) form CZ1; (51) form CZ2; (52) form CZ6; (53) form CZ7; (54) form CZ8; (55) form Kero; (56) form DA; (57) form DB; (58) form DC; (59) form DD; (60) form DE; (61) form DF; (62) form DJ —Menzel (1966, Fig,14., 85) calls such forms "collared jars;" (63) form DL; (64) form DM – Menzel (1966, Fig.14, 85) calls these form "collared jars;" (65) form DN; (66) form DO; (67) form jar unique; (68) form W2; and (69) form X2. Overall, typical jar forms in the Lurín-Inca style are (1) continuations of forms existing prior to Inca influence; (2) imported forms —either (a) the idea was imported, or (b) the vessels themselves are imported (like the Inca style vessels shapes); and (3) innovative shapes manufactured locally.

Based on differences in rim shapes there are thirteen (13) olla forms: (1) form OA; (2) form OB; (3) form OC; (4) form OF; (5) form OG; (6) form OH; (7) form OI; (8) form OK; (9) form OL; (10) form OM; (11) form ON; (12) form OO; and (13) form OP. Their profiles are illustrated in Figure Appendix B.1, the frequency of their diameters is illustrated in Figure Appendix B.2, and the frequency of the olla's rim thickness is showed in Figure Appendix B.3. Like jars, typical olla forms are (1) continuations of forms existing prior to Inca influence; (2) imported forms —either (a) the idea was imported or (b) the vessels themselves are imported (like the Inca style vessels shapes); and (3) innovative shapes manufactured locally.

Based on differences in rim shape, twenty (20) bowl types can be distinguished from assemblages that have Lurín-Inca sherds: (1) form LD; (2) form LG1; (3) form LJ1; (4) form LK; (5) form LN; (6) form LN-big; (7) form LO; (8) form LP; (9) form LR; (10) form LT; (11) form LY; (12) form LY1; (13) form LZ; (14) form LZ-Unique; (15) form LZ5; (16) form LZ3; (17) form LZ6; (18) form LZ7; (19) form LZ8; and (20) form LF –also called form LF because of their morphological similarities to the "P'uku" vessels described by Cháves in her ethnographic work on pottery production at Raqchi'I, Cuzco (1984, 164). Cross-cut bowl profiles are illustrated in Figure Appendix C.1, the frequency of their diameters and thickness are illustrated in Figure Appendix C.2 and in Figure Appendix C.3 respectively. In summary, typical additional bowl forms in the Lurín-Inca assemblages are (1) continuations of forms existing prior to Inca influence; (2) imported forms — either (a) the idea was imported or (b) the vessels themselves are imported (like the

Inca style vessels shapes); (3) innovative shapes manufactured locally; and (4) some shapes, like form LN and form LN-big, come in two distinctly different sizes but in the same shape, suggesting the shape of some vessels are important to the makers.

Figure 3.1. LURÍN-INCA VESSEL FORMS AND EXAMPLES

a) Form Aryballoid: PV48-164a; Surface collection; c5111; Paste J; Diameter 13cm
b) Form Aryballoid: PV48-137a; Surface collection; c4577; Paste K; Diameter ?cm
c) Form LD: PV48-109a; Surface collection; c6597; Paste J; Diameter 15cm
d) Form LD: PV48-109a; Surface collection; c6607; Paste J; Diameter 15cm
e) Form LD: PV48-137a; Surface collection; c5721; Paste D; Diameter 16cm
f) Form LD: PV48-86; Surface collection; c6067; Paste K; Diameter 20cm
g) Form Beaker Shaped Olla: PV48-9; Surface collection; c3777; Paste N; Diameter 18cm
h) Unknown Form: PV48-193; Surface Collection; c4874; Paste I
i) Unknown Form: PV48-343b; Surface Collection; c6246; Paste I
j) Unknown Form: PV48-19g; Surface Collection; c3978; Paste J
k) Unknown Form: PV48-137b; Surface Collection; c4614; Paste J
l) Unknown Form: PV48-137b; Surface Collection; c5710; Paste J
m) Unknown Form: PV48-137a; Surface Collection; c4583; Paste A
n) Unknown Form: PV48-137b; Surface Collection; c4615; Paste K
o) Unknown Form: PV48-137b; Surface Collection; c4616; Paste K
p) Unknown Form: PV48-164c; Surface Collection; c3257; Paste K
q) Unknown Form: PV48-110; Surface Collection; c5214; Paste A
r) Unknown Form: PV48-137d; Surface Collection; c4621; Paste J
s) Unknown Form: PV48-96a; Surface Collection; c4666; Paste J
t) Unknown Form: PV48-345b; Surface Collection; c4667; Paste J
u) Unknown Form: PV48-345b; Surface Collection; c4668; Paste K
v) Unknown Form: PV48-345b; Surface Collection; c4669; Paste K
w) Unknown Form: PV48-347; Surface Collection; c4691; Paste K
x) Unknown Form: PV48-299; Surface Collection; c5021; Paste D
y) Unknown Form: PV48-347; Surface Collection; c4692; Paste K

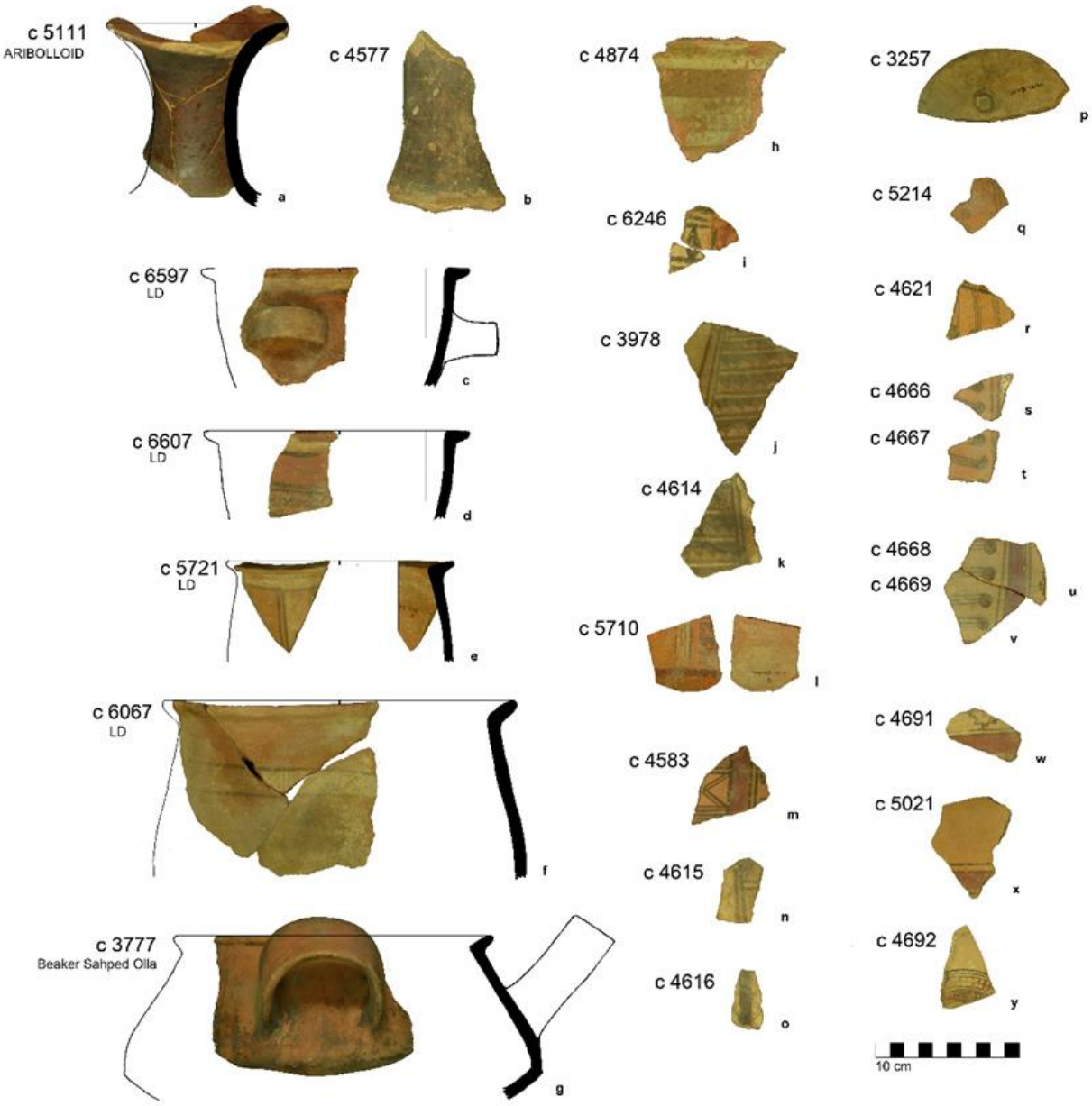
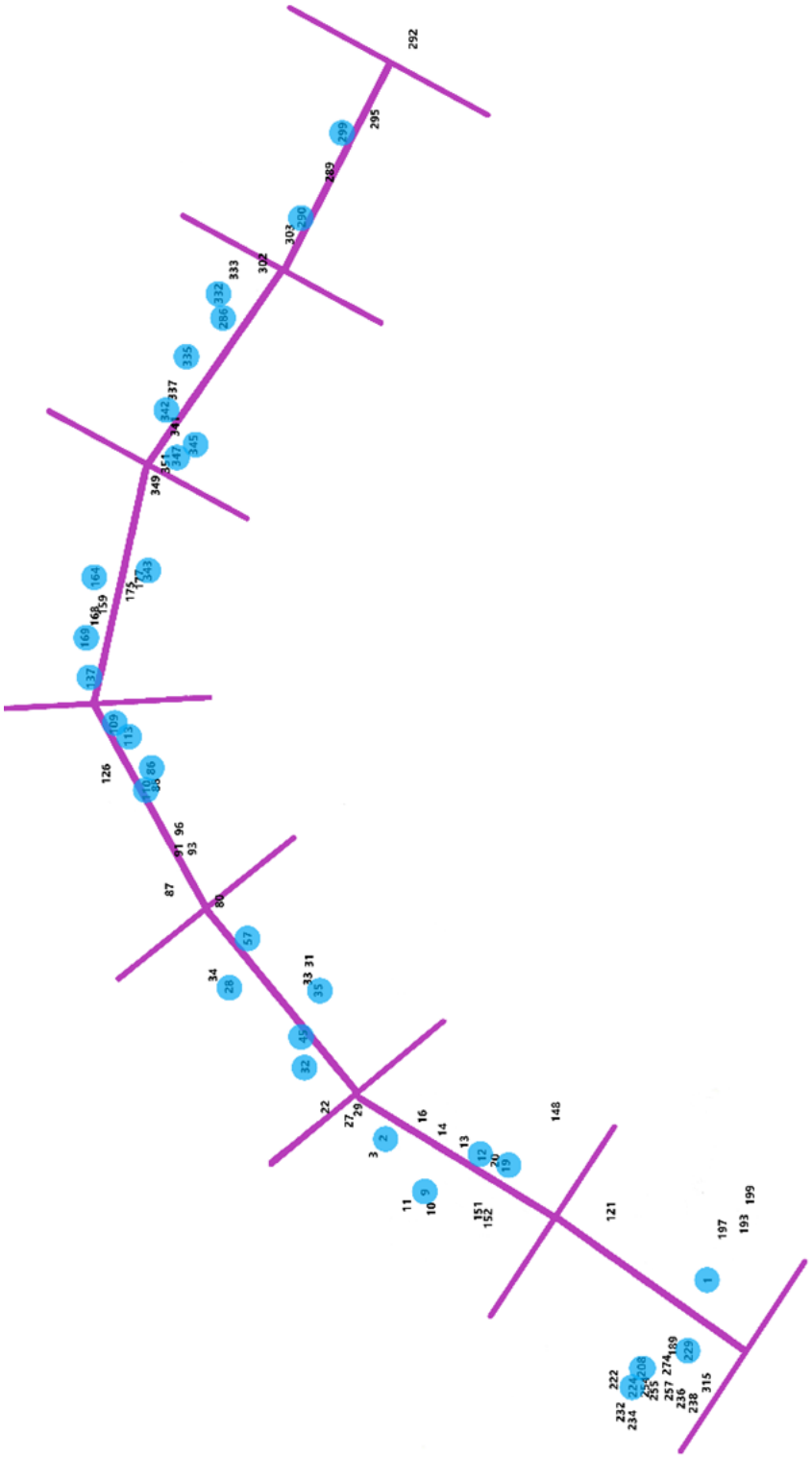


Figure 3. 1. Cont.



Map 3. 1. Lurin-Inca ceramic distribution in the Lurín Valley. Lines approximate 10 km distances.

Table 3. 1. Ceramic styles in the Lurín Valley during the Late Horizon.

Site	Inca-Lurin	Smoked Blackware	Red-Slipped	Orange-ware	Brown-ware	Brown-Cream	Red-on-white	Punctate	Chancay black-and-white	Glazed	Distance from Ocean
PV48-1	X	X	X	X	X	X	.	.	.	.	3
PV48-2	X	.	.	.	.	.	.	.	.	.	14
PV48-9	X	.	.	X	.	.	.	.	.	.	14
PV48-12	X	X	X	X	.	X	.	.	X	.	14
PV48-19	X	.	.	.	.	.	.	.	.	.	14
PV48-19g	X	.	X	.	.	.	.	X	.	.	14
PV48-28	X	.	X	X	X	.	.	.	.	.	26
PV48-32	X	X	X	.	X	.	X	.	X	.	23
PV48-35	X	X	.	.	X	.	.	.	.	.	25
PV48-45a	X	.	X	.	X	.	.	.	.	.	24
PV48-57a	X	.	.	.	.	.	.	.	.	.	26
PV48-86	X	X	.	.	.	.	.	.	.	.	36
PV48-109a	X	.	X	.	.	.	.	.	.	.	38
PV48-110	X	X	X	.	X	.	.	.	X	.	36
PV48-113a	X	.	.	.	.	.	.	.	.	.	37
PV48-137b	X	.	X	.	.	.	.	.	.	.	41
PV48-164a	X	.	X	X	X	X	.	.	.	.	47
PV48-169	X	.	.	.	X	.	.	.	.	.	45
PV48-208	X	.	X	.	.	X	.	.	.	X	5
PV48-224	X	X	.	X	.	.	.	.	X	.	5
PV48-229	X	.	.	X	.	.	.	.	.	.	5
PV48-286	X	.	X	.	.	.	.	.	.	.	60
PV48-290	X	.	.	.	.	X	.	.	.	.	64
PV48-299	X	.	X	.	.	.	.	.	.	.	69
PV48-332	X	.	.	.	.	.	.	.	.	.	61
PV48-335	X	.	X	.	.	.	X	.	.	.	58
PV48-342a	X	.	X	X	X	.	.	.	.	.	55
PV48-343a	X	.	X	.	.	.	.	.	.	.	55
PV48-345a	X	.	.	.	.	.	.	.	.	.	53
PV48-347	X	.	X	X	.	.	.	.	.	.	53

Chapter 4

THE CERAMIC STYLES IN THE LURÍN VALLEY DURING THE EARLY COLONIAL PERIOD

Overview

The Colonial Period in Peru begins in 1532 when Pizzaro and his Spanish forces, along with native allies, captured Atahualpa in Cajamarca. The city of Lima was founded shortly thereafter in 1535. From there, in 1542 the Spanish crown set out to control all of its south American territories via the consolidation of power under the command of the Viceroyalty of Peru. The early Colonial Period arguably lasts until about 1580 when Viceroy Toledo's Colonial reforms begging to takes effect over the rule over Peru and other Spanish conquered territories. The reform lasts until A.C.E. 1821 and is followed by the Republican Period (ongoing today). How natives of Peru, particularly those in the Lurín valley, dealt with these rapidly shifting social and cultural landscapes of power was of interest to the Spanish conquistadors then —to some degree— and is an ongoing interest to archaeologists and historians today.

Lima, as the new Spaniard capital in the new world, with its close proximity to the ocean was a high trafficked area and consequently the central coast has a rich body of texts left by various Spanish chroniclers in the 16th and 17th century including accounts by Miguel de Estete (1963 [1533]), Pedro Cieza de León (1946 [1553]), Polo de Ondegardo (1916 [1571]), Francisco de Avila (1873 [1608]), Guamán Poma (1980 [1615]), Vázquez de Espinoza (1948 [1630]), and Bernabé Cobo (1979 [1653]), as well as

other accounts left behind by unknown authors (e.g. Anonymous 1964 [1587]) which are nevertheless informative. Each author wrote with distinct reasons and with particular goals. For instance, Guamán Poma (1980 [1615]) wrote regarding the ill-treatment of the natives by the Spanish missionaries to King Philip II of Spain. Francisco de Avila (1873 [1608]) on the other hand, wrote about the "strange and exotic" beliefs of the natives juxtaposed to the "ordinary and common" beliefs of the Spaniards. Unfortunately, to the best of my knowledge, no Spanish chronicler wrote detailed notes about the production, manufacture, and circulation of ceramics and ceramic styles in those early days. Nor would they have as there was no profit in such observations.

The goal of this chapter is to present the surface collections found in the Lurín valley that have sherds manufactured during Colonial times. I also deal with the contemporary sherds associated with those assemblages belonging to the Colonial Period, their distribution, and their overall ceramic associations.

Colonial ceramic styles in the Lurín valley

Below I describe two ceramic styles which by definition and unmistakably belong to the Colonial Period: glazed ceramics and porcelain pieces. Table 4.1 summarizes these ceramics in context of sites they are found in and with other associated ceramics styles also found at those sites.

Glazed wares

Colonial glazes, new and comparatively vibrant compared to Andean antecedents, are recognized by their glass-like sheen finish; in fact they are so called "colonial vidrada" for it in the Spanish literature (Makowski 2002, 141; Marcone and López-Hurtado 2002). Sherds with bright green and yellow glossy glazes, colors previously unknown in the Andes, are from Europe and by definition belong to the Colonial Period.

Glazed ceramics in the Lurín valley are found in the following six sites: PV48-137b, 164a, 164c, 255, 286, and 347 (Map 4.1). They are not found alone but are found in assemblages that also have Lurín-Inca sherds at four sites: PV48-137b, 164a, 286, and 347; with Smoked Blackware ceramics at one site: PV48-164c; along Red Slip ceramics at five sites: PV48-137b, 164a, PV48-164c, 286, and 347; with Orangeware ceramics at two sites: PV48-164a and 347; with Brownware ceramics at one site: PV48-164a; and with Brown-Creme ceramics at two sites: PV48-164a and 164c (Table 4.1).

With the exception of the glazed ware sherds found near Pachacamac (sherd c1647 at PV48-255), all of the other glazed wares are recovered from five sites located more than 50 Km upstream. These include sites PV48-113b, PV48-164a, PV48-164c, PV48-286, and PV48-347 (Map 4.1). The Glazed sherds are from jars and perhaps bowls with a glazed exterior surface and at least in one case a partially glazed interior surface as well (c1647, Figure 4.1.a). While many of the sherds are small, at least one vessel

form is a local continuation of Late Horizon forms from earlier times: form “CN” (sherd c1647, Figure 4.1.a).

In some instances, the glaze was thickly applied and adhered to the vessel after firing, in other instances the glaze, applied to the exterior surface only, looks like small colored drops on a light-colored background (c860, c870, Figure 4.1.b-c). I suspect that this green glaze was applied to an already fired vessel and then re-fired but that the added pigment did not completely adhere to the surface as might have been wanted by the maker. Alternatively, the color glaze formula might have not been well prepared or applied correctly. This “mis-application,” assuming the colored drops were not done purposefully, reveals a local potter’ effort to incorporate new materials (green glazes in this case) into their ceramic repertoire. The imperfect application of the new material suggests that there must have been a learning curve to successfully applying Spanish glazes to local pottery manufacturing traditions.

Glazed ware vessels are made of local materials including Paste K and Paste J, both of which are light colored matrices with few or no inclusions in them (Appendix F). It is curious that such a refined clay was used for these colonial pieces. It is tempting to hypothesis that the rarity of the new material was reserved for highly refined and processed clays with the intent of producing fineware pieces.

Porcelain

Porcelain derives from certain clays heated to extremely hot temperatures in specialized kilns. The extreme temperatures, higher than other earthenware firing temperatures, vitrifies the minerals in the clay and produces a low permeability, elastic, strong, white, and often semi-translucent product. Porcelain can be sought out for its rarity and exotic appeal —even today. Porcelain would most certainly have been imported into Peru during Colonial times. Its arrival in Peru, along with other Asian goods, was most likely indirect. Originally, Asian goods were imported by the Spanish Manilla Galleons which traveled along an established trade route between the Philippines and Mexico, both which were part of New Spain. Asian commodities would have then come into Peru by way of Acapulco and then only transferred directly from the Manilla Galleons to "Lima ships" which would ferry it south to the burgeoning capital (Schurz 1918, 397). Direct Chinese-Philippine trade with Peru was banned by a set of Spanish royal orders and royal decrees starting in 1582. However, with much silver bullion to offer coming from the silver mines in Potosi, Peruvians could persuade merchants to skirt the royal banning of Asian goods to Peru in a type of black-market. So profitable was the enterprise that people in Lima could find European and Asian goods in 40 shops in the Street of Merchants in the city by the late 1500s; Asian silk textiles were routinely flaunted in public by many in the city and porcelain was a sought out commodity sold in many shops in Lima (Schurz 1918, 394).

The porcelain sherds recovered for this analysis come from two sites. Sherd c4165 was recovered from site PV48-148. Sherd c4168 was found at site PV48-204. Both sites are near the Pampa del Carmen area, approximately five to six kilometers northeast of Pachacamac and about 11 km away from the Pacific Ocean (Map 4.2). Site PV48-148 has only two other ceramic surface sherds associated with it. Both are a Red-slipped style, a common style during the Late Horizon and early Colonial Periods. Site PV48-204 also has one handle fragment in Red-slip style and eight non-characteristic reddish sherds associated with it (Table 4.1).

The first porcelain sherd, c4165, is a small fragment from a vessel of unknown form (Figure 4.1.g). The sherd is decorated on the outside with two colors. A thin black line "contains" the majority of a blue colored swirling design on one side. The blue pigment is seemingly "blurry" from having "run" or having "bled" while being applied or fired but it seems to be a floral-like pattern. At one point this design transgresses the thin containment outline by spilling over onto the clear white background on the other side of the divide. The inner wall of the vessel is undecorated.

The second porcelain sherd, c4168, is an even smaller fragment and is also from a vessel of unknown form (Figure 4.1.h-h_1). Although monochromatic in color, brown-reddish in this case, this porcelain sherd is seemingly higher in quality than sherd c4165 —or at least is more carefully and artistically rendered. The fine detail comes in at least three different linear thickness, shading is demonstrated on one of the painted designs

—an illustrated tree-branch-like scenario is detailed with leaf-like patterns. In this fragment the colors do not “run” or “bleed.” The inner wall of the vessel is undecorated. I do not know exactly from where or when this import was brought into the Lurín, but both pieces belong in the Colonial Period.

Figure 4.1. COLONIAL FORMS AND PORCELAIN EXAMPLES

a) Form CN: PV48-255; Surface collection; c1647; Paste J; Diameter 26cm
b) Unknown Form: PV48-113b; Surface Collection; c5653; Paste K
c) Unknown Form: PV48-164c; Surface Collection; c860; Paste J
d) Unknown Form: PV48-164a; Surface Collection; c870; Paste J
e) Unknown Form: PV48-286; Surface Collection; c1063; Paste K
f) Unknown Form: PV48-347; Surface Collection; c4720; Paste J
g) Unknown Form: PV48-148; Surface Collection; c4165
h) Unknown Form: PV48-204; Surface Collection; c4168
h.1) close up of c4168; (not to scale)

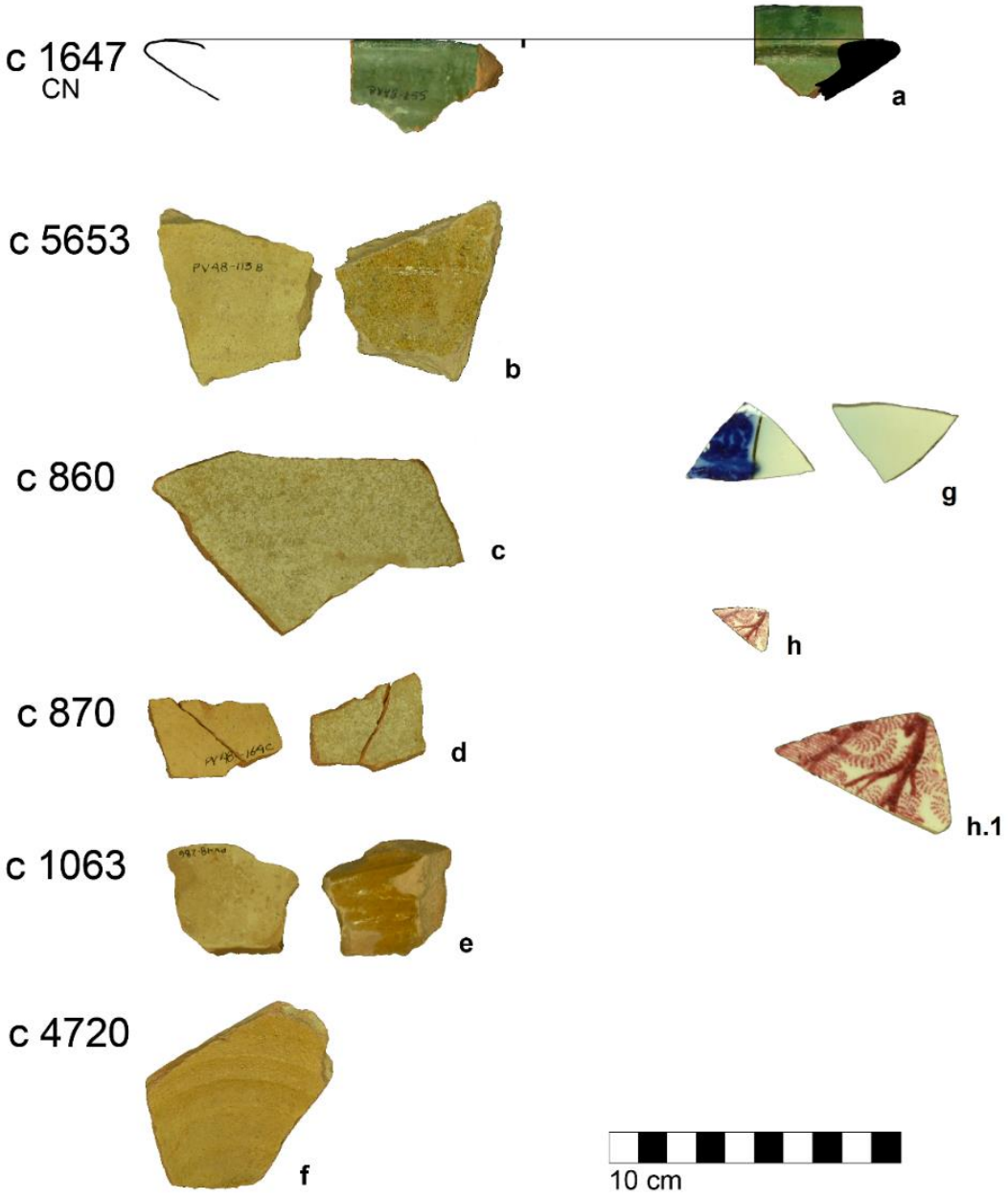
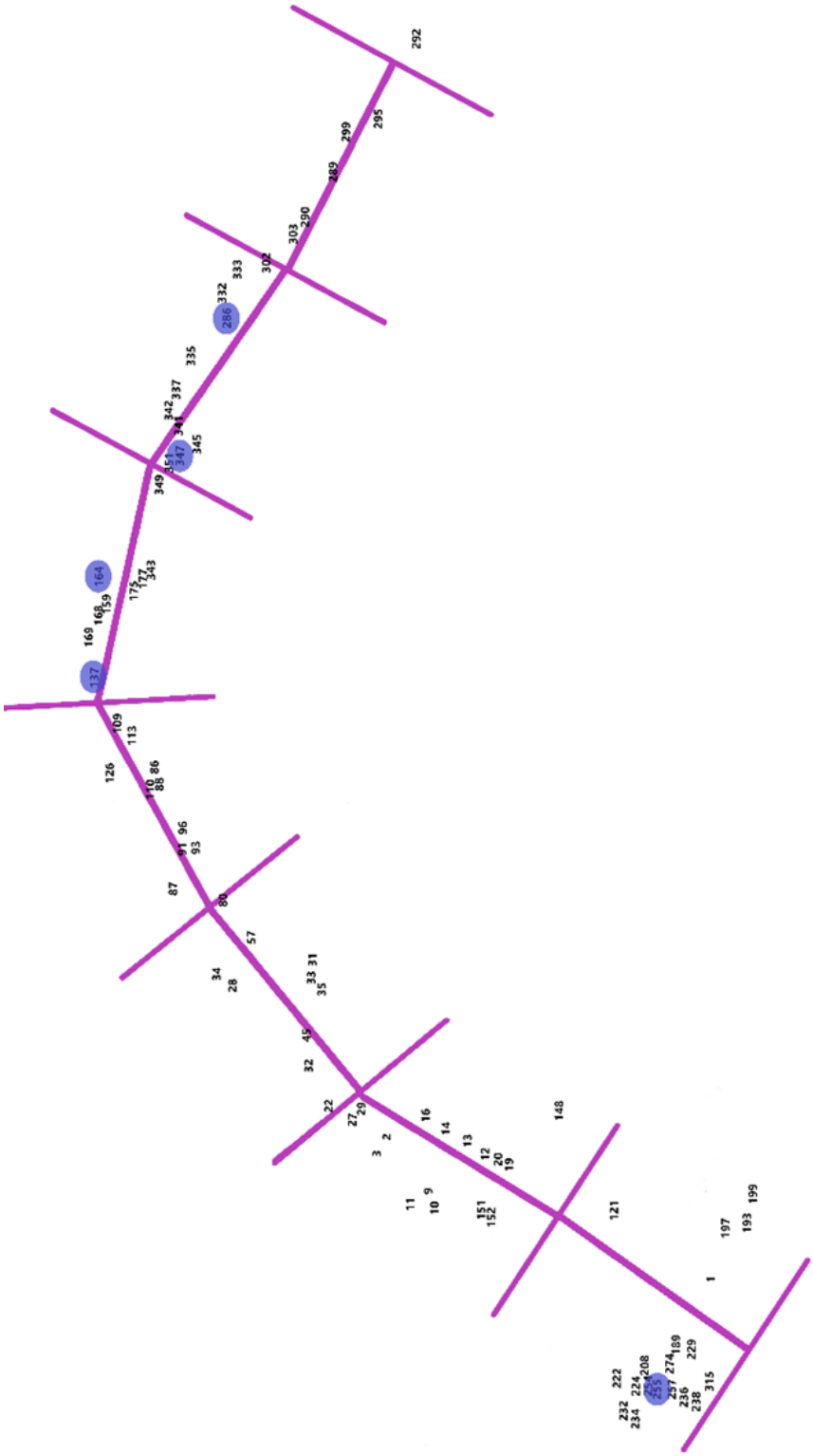
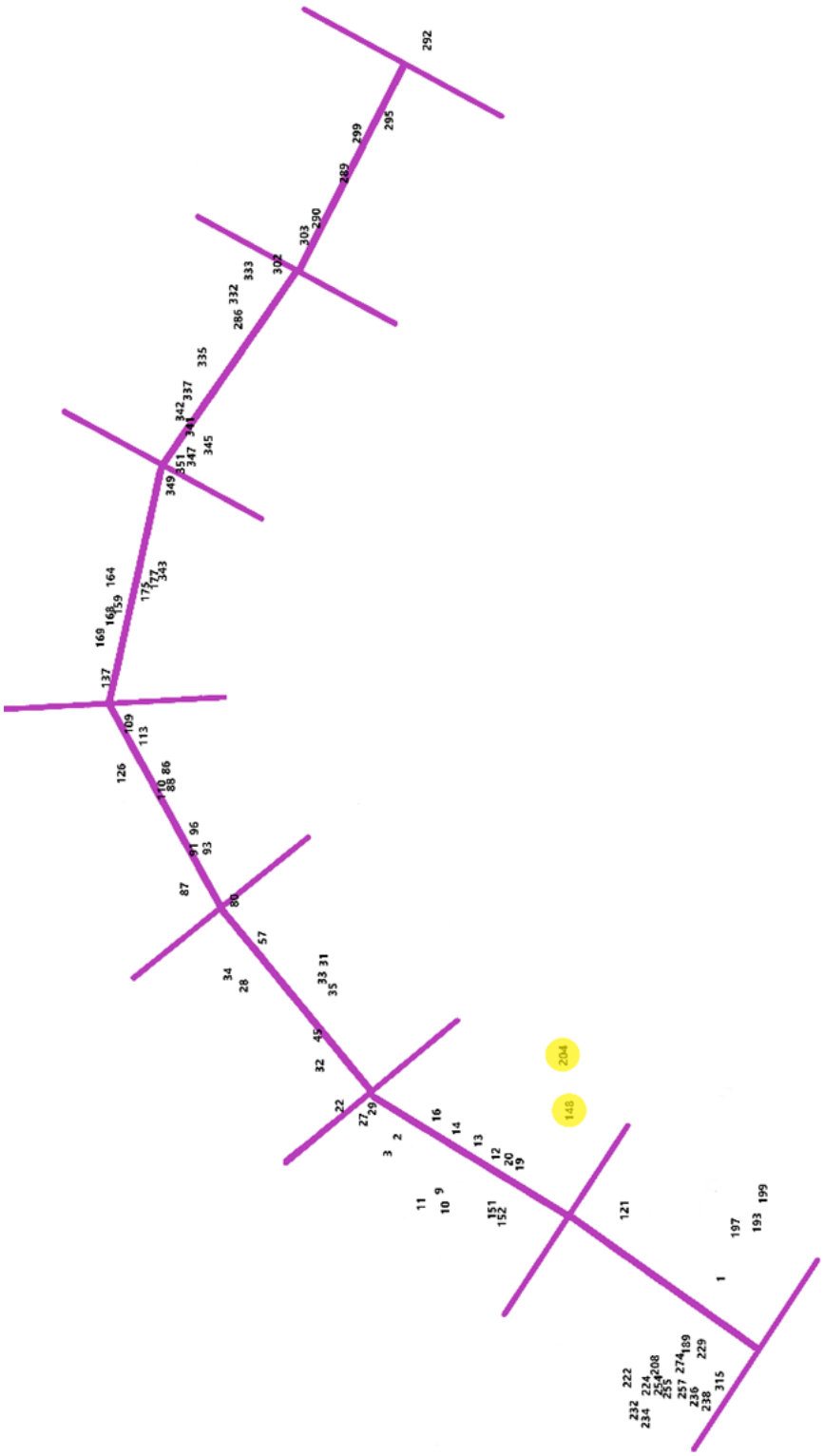


Figure 4. 1. Cont.



Map 4. 1. Glazed ceramics distribution in the Lurín Valley. Lines approximate 10 km distances.



Map 4. 2. Porcelain distribution in the Lurín Valley. Lines approximate 10 km distances.

Table 4. 1. Ceramic styles in the Lurín Valley during the Colonial Period.

Site	Inca-Lurín	Smoked Blackware	Red-Slipped	Orange-ware	Brown-ware	Brown-Cream	Glazed	Porcelain	Distance from Ocean
PV48-137b	X	.	X	.	.	.	X	.	41
PV48-148	.	.	X	.	.	.	.	X	11
PV48-164a	X	.	X	X	X	X	X	.	47
PV48-164c	.	X	X	.	.	X	X	.	47
PV48-204	.	.	X	.	.	.	.	X	12
PV48-255	.	.	.	.	.	.	X	.	2
PV48-286	X	.	X	.	.	.	X	.	60
PV48-347	X	.	X	X	.	.	X	.	53

Chapter 5

LURÍN-VALLEY MACRO POLITICS: A VIEW INFORMED BY CERAMICS STYLES

Overview

All the sites analyzed were placed into four relative periods based on the temporal association of key ceramic styles in their assemblages. Sites associated with the Middle Horizon were identified by assemblages which had Lima Phase 9, Nievería, and Pachacamac/Epigonal ceramic styles (Table 1.1). Late Intermediate Period sites have the following ceramic styles: Smoked Blackware, Red-Slip, Orangeware, Brownware, Creme-colored, Punctate, and Chancay Black-and-White (Table 2.1). Sites that belong to the Late Horizon were identified by assemblages that had Lurín-Inca ceramics (Table 3.1). Lastly, sites from the Colonial Period were identified by assemblages which had either Glazed ceramics or Porcelain sherds (Table 4.1).

The individual ceramic style distribution from each site, synchronically, have been discussed in chapter 1, chapter 2, chapter 3, and chapter 4. A diachronic and agglomerated ceramic style distribution has not. In the following sections I look at the agglomerated collections of ceramic assemblages analyzed. I explore the various patterns that emerge from their agglomerated analysis. Finally, I make statements about what the patterns suggest for the inhabitants of the Lurín valley who lived there from the Middle Horizon to the Colonial Period. Two levels of analysis from the

assemblages emerge: 1) a gross or coarse level analysis —discussed below in this chapter, and 2) a fine or detailed level analysis —discussed in the next chapter.

Below I look at the clustering of ceramic styles per site during the Middle Horizon, Late Intermediate Period, Late Horizon, and Colonial Period. These present a broad picture of ceramic style confluences in the valley, a coarse picture of entire assemblages in a long span of time.

Large scale ceramic patterning

Overall patterns of ceramic style clustering are observed by adding the number of ceramic styles for each site during the Middle Horizon, Late Intermediate Period, Late Horizon, and Colonial Period. The concentrations of ceramic styles in the Lurín valley changed as sites became more or less important during these broad time divisions.

Map 5.1 shows the nine Middle Horizon sites which were identified because they had Lima Phase 9, Nievería, Pachacamac and/or Epigonal ceramics: PV48-1, 2b, 16, 32, 34, 93, 193, 236, and 255. These ceramic styles are indictive of Middle Horizon sites. Perhaps unsurprisingly, Lima Phase 9, Nievería, Pachacamac and Epigonal ceramic styles are found at Pachacamac, PV48-1. That is to say, Pachacamac had at least four ceramic styles associated with its overall assemblage during the Middle Horizon. The remaining eight sites, sites PV48-2b, 16, 32, 34, 93, 193, 236, and 255 had only Lima Phase 9 ceramics in their assemblages. That is to say, they only had one Middle Horizon ceramic style during this period.

Map 5.2. shows the sixty-six (66) Late Intermediate Period sites which were identified because their assemblages had Smoked Blackware, Red-Slip, Orangeware, Brownware, Creme-colored, Punctate, and/or Chancay Black-and-White ceramic styles: PV48-1, 2b, 2c, 9, 10, 12, 13, 14, 16, 19f, 19g, 20a, 20d, 20e, 22, 28, 29, 31, 32, 34, 35, 45a, 45b, 45c, 57b, 57c, 80, 86, 87, 88, 93, 96, 109a, 110, 113d, 121c, 126, 137a, 137b, 137d, 164a, 164c, 169, 175, 193, 199, 208, 222, 224, 229, 236, 257, 274, 286, 289, 290, 299, 335, 341, 342a, 342b, 343a, 343b, 345b, 347, and 349. Late Intermediate Period agglomerated ceramic-style-per-site geographical distributions are as follows: Three sites have at least six ceramic styles comingled in their assemblages: sites PV48-1, 12, and 32; Two sites have at least five comingled ceramic styles in their assemblages: PV48-110 and 164a; Three sites have at least four ceramic styles in their assemblages: PV48-28, 224, and 342a; Thirteen (13) sites have at least three ceramic styles: PV48-19g, 35, 45a, 57b, 57c, 96, 137a, 164c, 193, 208, 335, 347, and 349; Twenty-two (22) sites have two ceramic styles in their assemblages: PV48-2b, 9, 13, 14, 16, 20a, 22, 34, 45b, 45c, 86, 88, 109a, 137b, 137d, 169, 199, 229, 286, 290, 299, and 343a; and twenty-three (23) sites have one Late Intermediate Period ceramic style in their assemblage: PV48-2c, 10, 19f, 20d, 20e, 29, 31, 80, 87, 93, 113d, 121c, 126, 175, 222, 236, 257, 274, 289, 341, 342b, 343b, and 345b.

Map 5.3 shows the thirty (30) Late Horizon sites which were identified because they had Lurín-Inca ceramics in their assemblages: PV48-1, 2, 9, 12, 19, 19g, 28, 32, 35, 45a, 57a, 86, 109a, 110, 113a, 137b, 164a, 169, 208, 224, 229, 286, 290, 299, 332, 335,

342a, 343a, 345a, and 347. These sites also had contemporary and Late Intermediate Period ceramics in their assemblages. Below I included the following Late Intermediate Period associated ceramic styles when adding up the number of total ceramics styles per site: Brown-Cream, Brownware, Chancay Black-and-White, Orangeware, Punctate, Red-Slipped, and Smoked Blackware. Late Horizon sites agglomerated ceramic-style-per-site geographical distributions are as follows: Two sites had six ceramic styles in their assemblages: site PV48-1 and 12; Three sites had five ceramic styles: PV48-32, 110, and 164a; Three sites had four ceramic styles: PV48-28, 224, and 342a; Five sites had three ceramic styles: PV48-19g, 35, 45a, 208, and 347; Eleven (11) sites had two ceramic styles: PV48-9, 86, 109a, 137b, 169, 229, 286, 290, 299, 335, and 343a; and six sites had one ceramics style: PV48-2, 19, 57a, 113a, 332, and 345a.

Eight Colonial Period sites had Glazed and/or Porcelain sherds: PV48-137b, 148, 164a, 164c, 204, 255, 255, 286, and 347; their distribution is illustrated in Map 5.4. These assemblages also had Brown-Cream, Brownware, Inca-Lurín, Orangeware, Red-Slipped, and/or Smoked Blackware sherds —ceramics styles associated with the Late Horizon. These Late Horizon styles are included in the count of total ceramic styles per site because they are found in the same surface layer as the Glazed and Porcelain sherds and must be treated somewhat as contemporaneous to these Colonial Period ceramic styles. Colonial Period agglomerated ceramic-style-per-site geographic distribution is as follows: One site had six ceramic styles associated with its assemblage: site PV48-164a; two sites have four ceramic styles in their assemblages: PV48-164c and 347; two sites

had three ceramic styles associated with their assemblage: PV48-137b and 286; two sites had two ceramics styles in their assemblages: PV48-148 and 204; and one site had one ceramic style associated with it: site PV48-255.

Looking at the agglomerated ceramic data in this fashion reveals three overarching patterns: 1) the sites become progressively and increasingly complex with time; 2) large sites are rare early in time and are less unique at later periods; and 3) the loci of importance shifts from down valley during the Middle Horizon to the upper valley during the early Colonial Period.

First, with time, the valley sites' assemblages become progressively "messy" and increasingly complex. This is illustrated with the increasing number of sites with more than one ceramic style associated in their assemblages. For instance, during the Middle Horizon one site (11.1% of all Middle Horizon sites, the site of Pachacamac) had a complex assemblage with four ceramic styles in it. During the same period the other eight sites (88.9% of all Middle Horizon sites) in the valley had only one ceramic style in their assemblage (Table 5.1, Map 5.1). This pattern observed during the Middle Horizon contrast with the ones observed for the Late Intermediate Period and Late Horizon.

During the Late Intermediate Period there is a flurry of new ceramic styles which seemingly flood into (or out of) the Lurín. They are distributed in the valley differently than during the Middle Horizon, not only in quantity but also in percentages as compared with each other. During the Late Intermediate Period we see three, or 4.5%

of all, Late Intermediate Period sites which have at least six ceramic styles in their assemblages. At the same time, we also see two (3%) sites with five ceramic styles, three (4.5%) sites with four ceramic styles, thirteen (19.7%) sites with three ceramic styles, twenty-two (33.3%) sites with two ceramic styles, and twenty-three (34.8%) sites with one ceramic style (Table 5.1, Map 5.2). There is a greater number of Late Intermediate Period sites than there are Middle Horizon sites, to be sure, but the distribution of ceramic style per site is different in the Late Intermediate Period than in the preceding Middle Horizon percentage wise too —a point I will return to shortly. These observations continue to be true during the Late Horizon.

During the Late Horizon the assemblages at sites in the Lurín are relatively less simple than during the Late Intermediate Period. In fact, two (6.7%), three (10%), three (10%), five (16.7%), eleven (36.7%), and six (20%) sites have six, five, four, three, two, and one ceramic style associated with their assemblages respectively (Table 5.1, Map 5.3). Late Horizon sites have a more similar ceramic style-per-site distribution with patterns observed during the Late Intermediate Period than patterns observed in the Middle Horizon. While there are fewer Colonial Period sites in the Lurín than for any other time period we nevertheless observe the same pattern when looking at the number of ceramic styles at Colonial Period sites.

In the early Colonial Period only one (12.5%), two (25%), two (25%), two (25%), and one (12.5%) site(s) have six, four, three, two, and one ceramic style(s) in their

respective assemblages (Table 5.1, Map 5.4). Comparing these numbers, we see that after the Middle Horizon, site assemblages become increasingly complex; they have more ceramic styles associated with them and, except during the Colonial Period, we see a greater number of overall sites throughout the valley post the Middle Horizon.

Second, the distribution of large and complex sites is concentrated in the lower valley during the Middle Horizon, it explodes in numbers at the beginning of the Late Intermediate Period and are spread throughout the valley by the Late Horizon. During the Middle Horizon, Pachacamac enjoyed the unique distinction of being the largest site in the valley with six ceramic styles in its assemblage. The rest of the valley had only mono-stylistic ceramic sites. These sites are all in the low and mid valley sections of the Lurín (Map 5.1). This suggest that Pachacamac was a very distinguished and unique site in a valley at the time. In the Late Intermediate Period, from a ceramic point of view, Pachacamac's uniqueness is obscured.

During the Late Intermediate Period there are a greater number of sites which have more ceramic styles, and also there are more sites —percentage wise— with higher number of assemblages which contained six, five, or four ceramic styles comingled. This is a new phenomenon that differs from the patterns found in the preceding Middle Horizon. During the Late Intermediate Period, Pachacamac, which now has six different ceramic styles in its assemblage, is no longer the only site in the valley with the largest number of different ceramic styles. Sites PV48-12 and PV48-32

now also share this distinction. Furthermore, sites PV48-110 and PV48-164 (Sisicaya) now each have five ceramics styles in their assemblages. This suggest an increasing importance –or at least an increasing hustle and bustle— in these mid to upper valley sites. There are also comparatively less sites during the Late Intermediate Period that are simply mono-ceramic styled assemblages as compared with the number of mono-ceramic styled sites during the Middle Horizon; 34.8% to 88.9% of sites in those periods respectively (Table 5.1). The large sites that have six and five ceramic styles are quasi-equidistant from each other; about ten kilometers apart. They are surrounded by sites which have four or three ceramic styles represented in their assemblages which in turn are surrounded by sites with two ceramic styles in their assemblages as well as mono-ceramic styled sites. Overall sites with two ceramics and one ceramic style in their assemblages are distributed throughout the valley evenly (Map 5.2). This geographical distribution patterns of ceramics observed during the Late Intermediate Period largely carries over into the Late Horizon.

During the Late Horizon complex sites with six (PV48-1 and 12) and five (PV48-32, 110, and 164) ceramic styles in their assemblages are roughly equidistant (~ 10 km) from each other —a pattern started in the Late Intermediate Period (Map 5.3). These too, like their Late Intermediate Period counterparts, are surrounded by sites with four and three ceramic styles. As for sites with two ceramics styles, they are spread out on the upper half of the valley. Mono-ceramic styled assemblages are found throughout the valley but are less common than during the Late Intermediate Period and Middle

Horizon (Table 5.1). While the distribution of the six and five ceramics style assemblage sites are, more or less, evenly distributed throughout the Lurín during the Late Horizon it is not the case so during the Colonial Period.

The early Colonial Period is ceramically patterned differently than the preceding Late Horizon not only in the paucity of sites but also in the distribution of the large multi-ceramic-styled assemblages in valley. During the Colonial Period large, complex sites are all up valley. In fact, the only site with six ceramic styles in its assemblage is PV48-164a (Sisicaya). This site too, like large sites in the preceding periods, is surrounded by sites with four and three ceramic styles in their assemblages. The sites with three and four ceramics styled assemblages are crudely equidistance from PV48-164a. Sites with two and one ceramic style(s), in their respective assemblages, are in the low valley; both type of sites a few kilometers away from the Lurín river itself (Map 5.4).

Third, the loci of importance in site clustering in the Lurín valley changes from the Middle Horizon to the Colonial Period; it shifts up valley. This notion seems to run contra popular wisdom which claims that Pachacamac grew in importance during the Late Horizon. While it may be true from one point of view, the situation is more complicated and more nuanced than that. While Pachacamac does extends its influence during the Late Intermediate Period and Late Horizon to other valleys (intra-valley), it

also loses some domination over the Lurín (inter-valley) valley itself. This statement requires exploration.

The statement's basic premise is observed by highlighting the geographic areas with above average ceramic-style-concentration clusters during the Middle Horizon, Late Intermediate Period, Late Horizon, and Colonial Period. To obtain geographic areas with above average ceramic-style-concentrations three steps are needed: (1) to ascertain the total number of ceramic styles analyzed for any period, (2) a geographic and spatial parameter in which to distribute ceramic style divisions visually needs to be established, and (3) a cross-period comparison is calculated and illustrated. These steps are outlined below.

In the first step we look for the total number of ceramic styles analyzed for any one period. For example, nine sites had Middle Horizon assemblages: PV48-1, 2b, 16, 32, 34, 93, 193, 236, and 255. Eight of those sites (all but PV48-1) had ceramic assemblages which are mono-stylistic, for a total of 8 ceramic styles analyzed at those sites. One site, PV48-1, had four different ceramic styles in its assemblage for a total of 4 ceramic styles analyzed at that one site. Adding up all the number of ceramic styles analyzed for assemblages that belong to the Middle Horizon, 12 total ceramic styles were analyzed —(1 style (x 8 sites) + 4 styles (x 1 site) = 12 styles total). Finally, to allow comparable comparison to other time periods (in step 3), the total number of ceramic styles analyzed is converted to a percentage. In the nine Middle Horizon assemblages a

total of 12 styles were analyzed, each ceramic style therefore makes up 8.3% (1/12) of total ceramic styles analyzed for Middle Horizon assemblages.

In the second step we device a spatial parameter in which to distribute the total number of ceramic styles analyzed in step one. Ideally a geographic divide informed by accurate elevations and micro-ecozones data would divide the Lurín valley precisely into lower, middle, and upper valley zones as discussed in the introductory chapter. For a myriad of reasons this proved difficult and inaccurate in the Lurín valley. After much fruitless fiddling with the idea, in the end I took the liberty of dividing the valley into seven, 10 km portions; choosing 10 km intervals because it is a round, familiar number. Next, I added up the total number of ceramic styles that correspond to sites found within those 10 km intervals. That is to say, I added up all the ceramic styles from sites 0-10 km inland, 11-20 km inland, 21-30 km inland, 31-40 km inland, 41-50 km inland, 51-60 km inland, and 61-70 km inland. For the Middle Horizon there are 7 (58.3%) total ceramic styles in the first 10 km interval —4 ceramic styles found in PV48-1, 1 ceramic style from PV48-193, 1 ceramic style from PV48-236, and 1 ceramic style from PV48-255 (4+1+1+1=7); it included 2 (16.7%) ceramic styles for the 11-20 km interval —1 ceramics style from PV48-2b and 1 ceramic style from PV48-16 (1+1=2); it counted 2 (16.7%) total ceramic styles from sites that were 21-30 km upstream —1 style from PV48-32 and 1 style from PV48-34 (1+1=2); and 1 (8.3%) ceramic style that were in sites 31-40 km upstream —site PV48-93 (1). There were no sites in the remaining 40-70 km intervals with any Middle Horizon sites. These numbers are tabulated (Table 5.2).

In the third step, the first two steps are repeated for each period of interest. Here the total number of ceramic styles are calculated for the Middle Horizon, Late Intermediate Period, the Late Horizon, and the Colonial Periods for groups formed by sites in the 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km partitions discussed in step 2 (Table 5.2). Lastly, I illustrated the tabulated data in a color-coded, gradient visual (Figure 5.1-5.4).

From the ceramic data used in this analysis we can see a de-concentration of importance in the lower Lurín valley after the Middle Horizon. That is to say, during the Middle Horizon the most important and lively area was the lower valley itself. The lower valley, particularly the coastal lower valley (the first 10 km interval), had a corresponding 58.3% of total ceramic assemblages (Table 5.2, Figure 5.1). The next two 10 km intervals, each had 16.7% of total ceramics assemblages. Sites between 31-40 km away from the ocean only represent 8.3% of total Middle Horizon ceramic assemblages. This pattern of high concentration of ceramic styles in the lower valley is driven by the site of Pachacamac with its relatively large and complex comingled ceramic style assemblage and the relatively impoverished ceramic assemblages of the other mono-ceramic style sites in the valley. Together, this concentration of different ceramic styles at Pachacamac hints at an unusual confluence of ceramics, for whatever reason, at the oracular site. Its social importance during the Middle Horizon was large as implied by the sheer numbers of styles at the site. The remaining sites, only having one ceramic assemblage, suggest a small, homogenous populace of the Lurín valley outside the

immediate surroundings of Pachacamac. The overall concentration of ceramic assemblages' changes during the Late Intermediate Period.

During the Late Intermediate Period we see a much more evenly distributed concentrations of ceramic styles throughout the valley. The distribution of ceramics in sites at a distance of 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km inland are 16.4%, 17.8 %, 21.9%, 13.7 %, 12.3%, 13.0%, and 4.8% respectively (Figure 5.2, Table 5.2). Three differences are evident between Late Intermediate Period and Middle Horizon ceramic concentrations: (1) there is an increasingly more-even distribution of ceramics across the valley —seen in the wider distribution of similarly sized ceramic concentrations; (2) a decreased inter-valley importance in the lower Lurín —reflected by the dropping concentration rate of total ceramic assemblages from 58.3% during the Middle Horizon to 16.4% during the Late Horizon; and (3) a new emergent lively sphere concentration of sites between 21 and 30 km inland —reflected in the high concentration of ceramic styles there as compared to the rest of the valley during the and Middle Horizon. These different ceramic concentrations would have reflected a changing cultural landscape in the valley for peoples there between the Middle Horizon and Late Intermediate Period. Even more equal ceramic style distributions are noted during the Late Horizon.

During the Late Horizon the concentration of ceramic-style density is sites between 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km

inland are 18.3%, 15.9%, 19.5%, 12.2%, 11.0%, 14.6%, and 8.5% respectively (Table 5.2, Figure 5.3). Broadly speaking the ceramic concentrations are consistently distributed in the lower, middle, and upper valley. There is a slightly higher concentration of ceramics in the low and middle valley, the areas 0-30 km inland, whose average ceramic density is 17.9%, as oppose to the average ceramic density of 11.6% for sites 31-70 km inland, but the concentrations differences are not highly pronounced. This pattern may suggest some sort of "stabilization" of the Lurín river inhabitants during the Late Horizon; a balance of low and middle valley importance. This suggested stability and evenness of ceramic distributions throughout the valley during the Late Horizon is uprooted during the Colonial Period.

During the Colonial Period the concentration of ceramics are found, almost exclusively, inland in the high middle and upper valley sections of the valley. In fact, the distribution of Colonial Period assemblages between 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km inland are 4%, 16%, 0%, 0%, 52%, 16%, and 12%, respectively (Table 5.2, Figure 5.4). The data is not only driven by site PV48-164 (Sisicaya) with its large assemblage of various ceramic styles along with Colonial Period ceramic styles. It is also informed by site PV48-137, which has three ceramic styles in its assemblage, and site PV48-347, a site upstream from Sisicaya which has 4 ceramic styles in its assemblage. While the upper mid-valley is devoid of Colonial Period ceramics (sites found within 21-40 km inland), there are some sites in the 11-20 km range which do have Colonial Period ceramics. Sites PV48-148 and 204 do not face the river itself

but are found a few kilometers inland instead, both have Colonial Period assemblages. The importance of the upper valley in the early Colonial Period is clear and pronounced.

Taken as a whole, the intervalley locations of importance shift from the low-valley —seemingly from the important site of Pachacamac during the Middle Horizon and Late Intermediate Period— to the dominant role of importance of Sisicaya in the upper valley by the early Colonial Period (see Feltham 1983). There are two possibilities which might explain the shift up valley. One possibility is that locals were purposefully trying to avoid the Spanish who were ambulating about the eventual city of Lima in the coast, near Pachacamac. In this scenario they just avoided the them by moving inland and upriver away from prying Spanish eyes. Another possibility is that the ceramic pattern is an artifact of the purposeful shift by the empyreal machinations of the Inca. In this scenario the Inca empire imposed a redistribution center close to Sisicaya, a royal Tambo, which they can more easily control and keep under watch. Sisicaya then becomes increasingly the most important site in the valley under Incan stewardship; in it are a growing concentration of people, resources, and along with them, an increasing number of different ceramics styles. The site retains its Late Horizon importance during the Early Colonial period as the remaining infrastructure of the Late Horizon falls apart.

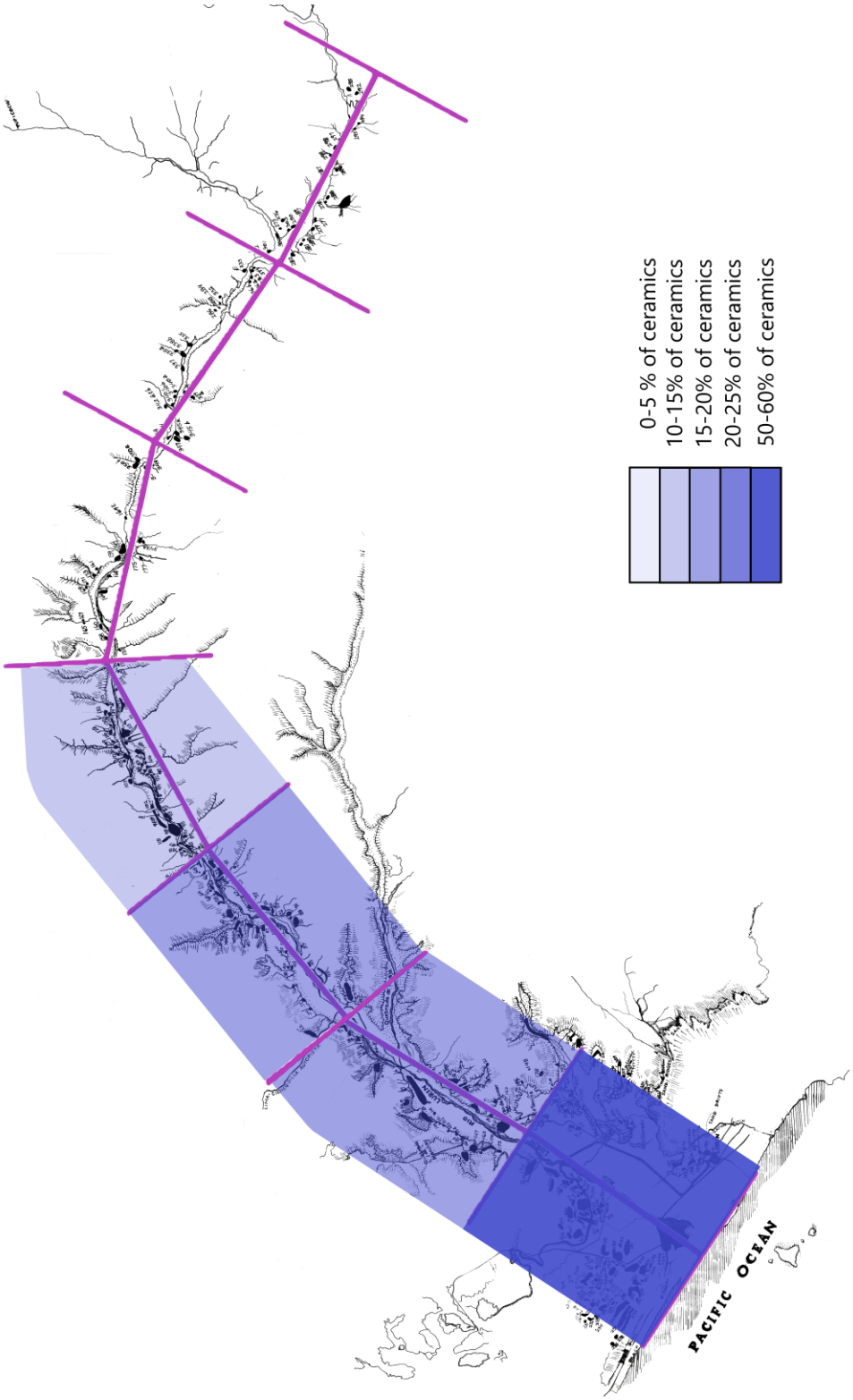


Figure 5. 1. Density of ceramics in the Lurin Valley during the Middle Horizon.

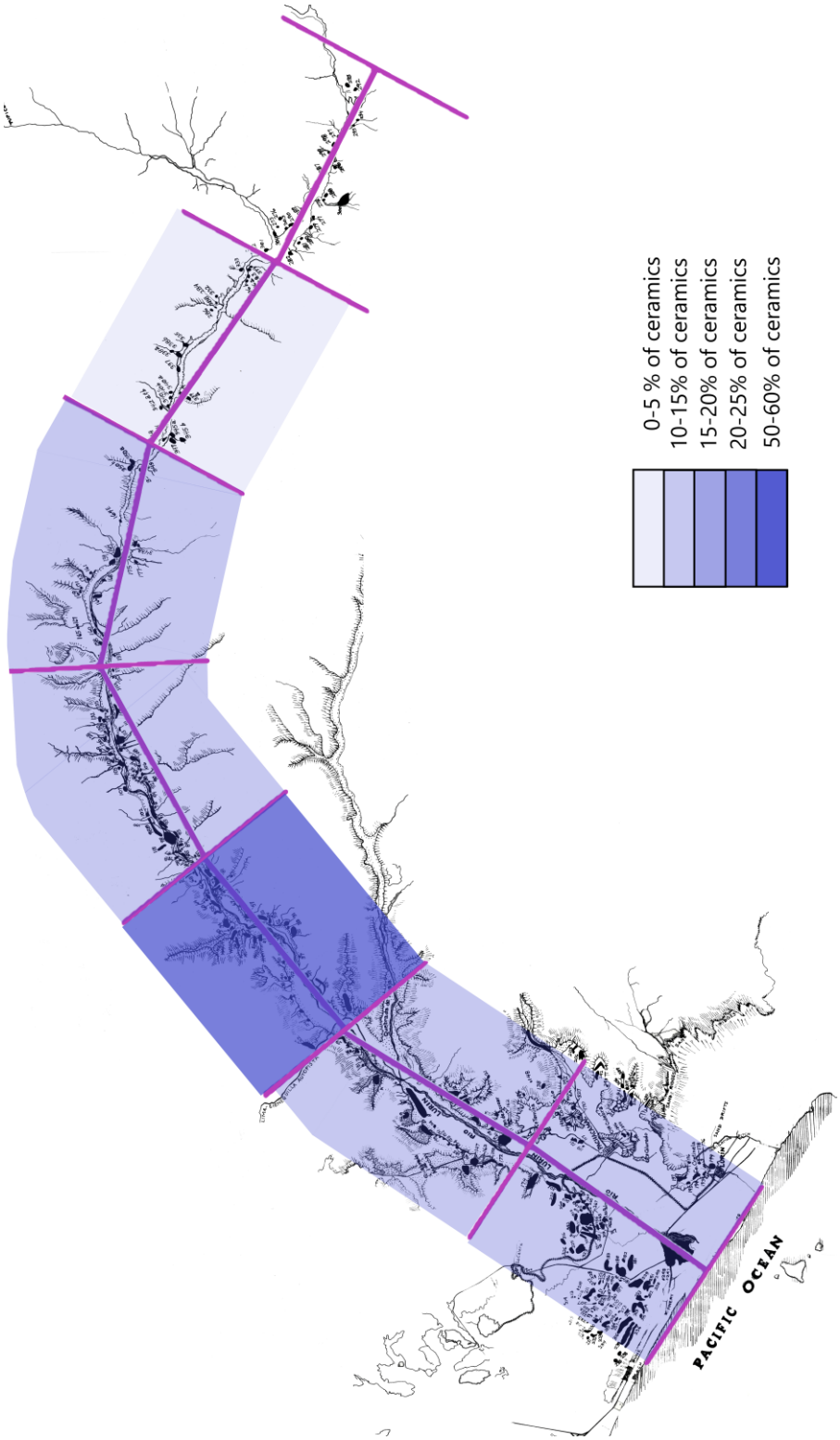


Figure 5. 2. Density of ceramics in the Lurin Valley during the Late Intermediate period.

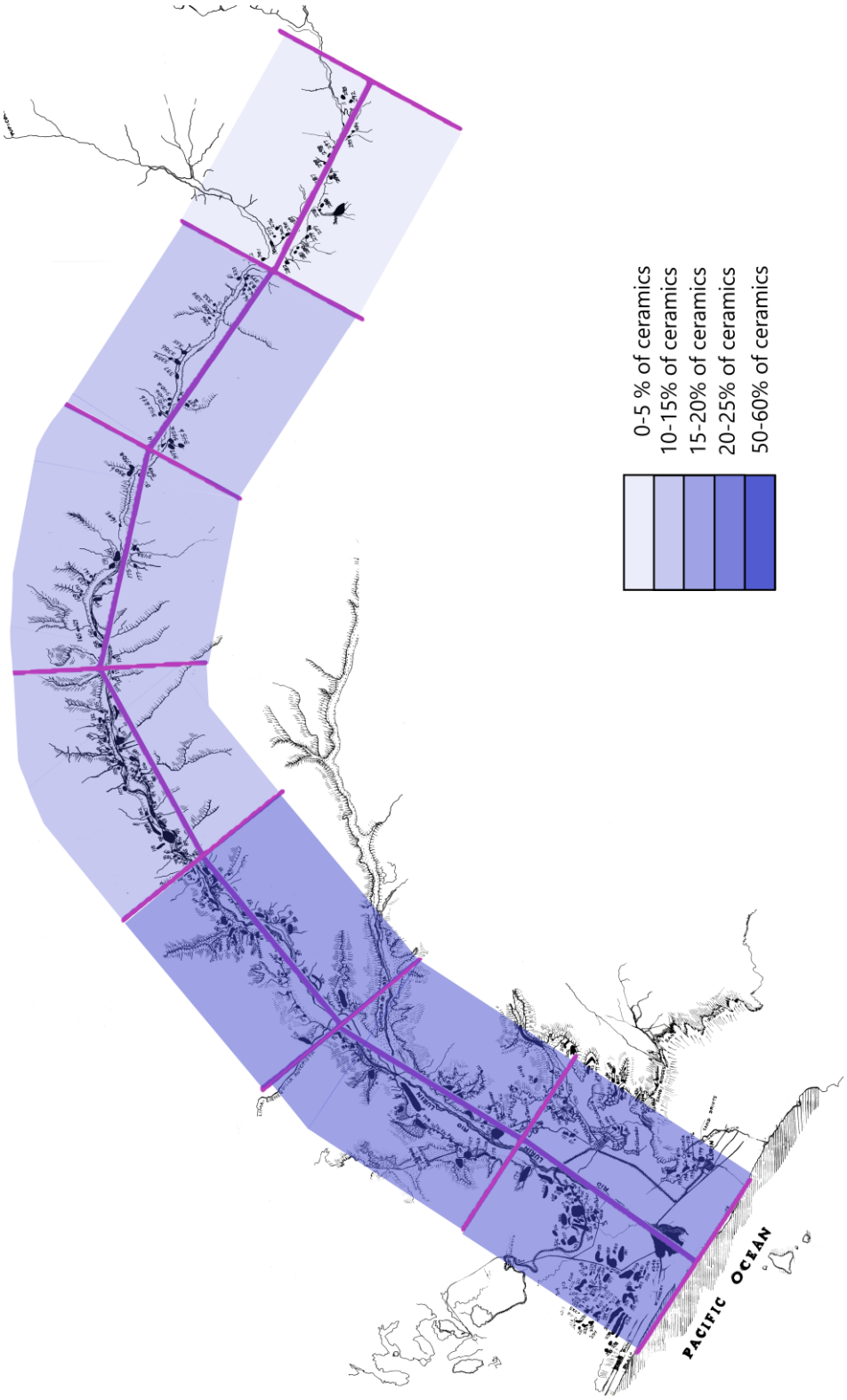


Figure 5. 3. Density of ceramics in the Lurin Valley during the Late Horizon.

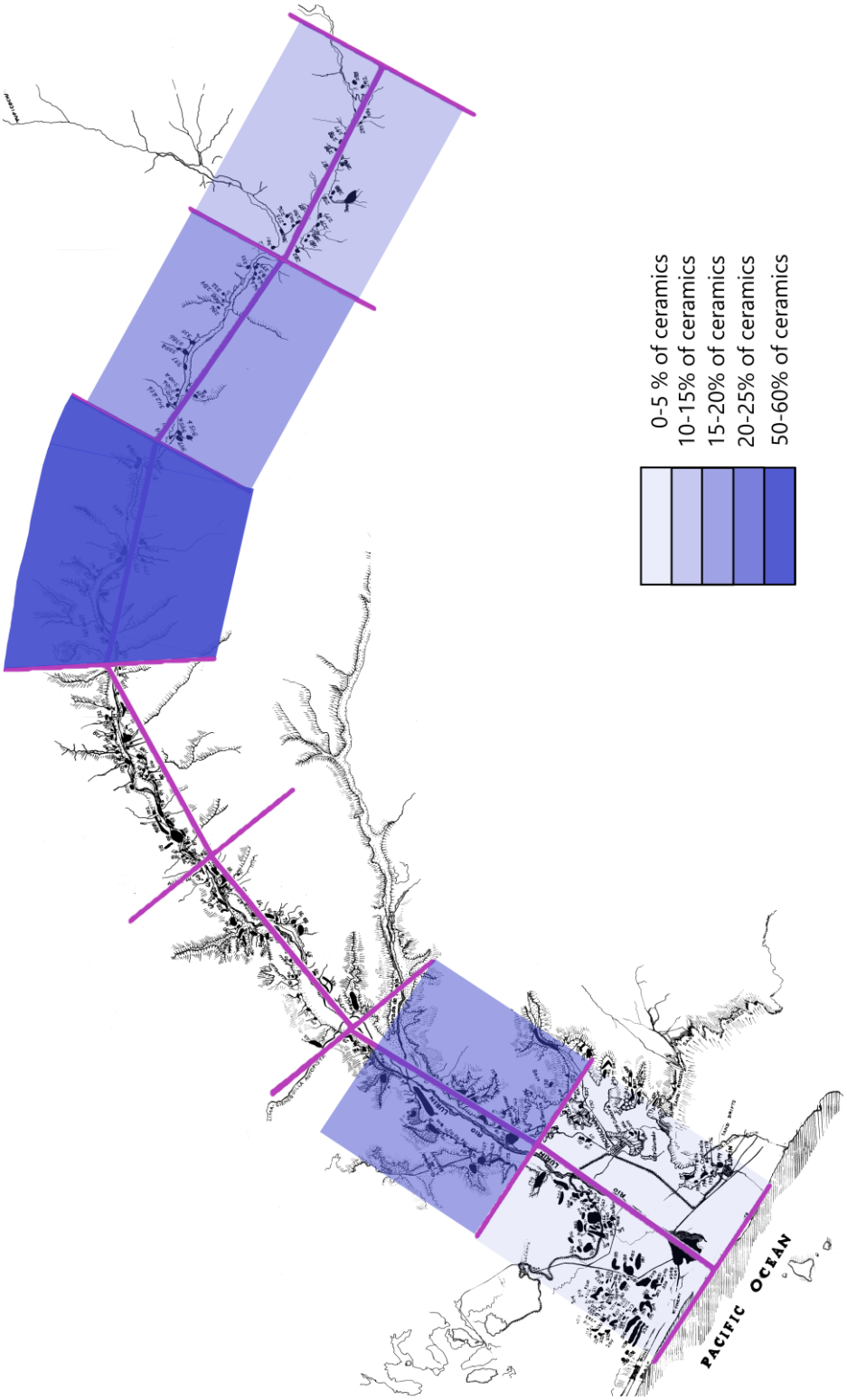
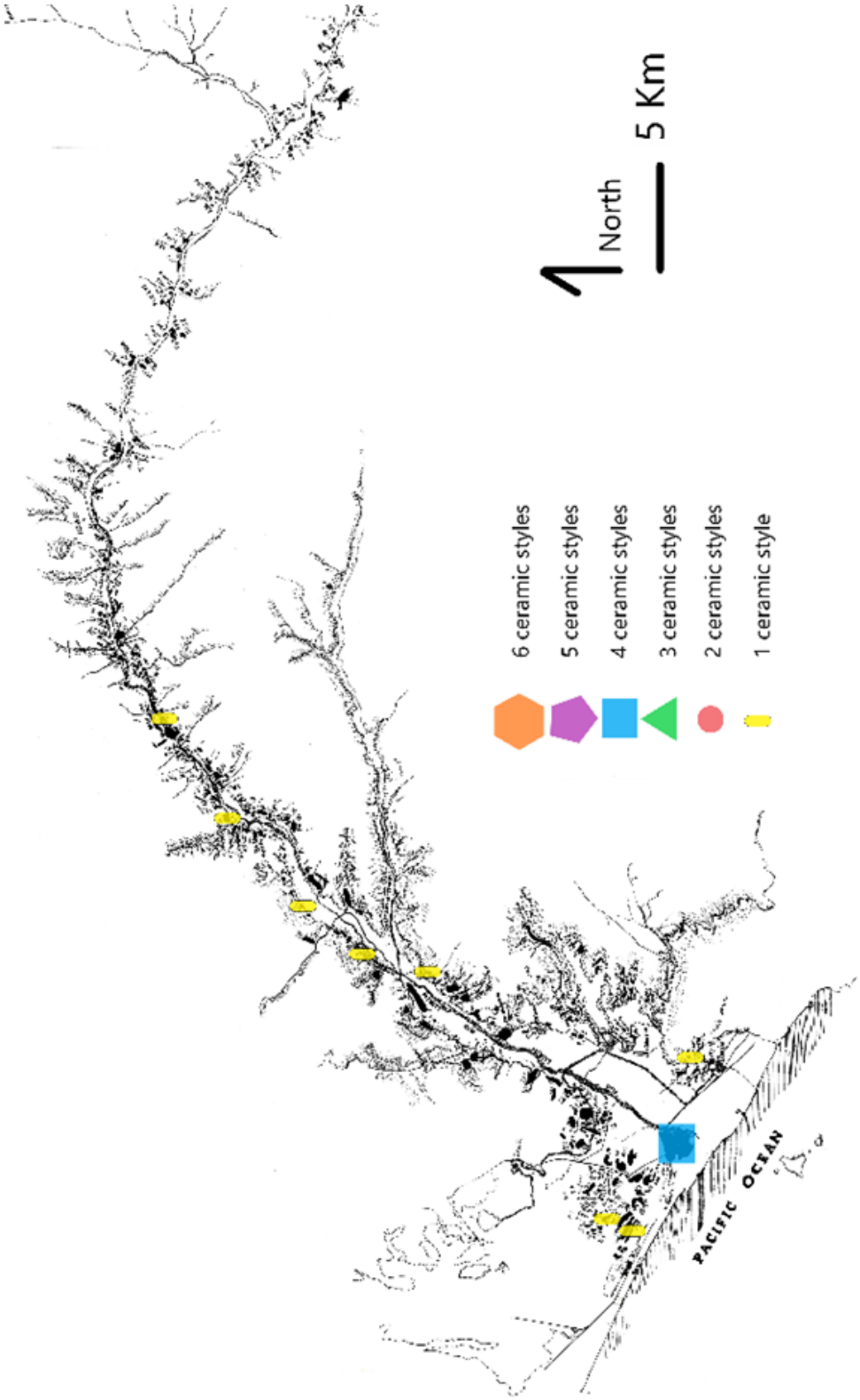
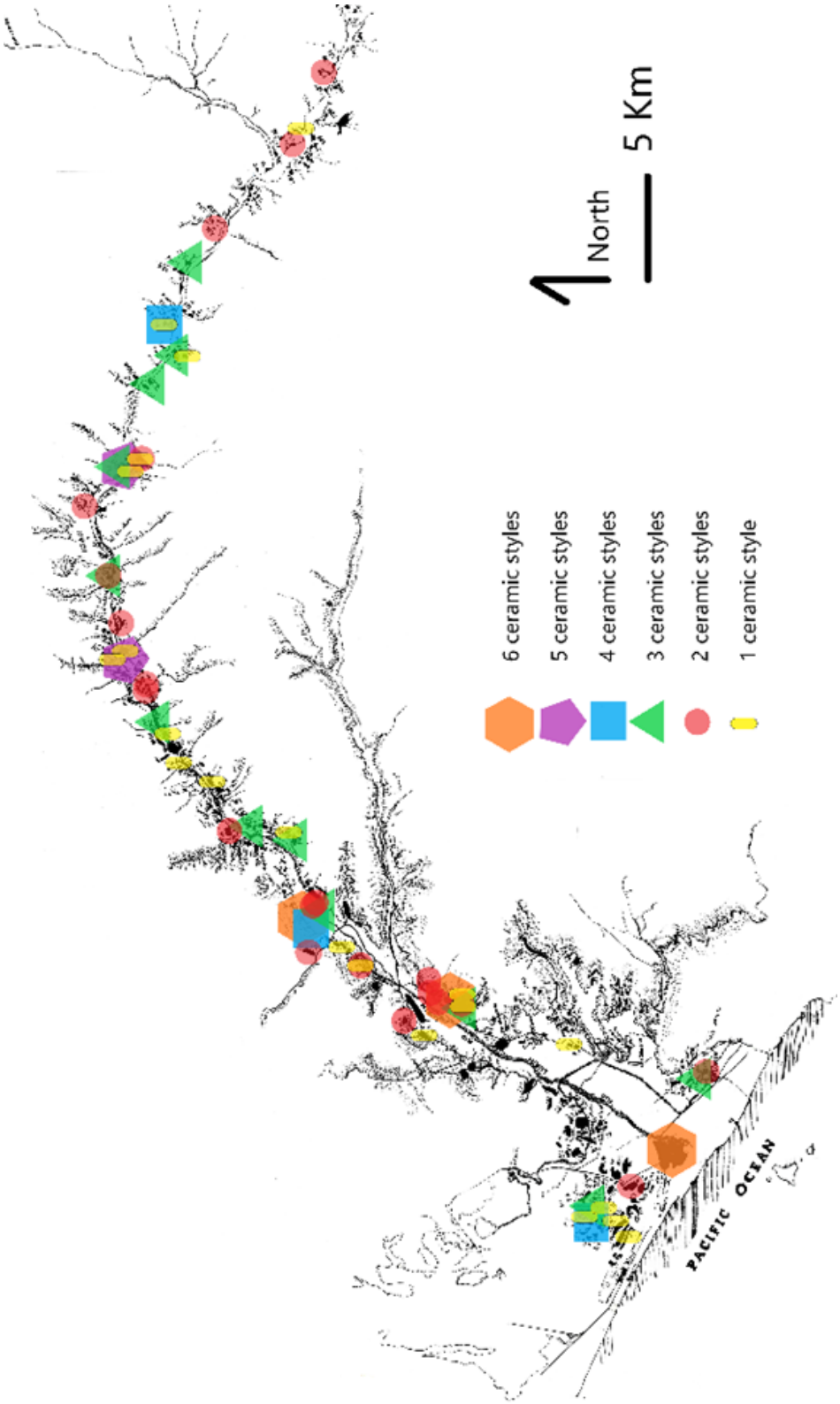


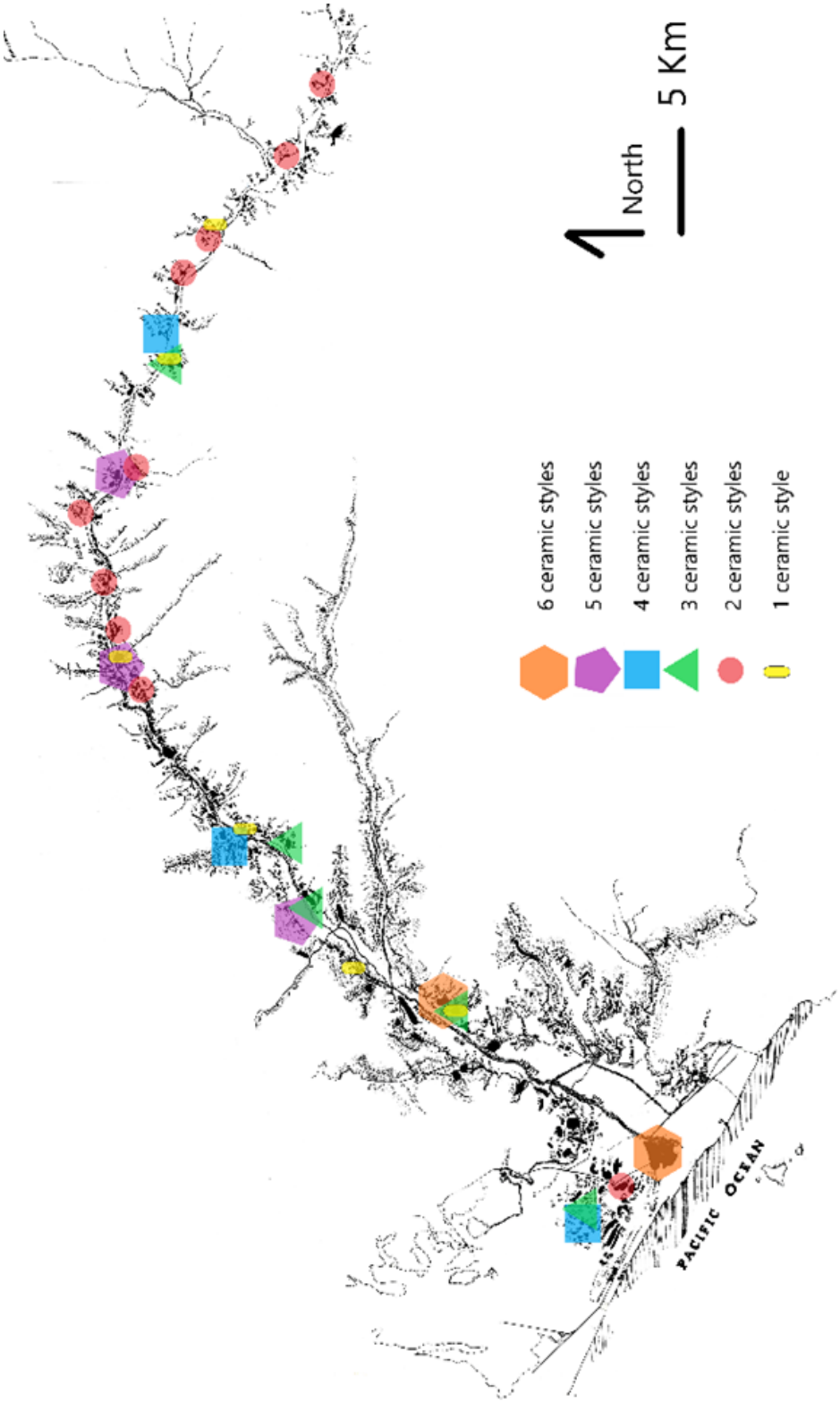
Figure 5. 4. Density of ceramics in the Lurin Valley during the Colonial Period.



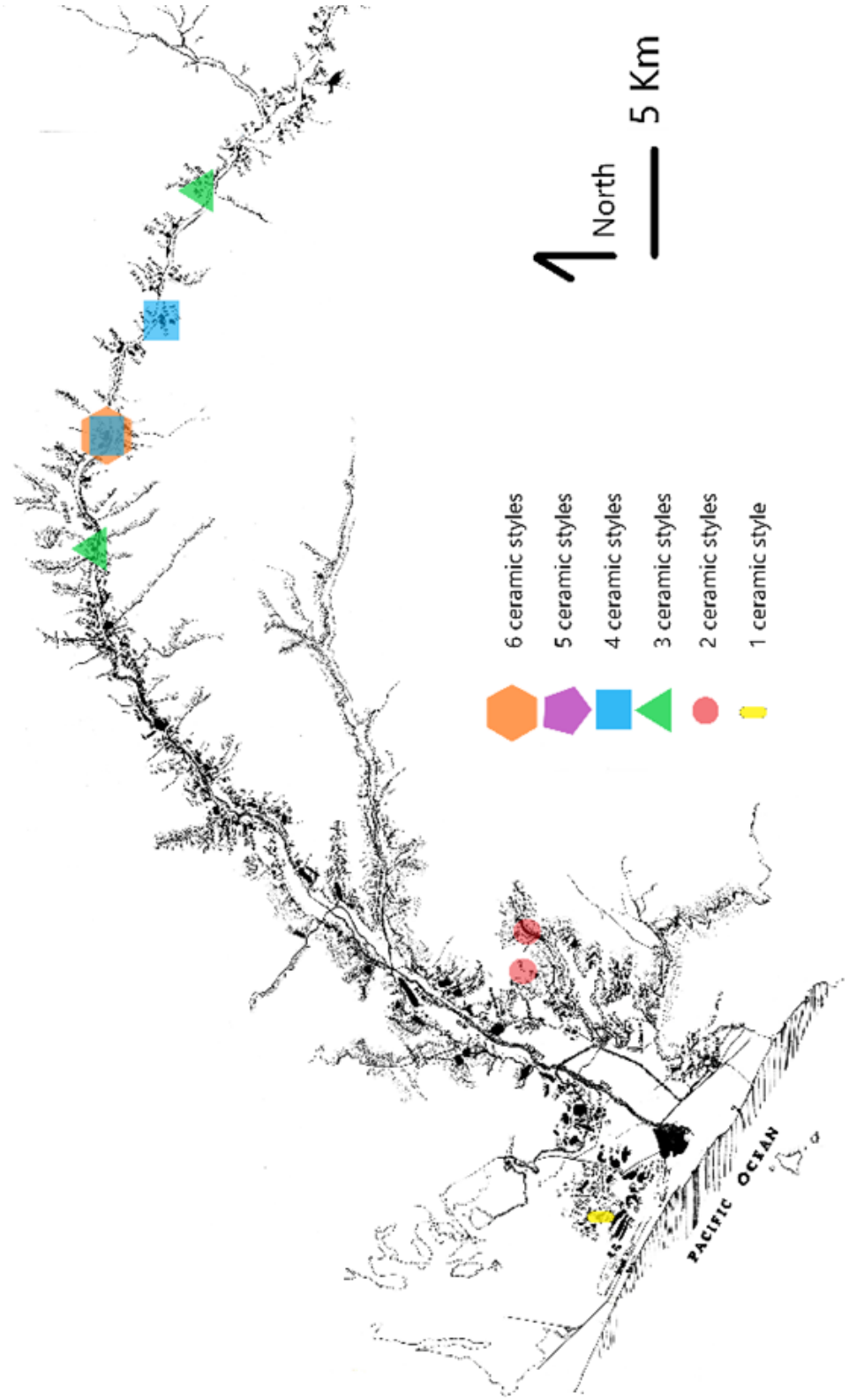
Map 5. 1. Ceramic styles concentrations during the Middle Horizon.



Map 5. 2. Ceramic style concentrations during the Late Intermediate Period.



Map 5. 3. Ceramic style concentrations during the Late Horizon.



Map 5. 4. Ceramic style concentrations during the Colonial Period.

Table 5. 1. Total number of ceramic styles per assemblages per period.

Number of ceramics styles per site	**Middle Horizon**	**Late Intermediate Period**	**Late Horizon**	**Colonial Period**
	N = 9 n, (%)	N = 66 n, (%)	N = 30 n, (%)	N = 8 n, (%)
6	0, (0.0)	3, (4.5)	2, (6.7)	1, (12.5)
5	0, (0.0)	2, (3.0)	3, (10.0)	0, (0.0)
4	1, (11.1)	3, (4.5)	3, (10.0)	2, (25.0)
3	0, (0.0)	13, (19.7)	5, (16.7)	2, (25.0)
2	0, (0.0)	22, (33.3)	11, (36.7)	2, (25.0)
1	8, (88.9)	23, (34.8)	6, (20.0)	1, (12.5)

Table 5. 2 Agglomerated total ceramic styles per period.

Distance form ocean	**Middle Horizon**	**Late Intermediate Period**	**Late Horizon**	**Colonial Period**
	N = 12 %, (n)	N = 146 %, (n)	N = 82 %, (n)	N = 25 %, (n)
0-10 Km	58.3, (7)	16.4, (24)	18.3, (15)	4, (1)
10-20 Km	16.7, (2)	17.8, (26)	15.9, (13)	16, (4)
20-30 Km	16.7, (2)	21.9, (32)	19.5, (16)	/
30-40 Km	8.3, (1)	13.7, (20)	12.2, (10)	/
40-50 Km	/	12.3, (18)	11.0, (9)	52, (13)
50-60 Km	/	13.0, (19)	14.6, (12)	16, (4)
60-70 Km	/	4.8, (7)	8.5, (7)	12, (3)

Chapter 6

LURÍN-VALLEY MICRO POLITICS: A VIEW INFORMED FROM THE CHANGING CERAMICS FORMS, COLORS, AND CLAYS OF SITE ASSEMBLAGES

Overview

In this chapter I deconstruct the distribution of ceramic vessel forms, sherd colors, and pastes of all assemblages from the sites detailed in Chapter 5 paying particular attention to each attribute during the Middle Horizon, Late Intermediate Period, Late Horizon, and Colonial Period. This allows for a detailed, nuanced understanding of how ceramic distributions were geographically patterned throughout the Lurín during these periods and how those patterns changed. The attention to vessel form, sherd colors, and paste details, as opposed to the macro-scale patterns observed in chapter 5, allows for a micro-political analysis of the sites in the Lurín valley itself.

Vessel form distributions in the Lurín

Archaeological sites in the Lurín valley were geographically split into seven geographically proximal groups in the same manner as described in chapter 5: sites within 0-10 km inland from the ocean formed one group. The same is true for sites that are 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km inland. All of the sites' assemblages, in each of these 10 km partitions, are analyzed together. That is to say, each site that had at least one example of a specific vessel profile contributed to

the summarized number of vessel forms in each of those seven 10 km intervals ("+1" for presence of a specific vessel form, “+0” for its absence).

Adding up all individual specific vessel profile examples for each group in each of the seven 10 km partition produces Table 6.1. To illustrate how Table 6.1 works, five examples of jar type BC are found in the Lurín’ midvalley section. One example of jar form BC was found at site PV48-29, which is between 11-20 km upstream. Four examples of jar shape BC were found at sites 21 to 30 km inland: one example from site PV48-22, one example from site PV48-32, one example from site PV48-45, and one example from site PV48-35. Table 6.1 shows the number of examples of form BC in each of the 10 km partitions. It shows a "1" for sites between 21-30 km ("+1" from one sample form BC at site PV48-29), "4" from sites found 21-30 km inland ("+1" from one example of form BC found at PV48-22, "+1" from one example of form BC found at PV48-32,"+1" from one example of form BC found at PV48-45, and "+1" from one example of form BC found at PV48-35 —1+1+1+1=4). This process was repeated for each jar, bowl, and olla form; combined they produce the following vessel form distributions throughout the valley.

Jars

The distribution of the jar shapes in the Lurín valley are as follows: six jar shapes are found in all seven of the 10 km geographic partitions: forms BB, CE-big, CM, CO, C-shortneck, and DF; six jar shapes were found in six of the seven 10 km partitions in the

valley: forms BJ, CJ, CL, CN, CQ, and CU; seven jar shapes are found in five of the seven 10 km partitions: forms BE, BH, BO, BZ, CI1, CT, and J1; ten (10) jar shapes are found in four of the seven 10 km partitions: forms BD, BV, BW, BY, CC, CX, CZ1, CZ8, DC, and DO; fifteen (15) jar shapes are found in three of the seven 10 km partitions: forms BF, BK, BR, BZ6, CA1, CH, CH1, CI, CP, CZ6, CZ7, DE, DJ, DM, and DN; thirteen (13) jar shapes are found in two of the seven 10 km partitions: forms BC, BG, BK2, BU, BZ1, BZ4, CE-small, CG, CW1, CW2, CZ, DA, and DB; and fifteen (15) jar shapes are found in one of the seven 10 km partitions: form B1-Unique, BF1, BJ1-Unique, BZ3, BZ5, CK1, CNQ1, CR, C-squash, CW7, CY, CY1, DL, W2-unique, and X2-Unique (Table 6.1).

Many of the jar varieties are found throughout the valley in no clear or simple pattern to their geographical distribution. For instance, jar type BB, CE-Big, CM, and CO are found in all seven 10 km partitions —their distribution is throughout the entire valley. Some jar shapes, while not found in all seven valley partitions, are found in three or four alternating, none-adjoining, 10 km partitions. In this way, jar form BD is found at sites between 11-20 km, 21-30 km, 41-50, and 61-70 km upstream, while jar types CH1 are found in sites 11-20 km, 41-50 km, and 61-70 km upstream. These jars are not tethered geographically to anywhere in particular, they show no geographical patterning to their distribution. Other jar types however are more restricted in their geographic distribution often times clustering to certain valley regions (Table 6.1).

Some jar profiles cluster in very specific 10 to 20 km ranges in the Lurín valley. Jar shape CW7, for example, is only found at sites 0-10 km from the Pacific Ocean. Jar shapes C-Squash, CK1, CnQ1, CY1, and DL are found solely at sites which are 11-20 km inland, while jar shapes CR, BF1, and BZ3 are found exclusively at sites which are 21-30 km from the Pacific Ocean. Jar types BC, BU, CW1, CW2, CZ, BZ4, and DB are found between sites 11-30 km away from the Pacific Ocean. Other jar profiles with specifically restricted distribution are found in the highlands only. For example, jar form BZ5 and jar shape CY are found only at sites between 61-70 km away from the ocean (Table 6.1).

Yet other jar profiles cluster in less restrictive patterns and remain within low, mid, and high valley regional divisions. For example, low-valley jar form BK are restricted to sites 0-30 km from the ocean; jars in shape BZ6 are restricted to sites 11-40 km from the ocean. Other forms cluster to sites in the mid-valley: jar shapes BF, CZ6, CZ7, and DM are distributed in sites 11-40 km away from the ocean. A profile found even further away from the ocean is jar shape DN. This form is just found on sites 21-50 km away from the ocean (Table 6.1).

Some jar profiles have approximately a 50 km distribution. Jar shapes BZ and jar shape J1 are distributed in sites between 0-50 km from the ocean, while jar forms BH, CX, and CZ8 are distributed at sites 10-60 km away from the ocean. Some jar profiles are found wholly in sites located in the first 60 km of the river —jar shapes BJ, CJ, CL,

and CQ fall under this category. Other jar forms are found only in sites in the last 60 km of the Lurín valley —form CN and form CU for instance (Table 6.1).

Some of the jar profiles, while distributed widely throughout the valley, have some geographical clustering patterns. For example, jar shape CL is found in three, seven, seven, three, two, and one site(s) which are 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, and 51-60 km respectively away from the ocean. Likewise, jar shape CJ is found at six, six, seven, four, five, and three sites which are, respectively, 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, and 51-60 km away from the ocean. In the same fashion, jar form BJ is found at three, seven, six, four, two, and one site(s) which are, respectively, 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, and 51-60 km away from the ocean. All three of these jar profiles clearly have a higher frequency of appearance at sites between 10-30 km away from the ocean, with diminishing frequency at sites further away from these center clusters (Table 6.1). This suggests that while some jar types are popular throughout the valley, jars cluster in frequency in certain geographic areas. The further away one travels from those popular cluster centers the less likely and the less frequently that specific jar profile is encountered in further-distant assemblages.

Bowls

The distribution of bowl profiles are as follows: two bowl shapes are found in all seven 10 km valley partitions: forms LD and LJ1; one bowl shape was found in six of the

seven partitions: shape LZ; one bowl shape was found five of the seven geographical partitions: form LZ1; three bowl profiles are found in four of the seven partitions: form KERO, LF, and LZ2; six bowl types are found in three of the seven 10 km partitions: shapes LO, LP, LR, LZ5, LZ7, and LY; four bowl types are found in two of the 10 km partitions: forms LG1, LK, LN-small, and LY1; and seven bowl profiles are found in one of the seven 10 km partitions: shapes LN-big, LT, LW, LZ3, LZ6, LZ8, and LZ-Unique (Table 6.1).

Many of the bowl profiles are found throughout the valley with no clear or simple pattern to their geographical distribution. Bowl forms LD, LJ1, and LZ, for example, are found in all seven valley partitions. Other bowl forms are found in three or four of the seven, non-adjoining, 10 km partitions. These include bowl type LO which is found at sites 0-10 km, 11-20 km, and 61-70 km away from the Pacific Ocean and bowl shape LZ2 which is found at sites 11-20 km, 41-50 km, 51-60 km, and 61-70 km away from the Pacific. A geographical pattern for such bowl profiles is difficult to ascertain. Other bowl forms however are more restricted in their geographic distribution. They cluster in certain valley portions.

Some bowl profiles have a 30 km distribution range; they cluster roughly into low, mid, or upper-mid valley regions. Bowl form LN-small for example, is found at sites 21-50 km from the Pacific. Bowl shape LG1 and bowl shape LK cluster in lowland sites 0-30 km away from the Pacific. Bowl forms LZ7 and LY are continuously found in low-mid

valley sites. They are found in sites that are 11-30 km away from the ocean. Other bowl profiles are found entirely in low-valley sites. Bowl shape LF and bowl shape LP are found at sites 0-40 km and 0-30 km away from the Pacific respectively.

Some bowl profiles cluster in very specific 10 km ranges in the Lurín valley. Bowl shape LZ3 and bowl shape LZ6 cluster in sites 0-10 km away from the ocean; bowl form LN-big is found at sites 11-20 km away from the Pacific; bowl forms LW and LZ8 at sites 21-30 km from the Pacific; and bowl shape LT at sites 41-50 km away from the Pacific.

Ollas

Olla types are distributed throughout the valley in the following patterns: One olla form was found in all seven 10 km valley partitions of the valley: shape OB; one olla form was found in six of the seven 10 km valley partitions: shape OA; five olla profiles are found in five of the seven 10 km valley partitions: profiles OD, OI, OL, OM, and OP; one olla shape was found in four 10 km valley partitions: form OK; three olla profiles are found in three 10 km valley partitions: shapes OC, OH, and OO; and one form was found at sites in only two 10 km valley partitions: shape ON (Table 6.1).

Some of the olla profiles are widely distributed throughout the valley in no apparent pattern. Olla shapes OB, OA, and OD for example, are found in sites in all seven partitions of the Lurín valley. Other olla forms are distributed widely in the valley, but in non-adjoining partitions; olla form OC for instance. Form OC sherds were found in sites 0-10 km, 21-30 km, and 41-50 km away from the Pacific. Although it is tempting

to link up the missing partitions (31-40 km in this case), we cannot know for sure if that particular form, form OC, was in those parts of the valley or not. With their absence noted, such olla profiles have no geographically discernable distribution.

Other olla types however are found in sites that are geographically more restricted and which overall reflect a more patterned geographical distribution. Most patterned olla shape distributions are observed in the lower and mid valley partitions of the Lurín. Olla form ON, for example, is found specifically at sites 11-30 km away from the ocean. Olla type OO is found at sites 11-40 km away from the ocean, while olla type OH is found at sites 0-40 km away from the pacific. Lastly, olla profile OM and olla profile OP are found at sites in the first 50 km of the Lurín river; that is to say they are found in assemblages of sites 0-50 km away from the Pacific Ocean.

Changes in vessel form with time

A total of seventy-three (73) sites had temporally diagnostic decorated sherds in their assemblages; Sixty-seven (67) of which had diagnostic vessel-form sherds also (outlined in Table 6.2). Thirty-six (36) sites had both only one-period temporally diagnostic decorated sherds and diagnostic vessel-form sherds in their assemblages: No sites, unfortunately, had only Middle Horizon ceramic-styled sherds but thirty-two (32) sites had Late Intermediate Period ceramic styled sherds —sites PV48-2c, 10, 13, 14, 20a, 20d, 20e, 22, 29, 31, 45B, 45c, 57b, 57c, 80, 87, 88, 96, 113d, 126, 137a, 137d, 175, 199, 222, 257, 274, 341, 342b, 343b, 345b, and 349; Three sites had only Late Horizon

styled sherds —PV48-57a, 113a, and 345a; and one site had Colonial Period sherds — site PV48-148. Twenty-four (24) sites had both two-period temporally diagnostic decorated sherds and diagnostic vessel-form sherds in their assemblages: Four sites had Middle Horizon and Late Intermediate Period ceramic style sherds comingled in their assemblage —sites PV48-16, 34, 93, and 236; Eighteen (18) sites had comingled Late Intermediate Period and Late Horizon ceramic style sherds in their assemblage —PV48-9, 12, 19f, 28, 35, 45a, 86, 110, 169, 208, 224, 229, 290, 299, 332, 335, 342a, and 343a; and lastly, two sites had sherds form nonconsecutive periods —site PV48-255 had Middle Horizon sherds and Colonial sherds while site PV48-164 had Late Intermediate Period and Colonial Period sherds. Seven sites had both three-period temporally diagnostic decorated sherds and diagnostic vessel-from sherds in their assemblages: three sites had Middle Horizon, Late Intermediate Period, and Late Horizon ceramic style sherds —sites PV48-1, 2b, and 32; and four sites had Late Intermediate Period, Late Horizon, and Colonial Period ceramic style sherds —PV48-137b, 164a, 286, and 347.

To determine which vessel-forms are correlated to Middle Horizon, Late Intermediate Period, Late Horizon, or Colonial Periods (if any), a set of comparative tables and lists of assemblage vessel forms are tabulated from the thirty-six (36) sites which had both only one temporally diagnostic style and vessel-form diagnostic sherds in their respective assemblages (Table 6.2). The agglomerated vessel form list of these

thirty-six sites was the base list for each time period's possible vessel forms (Table 6.2 column Late Intermediate Period, column Late Horizon, and column Colonial Period).

Sites exclusively with Late Intermediate Period sherds in their assemblages had a total of 106 different vessel forms which are illustrated in Figure Appendix A.1, Figure Appendix B.1, Figure Appendix Figure C.1. These 106 sites had the following forms: form BA, BB, BC, BD, BE, BG, BH, BI, BJ, BK, BM, BN, BO, BO1, BR, BT, BV, BW, BX, BY, BZ, BZ1, CA, CA1, CB, CC, CC1, CD, CE, CF, CG, CH, CH1, CI, CI1, CJ, CK, CK1, CL, CM, CN, CNQ1, CO, CQ, CS, CT, CU, CV, CW, CW1, CX, CZ, CZ1, CZ2, CZ4, CZ6, CZ7, CZ8, DA, DC, DD, DF, DG, DH, DJ, DK, DM, DN, DO, LA, LB, LC, LD, LE, LF, LG, LG2, LI, LJ1, LK, LO, LP, LQ, LR, LS, LX, LZ, LZ1, LZ4, LZ5, LZ6, LZ7, OA, OB, OD, OD1, OF, OG, OH, OI, OK, OL, OM, OO, OP, and OQ. These forms are a base list of possible Late Intermediate Period vessel forms. Sites exclusively with Late Horizon sherds in their assemblage had a total of thirty-nine (39) different vessel forms: form BB, BC, BF, BG, BJ, BK, BZ, C--, CA, CC1, CE, CI, CJ, CK, CL, CO, CP, CQ, CV, CW, CW1, CX, CZ4, CZ5, CZ6, DD, DK, DM, DN, LD, LF, LG, LK, LQ, LW, LX, LY, LZ, and OI. These forms are the base list for possible Late Horizon vessel forms. Sites exclusively with Colonial Period sherds had two different vessel forms: form BE and OP. Both of these vessel forms are the base list for possible Colonial Period vessel forms.

As is evident, some of these vessel forms (BB, BC for instance) are found in more than one period. Multi-period vessel forms are, by definition, non-period diagnostic vessel forms; they must be teased apart form period-diagnostic ones. To eliminate

multi-period forms, those forms which were found overlapping in the Late Intermediate Period, Late Horizon, and Colonial base lists are "canceled" out. This process left no diagnostic forms for the Colonial Period, but it did leave possibly seventy-one (71) diagnostic vessel forms for the Late Intermediate Period —form BA, BD, BH, BI, BM, BN, BO, BO1, BR, BT, BV, BW, BX, BY, BZ1, CA1, CB, CC, CD, CF, CG, CH, CH1, CI1, CK1, CM, CN, CNQ1, CS, CT, CU, CZ, CZ1, CZ2, CZ7, CZ8, DA, DC, DF, DG, DH, DJ, DO, LA, LB, LC, LE, LG2, LI, LJ1, LO, LP, LR, LS, LZ1, LZ4, LZ5, LZ6, LZ7, OA, OB, OD, OD1, OF, OG, OH, OK, OL, OM, OO, and OQ and possibly five diagnostic vessel forms for the Late Horizon —form BF, C--, CP, CZ5, LW, and LY (Figure Appendix A.1, Figure Appendix B.1, Figure Appendix Figure C.1).

However, some of these remaining forms could be "transitional" vessel-forms found "in between" periods. To account for these transitional forms an agglomerated list of assemblage vessel forms from the twenty-four (24) sites which had both temporally diagnostic decorated sherds and diagnostic vessel-form sherds in their assemblages was needed (Table 6.2 column Middle Horizon/Late Intermediate Period and column Late Intermediate Period/Late Horizon). The end goal of this step is also to “cancel” out overlapping forms and thus eliminating non-diagnostic forms for each period of interest and of each transitional periods in this case.

Vessel forms found in Middle Horizon/Late Intermediate Period sites (sites with both Middle Horizon and Late Intermediate Period decorated sherds in their

assemblages) had the following sixty-one (61) vessel forms: BA, BA1, BB, BB1, BF, BH, BJ, BM, BT, BW, BY, BZ, BZ1, CB, CC, CE, CH, CI, CJ, CK, CL, CM, CN, CO, COS, CS, CT, CU, CV, CX, CZ, CZ1, CZ4, CZ7, DB, DD, DF, DH, DL, DM, DO, LA, LB, LD, LE, LF, LJ1, LN, LP, LR, LY1, LZ7, LZ8, OB, OD, OF, OH, OI, OM, ON, and OO. Vessel forms found in Late Intermediate Period/Late Horizon sites (sites with both Late Intermediate Period and Late Horizon decorated sherds in their assemblages) had the following 103 vessel forms: BB, BC, BE, BF, BH, BI, BJ, BK, BL1, BM, BN, BO, BO1, BR, BT, BX, BY, BZ, BZ3, BZ4, BZ6, CA, CA1, CB, CC, CC1, CD, CE, CE1, CH1, CI, CI1, CJ, CK, CL, CM, CN, CO, CO1, CP, CQ, CQ1, CR, CS, C-squash, CT, CU, CV, CW, CW1, CW2, CX, CY1, CZ, CZ1, CZ4, CZ6, CZ7, CZ8, DB, DD, DE, DF, DH, DJ, DO, HORSESHOE, KERO, LA, LB, LC, LD, LE, LF, LG, LG1, Late Horizon, LJ, LJ1, LK, LL, LN, LO, LP, LQ, LX, LZ, LZ1, LZ4, LZ7, OA, OB, OC, OD, OF, OG, OH, OI, OK, OL, OM, OP, and OQ (Figure Appendix A.1, Figure Appendix B.1, Figure Appendix Figure C.1).

Transitional vessel forms, by definition, are not to be found in "pure" Middle Horizon, Late Intermediate Period, Late Horizon, or Colonial Period vessel form lists. Therefore, I canceled out overlapping vessel forms found on both lists redefining period-specific vessel forms. The net effect of this step is to define which vessel forms belong to which period. In this way too, transitional forms stand out; these are forms only found at sites with two consecutive period specific assemblages, but which are not in mono-period vessel form lists. That is to say Middle Horizon/Late Intermediate Period transitional forms are found in Middle Horizon/Late Intermediate Period assemblages but not in only-Middle Horizon or only-Late Intermediate Period assemblages.

Comparing the different vessel forms like this further re-defines and updates the diagnostic vessel form lists.

In the end, eliminating temporally overlapping forms, possible Middle Horizon/Late Intermediate Period transition vessel forms are the following: form BA1, BB1, COS, DL, LY1, LZ8, and ON; Possible Late Intermediate Period vessel forms are: form BD, BV, CF, CG, CK1, CNQ1, CZ2, DA, DC, DG, LG2, LI, LS, LZ5, LZ6, and OD1; Possible Late Intermediate Period/Late Horizon transition vessel forms are: form BL1, BZ3, BZ4, BZ6, CE1, CO1, CQ1, CR, C-squash, CW2, CY1, DE, HORSESHOE, LG1, Late Horizon, LJ, LL, and OC; and Possible Late Horizon vessel forms are: forms C--, CZ5, LW, and LY (Table 6.2).

Other vessel forms are "long lived" forms which transcend several periods. Seven sites had three-period temporally diagnostic decorated ceramic sherds. The three-period sites had either Middle Horizon, Late Intermediate Period and Late Horizon assemblages, or Late Intermediate Period, Late Horizon, and Colonial assemblages. All seven sites' assemblages are excluded from this part of the analysis as they had too many vessel forms to provide a useful comparative list. Although the difference in their assemblages' vessel forms could be "canceled out" to confirm vessel forms from the Middle Horizon and Colonial Periods (as Late Intermediate Period and Late Horizon vessel forms contribute to both groups total assemblages and would, theoretically at least, "cancel" each other out when the lists are juxtaposed).

Vessel form distribution summary

The number of different vessel forms recovered from each site proved useful in discerning patterns in their distribution in the Lurín valley, not only of vessel form frequencies, but of possible site hierarchies. The highest number of different vessel forms were recovered from site PV48-164 (Sisicaya). PV48-164's assemblage had a total of 61 different vessel forms. Site PV48-32 and site PV48-12 are tied for the second most-vessel-forms represented at a site in the valley; they each had 58 different vessel forms in their assemblages. Site PV48-1 (Pachacamac) and site PV48-28 had the next the greatest number of vessel forms represented in their assemblages; 52 and 48 different vessel forms in each, respectively. The next thirteen sites, PV48-16, 35, 29, 45, 34, 57, 20, 137, 96, 110, 113, 343, and 169 had the next the greatest number of different vessels forms in assemblages —38, 36, 34, 32, 31, 30, 29, 26, 26, 24, 23, 22, and 21 different forms in each, respectively. The remaining sixty-one (61) sites had less than 20 different ceramic forms in their assemblages; forty-nine (80%) of which had only 10 or less different vessel forms. Overall, sixty (60) sites have 1 to 20 different vessel forms, twelve (12) sites have 21-40 different vessel forms, and five sites have 41-61 different vessel forms. Based on the number of different vessel forms from each assemblage, there is at least a three-tier hierarchy of the sites (Figure 6.1). Sites PV48-164, PV48-32, PV48-12, PV48-1, and PV48-28 being the largest and most diverse assemblages, reflecting their overall prominence in the valley.

Beyond site hierarchies, there are differences in the distribution of vessel forms. Different vessel forms are distributed along the Lurín valley differently. Approximately 34% (~25 out of 72) of jar forms are distributed throughout the valley with little or no geographical patterning. This contrasts with about 38% (~9 out of 24) of bowl forms distributed throughout the valley with little discernable geographical pattering and with over 58% (~7 out of 11) of olla forms which are distributed ubiquitously throughout the valley (Table 6.1). At face value, the numbers alone suggest that some vessel forms — ollas in particular— have practical and functional considerations which the intended form fulfills before deviations and adorations can distinguish one type of vessel form from another. If one presumes that ollas are used for storage purposes (large volume with restricted openings) it makes sense that their intended function curtails or stifled any artistic, individual, or ethnic expression that could have been imprinted on them during their manufacturing processes. Bowl and jar forms were probably better suited to express manufacturing differences —and for whatever those differences may mean or symbolize (stipulated in Chapter 7).

The spatial patterning distribution of the vessels must be analyzed; jar forms will be discussed first. There are three types of spatial patterns for the distribution of specific jar forms: (1) some forms are found throughout the valley with no particular geographical distribution (jar form BV or jar form DO for example); (2) Some jar forms shared a range in distribution which loosely patterns into low, middle, or mid-high valley spatial differences. Jar form CJ and jar from J1, for instances, are concentrated in the

lower parts of the valley. Jar form BC or jar form CZ on the other hand, have a low-middle valley distribution, while jar form DN has a mid-high valley distribution. It is note-worthy that there is no clear demarcation between low-valley, middle-valley, or high valley jar forms observable in the archaeological ceramic record analyzed here. Rather, low valley, middle valley, and high valley forms are found in 20, 30, and 40 km ranges —depending on the jar form— which (a) at times overlap, (b) are often gradually and distributed over a gradient, and (c) are often borrowed from neighbors living "up" the valley and/or living "down" the valley. Even in jar forms which seem prevalent throughout the valley (jar form BJ, CJ, and CL for example) there are observable concentrations of popularity (reflected in high frequency of form appearance) in specific parts of the valley with diminishes popularity of those same forms the further away from those centers; and (3) some jar forms are specifically and geographically distributed in very restricted regions in the valley. Many of these geographically restricted vessel forms are found only in upper valley sites (jar form BZ5 or jar form CY for instance), others may be found in mid-valley sites (jar form CR or jar form BZ6 in this case), and other still are found only in low-valley sites (jar form CW for example).

The same three patterns are mostly true for bowl forms although upper-valley-only-bowl forms are not readily observed. To a lesser degree, the pattern holds true for olla forms also. The caveat here is that most olla forms spatial patterning is observed within sites 50 km from the ocean —possibly because of form restrictions imposed by the olla's functional needs (discussed above).

Sherd color distributions in the Lurín

Roughly 9,500 ceramic sherds were analyzed. Each ceramic sherd's color was categorized using Maerz and Paul's (1950) color dictionary in the manner described in Appendix E. All the sherds observed at one site made up that site's assemblage. At each site, a single-instance color categories "presence" or "absence" was tallied up as reflected from the assemblage's ceramic colors. At each site, if any of the sherds had an observed color category, then a "+1" score was noted for it; if no sherds were observed with that particular color, then a "+0" score was noted. If two sherds at the same site had the same color, then a single instance score of "+1" was noted. The processes were repeated for all color categories at all site assemblages analyzed from all the sherds observed.

To ascertain color distribution patterns the Lurín valley was again divided into seven 10 km partitions. That is to say, all sites between 0-10 km, 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km are grouped together into their seven corresponding partitions. All of the sites within those seven 10 km partitions contributed to an agglomerated pool of "+1s" or "+0s" for each color category observed in its corresponding 10 km section. Sites in the same partitions accumulated their color scores. For example, sherds of color 5A were observed in five different sites which were between 0-10 km away from the pacific (sites PV48-1, 193, 197, 229, and 234); each site contributes a "+1" score and therefore a "+5" data point is entered in its corresponding

table cell (Table 6.3). In the same way, color 5A is observed at nine, ten, six, five, three and three different sites which were, respectively at 11-20 km, 21-30 km, 31-40 km, 41-50 km, 51-60 km, and 61-70 km away from the Pacific. This procedure was repeated for each color for each of the seven 10 km partitions. The agglomerated summary of this process produces Table 6.3.

Ninety-eight (98) different colors are observed in the total sherds from assemblages analyzed. Some colors are observed with more frequency than others. Colors 7J, 14G, and 13D are observed in sherds that came from 56, 53, and 51 different sites respectively. Colors 15J, 13G, 5A, and 6J are observed at 45, 41, 41, and 40 sites respectively. Colors 15G, 8J, 14D, and 5J are observed at 39, 39, 38, and 37 sites respectively. Colors 15H, 15D, 15K, and 16J are observed at 22, 21, 21, and 20 sites respectively. The following colors are observed at 10-19 sites: colors 7K, 14H, 14J, 12D, 16A, 16K, 8K, 4G, 15A, 4J, 13A, 6H, 8L, 12A, 16D, 5G, 5H, 8F, and 13J. Colors observed at 10-2 sites include: colors 12G, 16G, 6A, 7G, 7H, 8H, 14B, 16B, 16H, 6G, 7B, 11D, 14K, 6B, 8A, 8G, 12J, 13H, 4A, 4B, 5B, 6K, 7A, 11G, 14A, 16I, 1B, 6I, 8B, 8D, 10D, 13B, 13K, 15E, 16C, 2G, and 6L. Colors observed only at one site are: colors 11A, 11F, 12H, 14I, 15B, 15C, 15L, 17C, 1G, 3A, 3B, 4C, 4F, 4H, 4K, 4L, 5D, 5I, 5K, 6F, 7C, 7E, 7F, 7L, 8C, 9A, and 9G.

Some sherd colors are distributed widely throughout the valley with no geographical patterning. Others are more geographically restricted. Fifteen (15) colors are found in assemblages from sites in all seven 10 km partitions. These colors are:

colors 5A, 5J, 6J, 7J, 7K, 8J, 8L, 13D, 13G, 14D, 14G, 15G, 15J, 15K, and 16J. Although these colors are found throughout the entire valley, some of them —particularly colors 5A, 7J, 13D, 13G, 14G, and 15J— seem to have higher concentrations of clustering around certain valley portions (Table 6.3). For example, color 13G and color 14G are found in high frequencies at sites 0-10 km away from the ocean. They are found less frequently at sites higher in the valley. These colors are still fairly popular in the 11-30 km partitions where they appear in 10 to 8 sites at each partition, but they are found less frequently beyond the mid-valley sections overall as they appear in diminishing frequencies at sites beyond the low-valley. Similarly, colors 5A, 13D and 15J appear in high frequency at sites in the in the 11-30 km partition, while Color 7J seems popular at sites found between 41-50 km inland (Table 6.3).

Thirteen (13) colors are found in assemblages at sites from six of the seven 10 km Lurín valley partitions. Colors 4J, 6H, 7H, 12D, 13A, 14H, and 16K are observed, more or less equally distributed, in assemblages found at sites 0-60 km from the Pacific. Colors 4G 8K, 14J, and 15H are found at assemblages 0-50 km and 61-70 km away from the Pacific Ocean —these colors too are evenly distributed throughout the valley portions in which they are found. Color 16A is observed in assemblages from sites 0-30 km and 41-70 km away from the pacific. And lastly, assemblages from sites ranging from 11-70 km inland have sherds in color 15D (Table 6.3).

Ten (10) colors are found in assemblages at sites from five of the seven 10 km partitions: colors 5G, 6A, 8F, 16D, 5H, 12A, 14B, 7G, 15A, and 16H. The first four of which one finds, largely evenly distributed, at sites 0-50 km away from the Pacific. The remaining colors are found throughout the valley, with littler spatial patterning to their distribution (Table 6.3).

Thirteen (13) colors are found in assemblages from sites in four of the seven 10 km partitions: colors 6B, 8A, 8G, 16G, 7B, 7A, 12G, 12J, 13J, 16B, 6G, 8H, and 14K —the first four of which are found only at sites between 0-40 km away from the Pacific. The remaining eleven colors, while mostly present at sites which are 0-30 km away from the Pacific region, also make various, un-patterned-appearances at sites that range from 31-60 km away from the Pacific (Table 6.3).

Thirteen (13) colors are found in assemblages from sites in three of the seven 10 km partitions: colors 1B, 4A, 4B, 5B, 8B, 8D, 11G, 6K, 6I, 11D, 13H, 14A, and 16I —the first seven of which are only found in assemblages of sites in the lower and low-mid valley sections; sites between 0-30 km away from the Pacific. Color 16I is a mid-valley color; it appears only at sites between 11-40 km away from the Pacific. Colors 6K, 6I, and 11D mainly are found at sites between 31-60 km inland but make a rare appearance in low-mid valley assemblages as well (Table 6.3).

Four colors appear in assemblages from sites in only two of the seven 10 km valley sections: colors 6L, 13B, 10D, and 13K. Color 10D and color 13K appear only in

mid-valley sites; they appear in assemblages 21-30 km and in assemblages 41-50 km away from the Pacific Ocean respectively. Color 6L and color 13B on the other hand are found both in low-valley and in high-valley sites (Table 6.3).

Thirty (30) colors appear in assemblages from sites in only one of the seven 10 km Lurín valley sections. These thirty colors must be observed with caution. It is possible that some of the color categories are mislabeled —many categories are very similar to their neighboring color in the color dictionary— thus potentially appearing here as a distinct color category, when they could, in fact, be a very similarly but differently labeled color (say a color 4C label instead of color 4D label, for instance). Although these thirty colors are observed in low frequency, they are included in the analysis because much attention was bestowed upon and during the color classification process. Because they only appear in one 10 km partition, these colors are geographically restricted to very specific parts of the valley. In this way assemblages from sites 0-10 km away from the Pacific had sherds with the following rare colors: 3B, 5K, 7E, 11F, 15B, 15C, and 17C; Assemblages from sites 11-20 km upstream had sherds with colors: 1G, 2G, 3A, 4C, 4F, 4K, 5I, 8C, 14I, and 15L; Assemblages from sites 21-30 km upstream had sherds with the following colors: 5D, 6F, 9A, 9G, 11A, 15E, and 16C; Color 7L is found in assemblages from sites between 31-40 km away from the Pacific; Colors 4H, 4L, 7C, and 7F are in assemblages from sites 41-50 km away from the Pacific; And sherds in color 12H are found at sites 51-60 km away from the Pacific.

Changes in sherd colors with time

A total of seventy-three (73) sites had temporally diagnostic decorated sherds; Thirty-seven (37) of which were used to ascertain if particular colors of sherds corresponded to the Middle Horizon, Late Intermediate Period, Late Horizon, and/or the Colonial Period. Four sites which had only Middle Horizon/Late Intermediate Period decorated sherds provided color samples for this transitional period: sites PV48-16, 34, 93, and 236. Eighteen (18) sites which had only Late Intermediate Period decorated sherds provided color samples for the Late Intermediate Period: sites PV48-10, 13, 14, 22, 29, 31, 80, 87, 88, 96, 126, 175, 199, 222, 257, 274, 341, and 349. Fourteen (14) sites which had only Late Intermediate Period/Late Horizon comingled decorated sherds provided color samples for this transitional period: sites PV48-9, 12, 28, 35, 86, 110, 169, 208, 224, 229, 290, 299, 332, and 335. Lastly, only one site which had only Colonial Period decorated sherds provided color samples for this period: site PV48-148.

Colonial Period sites' assemblages had sherds in two colors: colors 8J and 13D (Table 6.4). These colors are also found in assemblages with Middle Horizon/Late Intermediate Period, Late Intermediate Period, and Late Intermediate Period/Late Horizon decorated sherds; they are not temporally diagnostic. The color analysis for Colonial Period site assemblages in hampered by the small sample of Colonial Period sites–the one site. Nevertheless, some overall comments can be made by the patterns that emerge from the remain data of Middle Horizon/Late Intermediate Period

assemblages, Late Intermediate Period assemblages, and Late Intermediate Period/Late Horizon assemblages. Some colors are found in sherds from all periods, while other colors are not.

Assemblages with Middle Horizon/Late Intermediate Period decorated sherds, Late Intermediate Period decorated sherds, and Late Intermediate Period/Late Horizon decorated sherds shared the following twenty-seven (27) colors: color 5A, 5G, 5J, 6G, 6J, 7J, 7K, 8F, 8K, 8L, 12D, 13G, 13J, 14D, 14G, 14H, 14J, 15D, 15G, 15H, 15J, 15K, 16D, 16G, 16H, 16J, and 16K (Table 6.4). These colors also are not temporally diagnostic.

One color was found in assemblages that had both Middle Horizon/Late Intermediate Period decorated sherds and only Late Intermediate Period decorated sherds: color 6I. As these periods are consecutive, the color 6I seems somewhat diagnostic or characteristically indicative of these periods. Sixteen (16) colors were reflected in assemblages that had only Late Intermediate Period decorated sherds and Late Intermediate Period/Late Horizon decorated sherds: colors 4A, 4B, 4G, 4J, 5B, 5H, 6A, 6B, 6H, 7B, 8G, 11G, 12G, 14A, 14K, and 16A. As these periods too are consecutive, they seem somewhat diagnostic or characteristic of sites of these periods. Seven colors are reflected in assemblages that had Middle Horizon/Late Intermediate Period decorated sherds as well as assemblages that had Late Intermediate Period/Late Horizon decorated sherds: colors 7G, 8H, 12A, 13A, 14B, 15A, and 16I (Table 6.4). As

these periods are consecutive, these colors might be characteristic of them —however, their span is so large that they might as well be non-diagnostic colors.

Thirty-three (33) colors are the best candidates as temporally diagnostic ones because they are found in temporally restricted assemblages. One color is found only in Middle Horizon/Late Intermediate Period assemblages: color 2G. Twelve (12) colors are found only in Late Intermediate Period decorated assemblages: colors 3B, 4F, 7E, 9G, 10D, 11A, 11F, 13K, 14I, 15B, 15L, and 16C. While twenty (20) colors are found only in assemblages that have Late Intermediate Period/Late Horizon decorated sherds: colors 1B, 1G, 3A, 4C, 4K, 5I, 5K, 6F, 6K, 7A, 7H, 8A, 8B, 8C, 8D, 9A, 11D, 12J, 15E, and 16B (Table 6.4). These colors are the best candidates as temporally diagnostic colors.

While there are many minute differences in the color categories in the assemblages analyzed, overall there is no real color differentiators in the sherds from one period to the other. For instance, color 2G –a light, rosy colored hue– is only found in assemblages with Middle Horizon/Late Intermediate Period sherds. However, color 2G is quite similar to color 3B –a slightly darker, rosy hue– found in assemblages that have only Late Intermediate Period sherds. Furthermore, it is also very similar to color 1B and color 3A –again variations of rosy hues– which are only found in Late Intermediate Period/Late Horizon assemblages. In this way shreds in hues of rosy-reds (colors 1B, 2G, 3A, 3B, 4A, etc.) are found in assemblages of all periods. The same is true for light orange hues (colors 9A, 9G, 10D, 11A, 11D, etc.), dark orange-hues (colors 4J,

4K, 5J, 5K, 6J, 13G, 13J, etc.), dark red hues (colors 6I, 7B, 7E, etc.), and light and dark grey hues (6A, 7A, 15A, 15D, 16A, etc.). In sum, there are no clear colors which seem associated with any one particular period.

Color distribution summary

The sheer number of observed colors in each site proved useful in discerning some patterns in Lurín valley sites assemblages not only of color frequencies but also of possible site hierarchies. The site with the highest total number of different colored sherds in its assemblage was site PV48-164 (Sisicaya). PV48-164's assemblage had a total of 64 different colors represented in its various sherds. Site PV48-12 was the second most-colored represented site in the valley. It had 63 different colors in the sherds from its assemblage. Site PV48-1 (Pachacamac), PV48-28, and PV48-32 had the next the greatest number of colors represented in their assemblages —49, 49, and 45 different colors at each respectively. The next eleven sites, sites PV48-45, 16, 35, 57, 29, 96, 20, 19, 31, 343, and 34 had the next most amount of colors in their assemblages — 38, 37, 33, 33, 28, 27, 26, 25, 24, 24, and 23 different colors respectively. The remaining sixty-six (66) sites had 22 or less colors represented in their assemblage; forty-four (~67%) of which had 10 different colors or less in their total assemblages. Taking it all together, there is at least a three-tier hierarchy of the sites based on the number of colors in their assemblages (Figure 6.2). Sixty-six (66) sites have 1 to 22 different colors, eleven (11) sites have 23-43 different colors, and five sites have 44 or more colors in

their assemblages. Site PV48-164, PV48-12, and PV48-1 being the largest and most colorful assemblages. This likely is reflecting each site overall looming presence in the valley at various times.

Perhaps unsurprisingly, there is a linear and positive correlation between the number of vessel forms per site and the number of colors recorded at each of those sites (Figure 6.3). From this perspective, the three-tier nature of sites in the Lurín is evident: Tier 1 sites include: sites PV48-164, 12, 32, 1, and 28; Tier 2 sites include: sites PV48-14, 16, 19, 20, 29, 31, 34, 35, 45, 57, 96, 110, 113, 121, 137, 169, and 343; and Tier 3 sites: sites PV48-2, 3, 9, 10, 11, 13, 22, 27, 33, 80, 86, 87, 88, 91, 93, 109, 126, 148, 151, 152, 159, 168, 175, 177, 179, 189, 193, 197, 199, 208, 222, 224, 229, 232, 234, 236, 238, 254, 255, 257, 274, 286, 289, 290, 292, 295, 299, 302, 303, 315, 332, 333, 335, 337, 341, 342, 345, 347, 349, and 351. However, also from this perspective (Figure 6.3), a four-tier nature of all sites in the Lurín can also be proposed and defended. From this second point of view Tier 1 sites would include: sites PV48-164 and 12; Tier 2 sites would be: sites PV48-32, 1, and 28; Tier 3: sites PV48-4, 16, 19, 20, 29, 31, 34, 35, 45, 57, 96, 110, 113, 121, 137, 169, and 343; and tier 4 sites: the rest. In both scenarios, what seems striking is that Pachacamac is not as "high" tiered as one would expect it to be; at least not compared to sites PV48-164 and PV48-12 which have both higher number of different vessel forms and a higher number of colored sherds in their assemblages.

Surprisingly perhaps are the color patterns observed. Broadly speaking, red sherds are found throughout the valley with lighter colored reds (colors around 4H, and 4L) perhaps appearing in higher frequencies in the upper valley assemblages than their darker red counterparts in the middle and low valley (colors around 6I, 5K, and 6L). Mid valley sites have a high frequency of brown and light brown colored sherds (colors around 14I and 13K). The low valley and midvalley sites seem frequently represented by orange colored sherds of various hues (colors around 9G and 12J).

Some colors are commonly found in many assemblages throughout the valley. Colors 7J, 14G, 13D, 15J, 13G, 5A, and 6J for instance, appear quite regularly showing up in forty or more of the sites analyzed. Colors 15G, 8J, 14D, 5J, 15H, 15D, 15K, and 16J, are another batch of common colors which appear frequently in the archeological record —these are found at twenty to forty of the sites throughout the valley. There is little geographical patterning to any of these colors. The remaining eighty-four (84) colors observed are found in 20 or less sites. Many colors are found in low and mid-valley assemblages, sites 0-10 km, 0-20 km, 0-30 km, and 0 to 40 km inland. These sites have assemblages with the following colors: colors 1B, 4A, 4B, 5B, 8B, 8D, 11G, 6B, 8A, 8G, 16G, 5G, 6A, 8F, 16D, 4J, 6H, 7H, 12D, 13A, 14H, and 16K. Other colors seem restricted to a mid-valley and upper-valley regions; colors 10D, 13K, and 14K are examples. Yet other colors have even more of a geographically limited distribution. Colors 3B, 5K, 7E, 11F, 15B, 15C, 17C, 1G, 2G, 3A, 4C, 4F, 4K, 5I, 8C, 14I, 15L, 5D, 6F, 9A, 9G, 11A, 15E, 16C, 7L, 4H, 4L, 7C, 7F, and 12H, are all restricted to assemblages within

10 km of each other. Caution is warranted in their analysis as the smaller samples used to make these observations are more susceptible to color misclassification.

Overall, each of the seven partitions the Lurín valley was divided into has similar colored sherds than the immediate neighboring partitions. Changes in color distributions are relatively gradual and tempered up and down the valley. There is never an abrupt, sharp, demarcation where colors stand in high contrast of each other. There are no clear "high valley" colors or "low valley" color patterns. There are no clear diagnostic Middle Horizon, Late Intermediate Period, Late Horizon, or Colonial Period colors either.

Paste and Clay matrix distributions in the Lurín

At least fifteen (15) different pastes were identified from the thousands of sherds used in this analysis; their compositional descriptions and illustrations are detailed in Appendix F. While other scholars have identified up to 20 different pastes (see Makowski et al. 2015), I feel the distribution paste patterns presented below are defendable from the data I have analyzed. In the following section I analyzed the distribution of a small sample of sherd pastes analyzed in the Lurín valley.

The analysis presented in this section has several shortcomings: 1) it is a qualitative not quantitative analysis; 2) it is informed from a small number of samples — about 200 from the 9,500 total sherds analyzed; 3) the samples are not random —I chose them based on the most detailed notes I had; 4) the geographical distribution of

three (out of the fifteen) pastes observed is missing; and 5) the analysis is macroscopic —no spectrometric or microscopic analysis was used in the clay classifications. Despite these shortcomings, a qualitative and cursory analysis of the pastes analyzed proved fruitful in making some preliminary conclusions regarding spatial patterning of clay matrices in the assemblages analyzed.

The spatial distribution of twelve pastes observed is discussed below. Paste A was observed in sherds from eleven (11) sites: sites PV48-9, 28, 31, 34, 57c, 110, 137a, 164a, 343b, 347, and 349; Paste B was observed in sherds from eleven (11) sites: sites PV48-1, 2b, 32, 45a, 121g, 137b, 164b, 289, 332, 337, and 343b; Paste C was observed in sherds from six sites: sites PV48-13, 28, 29, 32, 113d, and 164a; Paste D was observed in sherds from nine sites: sites PV48-1, 12, 13, 32, 137a, 164e, 179, 199, and 299; Paste E was observed in sherds from seven sites: sites PV48-12, 20, 35, 45c, 164a, 224, and 341; Paste I was observed in sherds from twelve (12) sites: sites PV48-12, 45a, 164c, 113b, 137a, 164c, 193, 197, 199, 335, 343b, and 347; Paste J was observed in sherds from twenty-one (21) sites: sites PV48-1, 12, 16, 19g, 29, 32, 57b, 93, 96a, 208, 109a, 121c, 137b, 164a, 208, 224, 255, 286, 302, 345b, and 347; Paste K was observed in sherds from ten (10) sites: sites PV48-86, 88, 113b, 137a, 164c, 286, 290, 295, 345b, and 347; Paste L was observed in sherds from eight sites: sites PV48-12, 14, 22, 45a, 45b, 57b, 96b, and 164c; Paste M was observed in sherds from eight sites: sites PV48-19h, 20e, 96, 121f, 193, 193, 193, and 274; Paste N was observed in sherds from three sites: sites

PV48-9, 229, and 345b; and finally, Paste O was observed in sherds form five sites: sites PV48-1, 45, 121, 286, and 347.

Of all the pastes analyzed, only three pastes —Paste K, Paste A, and Paste M— have some geographically patterning to their distribution. Paste K is only observed in sherds from assemblages of mid to high valley sites; sites 35 km to 70 km away from the Pacific Ocean. This suggests that Paste K, perhaps, is a sort of high valley paste. Although it only found in sites in the mid-valley or higher it is not a restricted paste as it is observed in at least 10 different sites (Map 6.1). Paste A, for the most part, is geographically restricted to assemblages in the midvalley; sites between 25 km and 50 km away from the Pacific. All eleven sites in which Paste A is observed in, except at site PV48-9, were in the aforementioned range. Site PV48-9 is approximately 14 km from the Pacific and escapes the pastes otherwise restricted geographical range. With the exception of this site the other ten sites cluster in a relatively small geographic midvalley region (Map 6.1). Paste M is observed in assemblages from sites 0-35 km away from the Pacific; it is found in low valley and low-mid valley sites (Map 6.2). With the exception of its observation at site PV48-96, Paste M seems to cluster at sites less than 15 km away from the Pacific. It is possible that this was a clay of choice for low valley potters.

The remaining ten pastes for which geographical associations are possible are distributed throughout the valley in no clear clustering or discernable patterning. Paste D and Paste E are observed in assemblages from sites that range of 0-70 km and 0-50

km away from the Pacific respectively (Map 6.1). Paste B, Paste I, and Paste L are observed in assemblages from sites 0-60 km away from the Pacific (Map 6.2). None of these three pastes distinctively cluster anywhere in particular along the valley. The distribution of Paste N, Paste D, Paste C, and Paste J are illustrated in Map 6.3. None of those pastes either have any clear geographical patterning. Paste J is the most commonly observed paste; it is found in twenty-one (21) sites which are evenly disturbed throughout the entire valley. The least observed paste is Paste N; it is only observed in three, distant from each other sites (Map 6.3).

Temporal preferences of Pastes

Correlation between pastes and temporal periods were explored with limited success. I looked at the paste of sherds from assemblages of sites that were from Middle Horizon, Late Intermediate Period, Late Horizon, and Colonial Periods (identified in chapters 1-4). There was no clear correlation between most paste used in vessel manufacturing processes and any one particular time period. For instance, Paste J and Paste I are observed in sherds from Middle Horizon sites (sites PV48-1, 2b, 32, 34, 93, 193, 236, and 255), and also in sherds from Colonial Period sites (sites PV48-137b, 164a, 164c, 255, 286, and 347). They are also observed in a myriad of Late Intermediate Period and Late Horizon sites (Map 6.1, 6.2, and 6.3). This suggest that Paste J and Paste I are not associated with any particular time period. This seems to be the case for most

of the pastes recorded. Two pastes, however, appear at interesting sites with specific temporal associations and perhaps temporal correlations.

Sherds made of Paste M appeared entirely at low-valley sites but are observed particularly at site PV48-193 —a Middle Horizon site identified by its Lima Phase 9 ceramics. Although it is a small sample, this correlation suggest that Paste M was one of the clays used by Lima Phase 9 potters —or at least by low-valley potters as early as the Middle Horizon. Because Paste M is limited to low-valley sites, at least some of the following inferences must be true: 1) mid and high valley potters did not have access to Paste M; 2) mid and high valley potters were unaware of it, 3) mid and high valley potters did not travel to its source, 4) mid to high valley potters did not trade for it, and/or 5) pottery made with Paste M did not travel to mid or high valley sites.

Sherds made from Paste K on the other hand, seem limited to high-valley assemblages. In particular, they are curiously present at sites PV48-137, 164, 286, and 347 —four (of the six) Colonial Period sites identified by the presence of glossy ceramics in their assemblage. All four of the sites have Lurín-Inca sherds in their assemblages which temporally tethers them to the Late Horizon also. Possible association with Red-Slip ceramics at the same assemblages pushes further back their temporal association to at least the Late Intermediate Period. Nevertheless, Paste K is a frequently found paste in highland assemblages and seems associated with Colonial Period and at least some Late Horizon sites. Therefore, we can infer some of the following as true: 1) low-valley

potters did not have access to Paste K, 2) low-valley potters did not acquire Paste K for their pottery needs, 3) ceramics made from Paste K did not find their way to the low-valley sites, 4) Paste K was a new source of clay discovered some time in the Late Intermediate Period, 5) Paste K was a clay promoted by high valley potters at some point during or after the Late Intermediate Period, and/or 6) Paste Ks quarry had too much cost for low-land potters to bother going for it as a resource.

Paste distribution summary

Of the fifteen (15) different pastes observed and used in this analysis only two seem to have a geographic and temporal correlations. Paste M is found only in low valley sites and seems to be associated with Middle Horizon assemblages. Paste K is found only in high-valley sites and seems associated with terminal Late Intermediate Period, certainly Late Horizon, and possibly Colonial Period sites. These correlations should be taken as preliminary suggestions for future analysis; they are hampered by the small, non-random sample sizes used in this particular part of the analysis.

All other pastes analyzed have a wide-ranging distribution throughout various assemblages from sites in all parts of the valley. Seemingly all pastes are found in complex assemblages, suggesting no direct clear association or correlation between paste and any one particular ceramic style. If this is the case, it reaffirms Makowski's et al. (2015, 151) conclusions of little direct correlation between paste style and ceramic style in the Lurín; they suggest instead that the Lurín inhabitants had several

decentralized workshops producing different ceramic types depending on social needs —all which had, more or less, equal access to different clay sources. Furthermore, all pastes have little (if any) temporal associations whatsoever —an observation first suggested by Arnold (2000). It seems that low valley, mid valley, and high valley potters had access to a myriad of different sources of clay —either directly or via trade for raw clay material. That is to say, no one clay source seems to have been controlled by any group at any one time. Alternatively, the shortcomings of this section (outlined above) are too great to overcome. There are no discernable and clear paste distribution patterns because the analysis and observations were too coarse in their initial steps, tainting the results and rendering patterns invisible. Future ceramic analysis would benefit from chemical and mineral composition of the clay as well as petrographic analysis from the sherds —an analysis not limited to magnified visual inspection only.

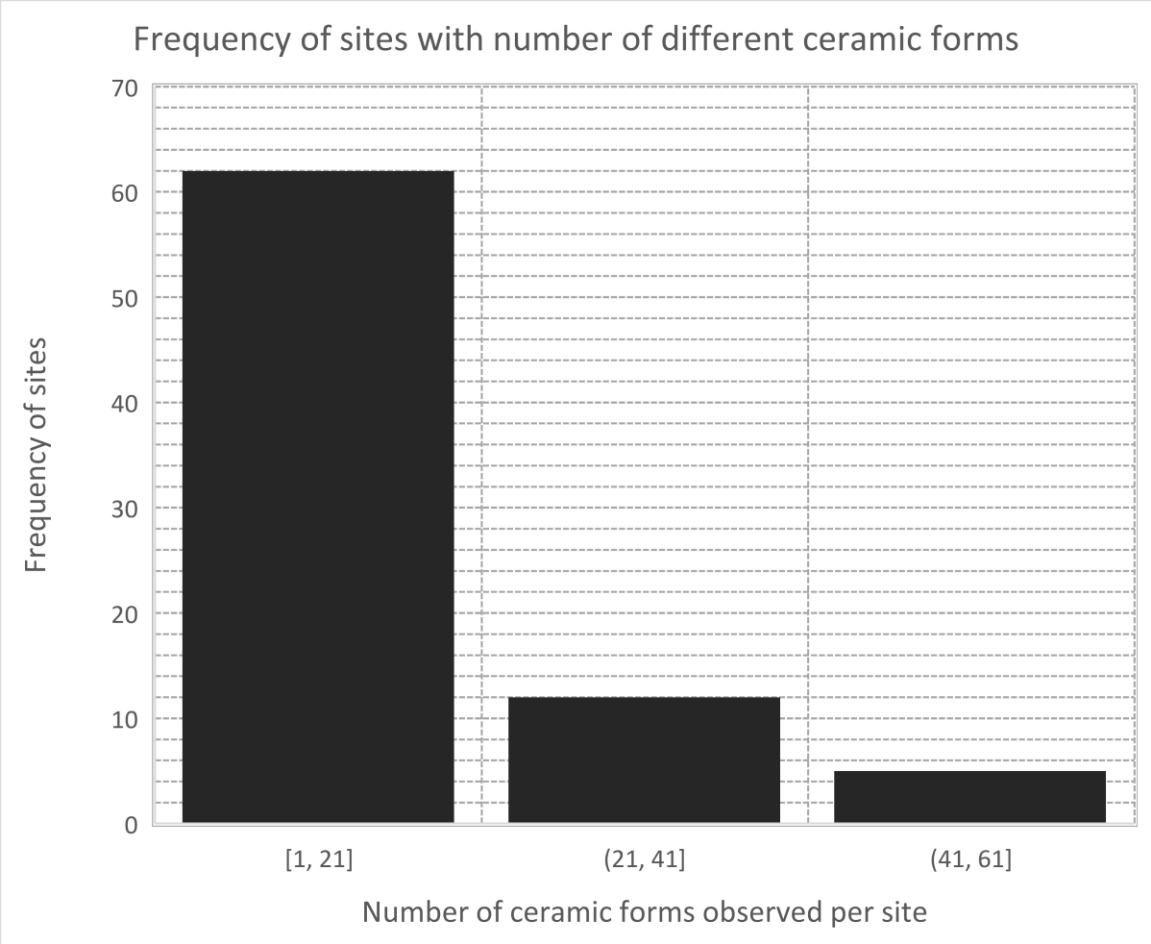


Figure 6. 1. Histogram showing frequency of sites with different number of ceramic vessel forms in their assemblages.

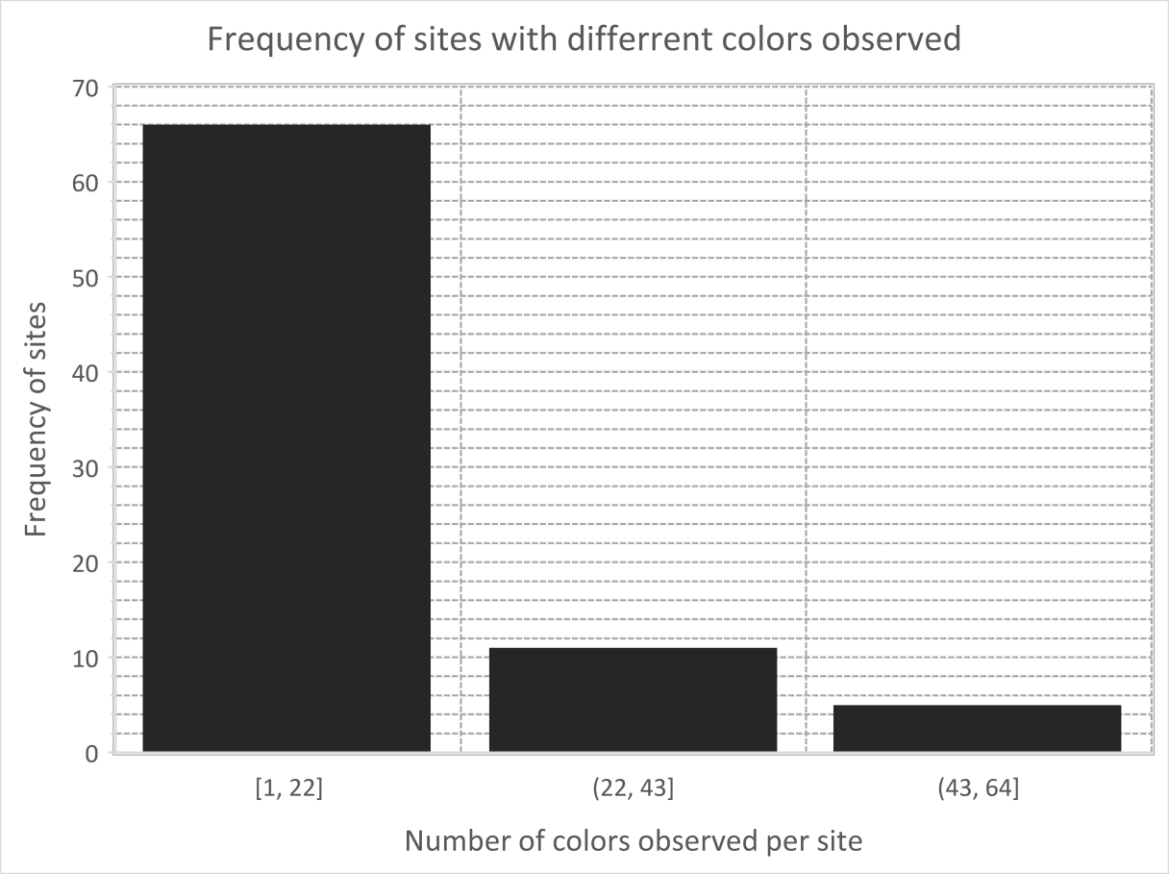


Figure 6. 2. Histogram showing frequency of sites with different number of sherd colors in their assemblages.

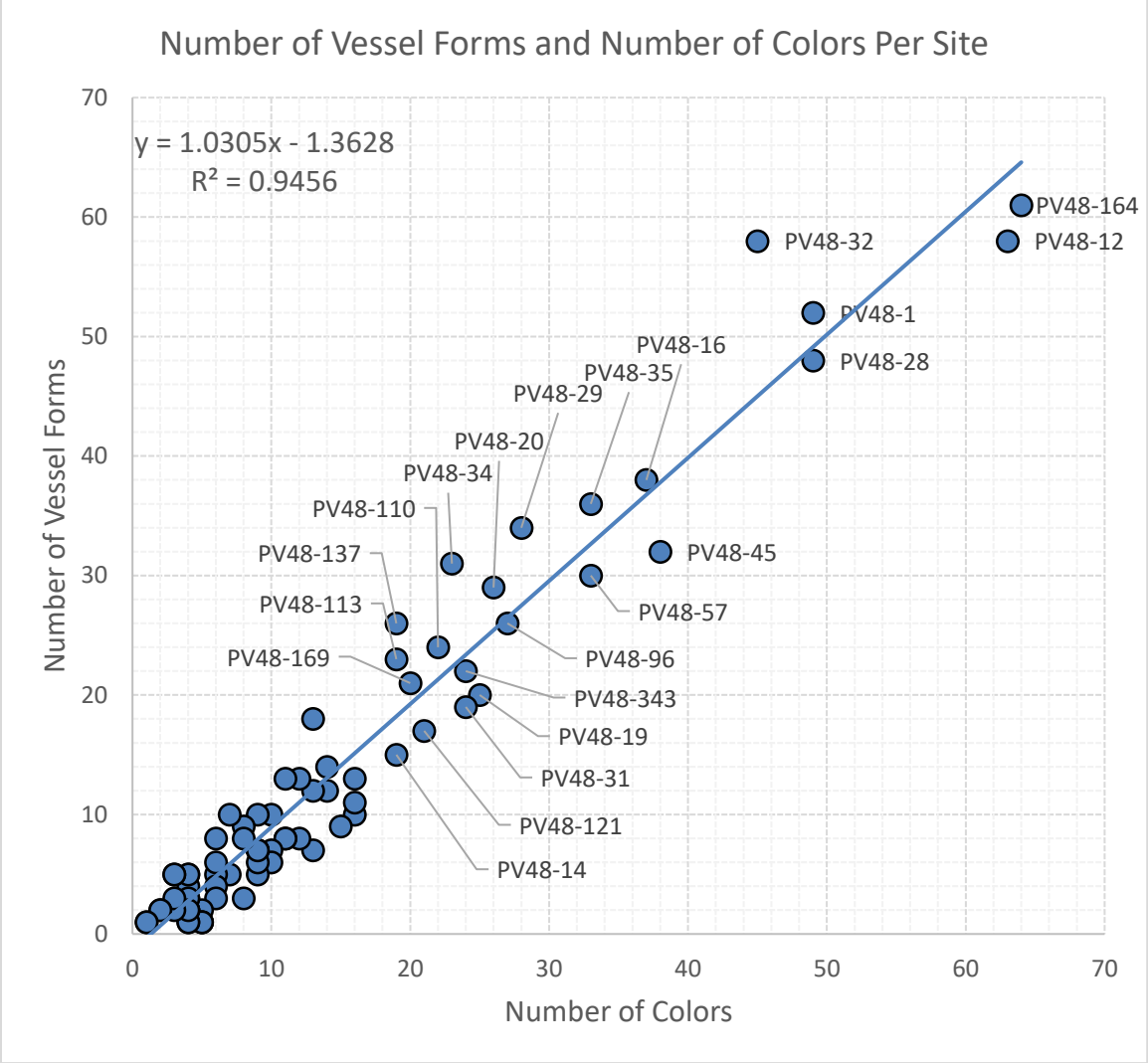
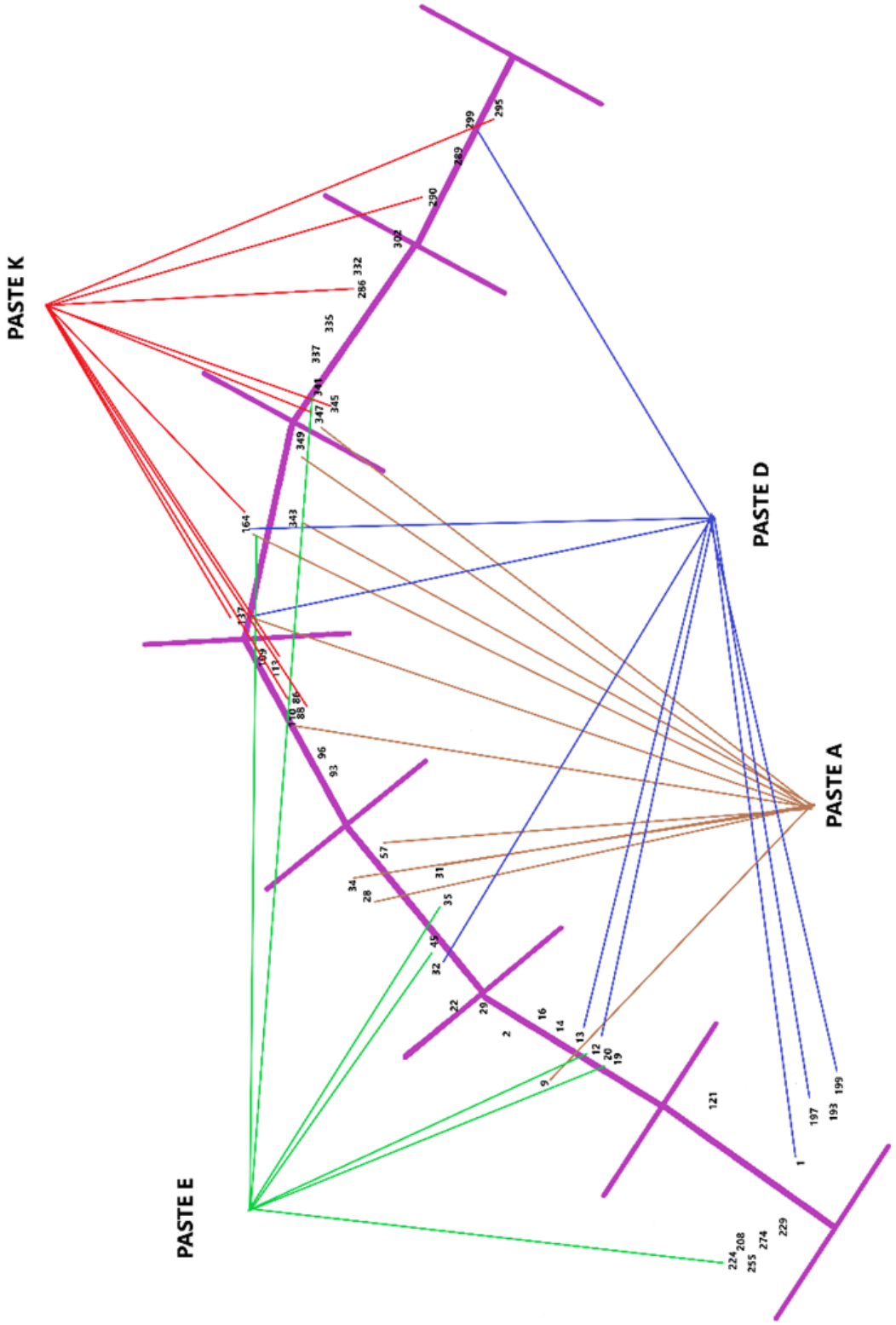
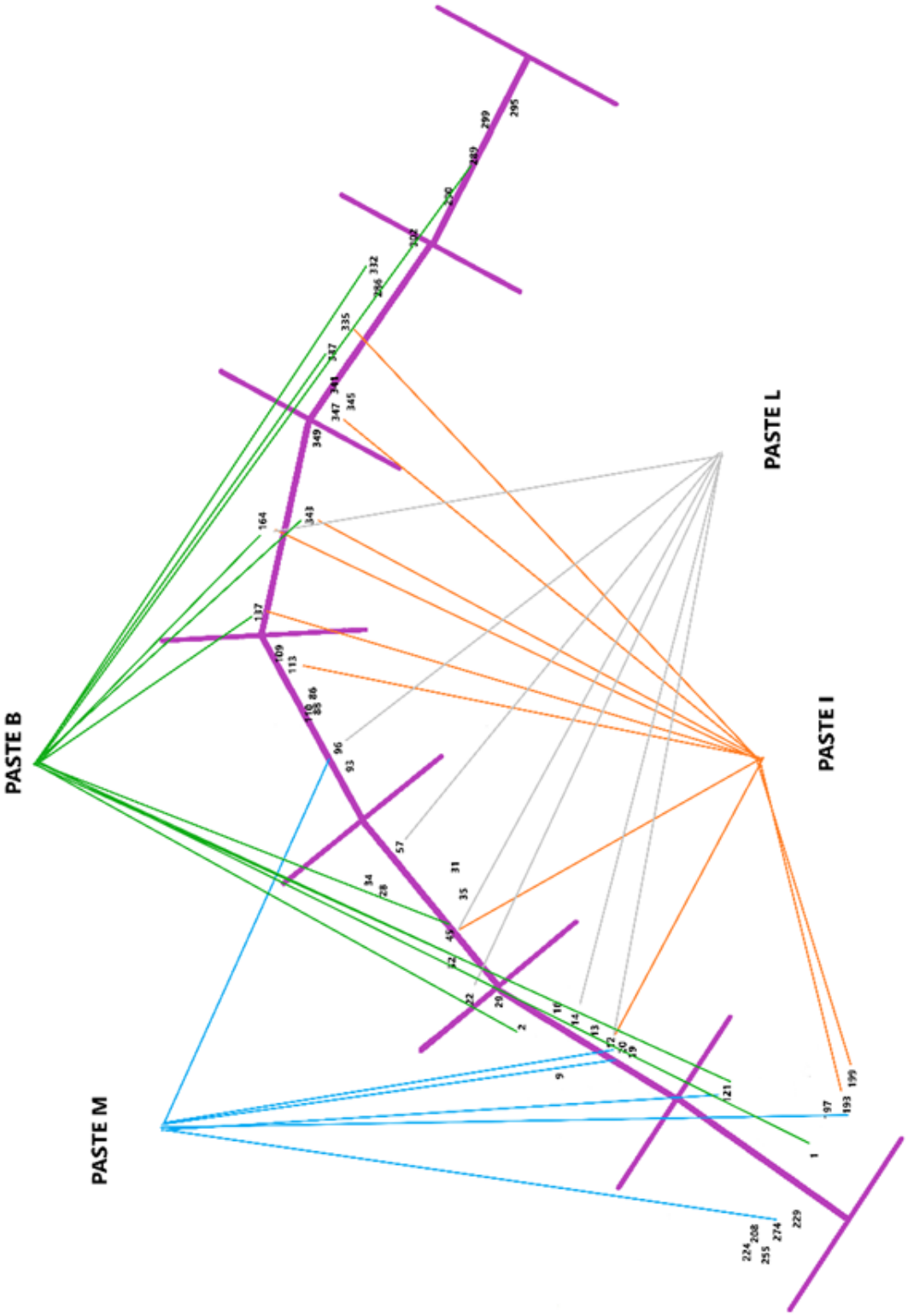


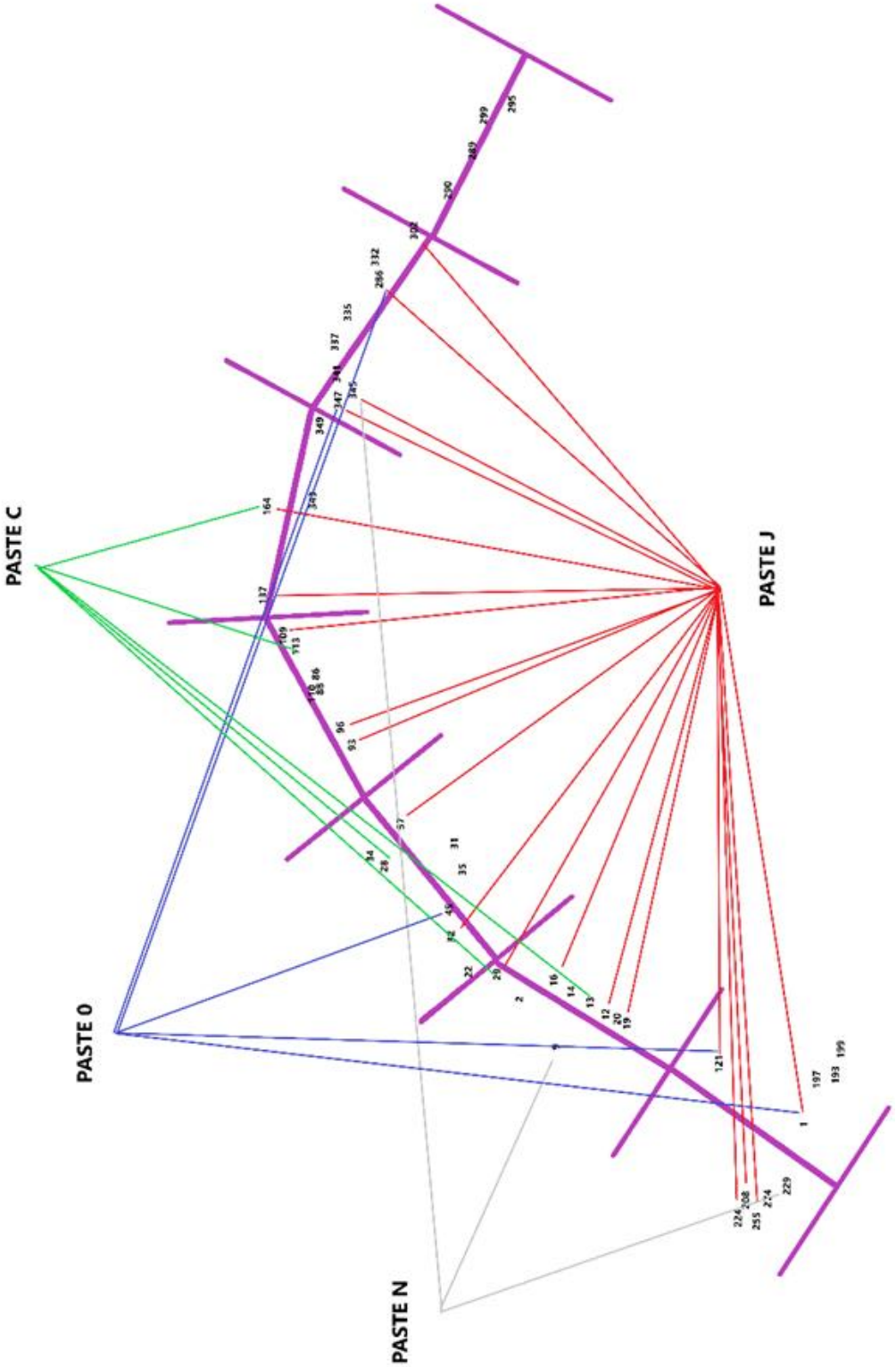
Figure 6. 3. Correlation between number of vessels per site and number of colors per site.



Map 6. 1. Distribution of Paste A, Paste D, Paste E, and Paste K in the Lurín Valley.



Map 6. 2. Distribution of Pate I, Paste L, Paste M, and Paste B in the Lurín Valley.



Map 6. 3. Distribution of Pate N, Paste O, Paste C, and Paste J in the Lurín Valley.

Table 6. 1. Number of sites with each vessel form at different distances form the Pacific Ocean.

Vessel Form	Distance from ocean						
	0 to 10 km	10 to 20 km	20 to 30 Km	30 to 40 km	40 to 50 km	50 to60 km	60 to 70 km
BB	4	6	8	1	3	2	2
CE big	5	8	8	6	3	2	3
CM	3	8	6	5	4	2	3
CO	2	6	5	7	3	4	4
C-shortneck	2	1	2	4	3	4	1
DF	3	5	6	3	3	2	1
LD	2	5	5	3	2	1	1
LJ1	3	1	3	2	1	4	2
OB	6	4	5	5	3	3	1
BJ	3	7	6	4	2	1	0
CJ	6	6	7	4	5	3	0
CL	3	7	7	3	2	1	0
CQ	1	2	4	3	3	3	0
CN	0	4	2	2	2	1	3
CU	0	4	6	1	2	4	1
BH	0	5	2	1	3	1	0
BZ	1	1	4	2	1	0	0
J1	1	4	3	2	1	0	0
OM	1	1	3	1	1	0	0
OP	1	5	3	1	1	0	0
CX	0	2	4	2	1	0	0
CZ8	0	2	2	0	1	1	0
LF	1	3	1	1	0	0	0
CH	0	2	1	0	0	0	1
DN	0	0	1	1	0	1	0
LR	0	1	1	0	2	0	0
CZ6	0	4	4	0	1	0	0
BF	0	3	4	0	1	0	0
CZ7	0	3	2	0	1	0	0
DM	0	1	2	0	1	0	0
BZ6	0	1	2	2	0	0	0
LY	0	3	2	1	0	0	0
LZ7	0	1	1	1	0	0	0
OO	0	1	1	1	0	0	0
OH	5	0	1	1	0	0	0
LP	1	1	3	0	0	0	0
BK	1	4	6	0	0	0	0
LG1	1	0	1	0	0	0	0
LK	1	0	2	0	0	0	0
LN-small	0	0	1	0	1	0	0
ON	0	2	1	0	0	0	0
BC	0	1	4	0	0	0	0
BU	0	1	1	0	`	0	0
CW1	0	2	3	0	0	0	0
CW2	0	1	1	0	0	0	0
CZ	0	5	1	0	0	0	0
BZ4	0	1	1	0	0	0	0
DB	0	2	1	0	0	0	0
CW7	1	0	0	0	0	0	0
LZ6	1	0	0	0	0	0	0
LZ3	1	0	0	0	0	0	0
w2-unique	1	0	0	0	0	0	0
X2-Unique	0	1	0	0	0	0	0

DL	0	1	0	0	0	0	0
CY1	0	1	0	0	0	0	0
CNQ1	0	1	0	0	0	0	0
CK1	0	1	0	0	0	0	0
Csquash	0	1	0	0	0	0	0
LN-big	0	2	0	0	0	0	0
LZ8	0	0	1	0	0	0	0
BJ1-Unique	0	0	1	0	0	0	0
BF1	0	0	1	0	0	0	0
CR	0	0	1	0	0	0	0
LW	0	0	2	0	0	0	0
BZ3	0	0	2	0	0	0	0
LZ-Unique	0	0	0	1	0	0	0
LT	0	0	0	0	1	0	0
B1-unique	0	0	0	0	0	1	0
BZ5	0	0	0	0	0	0	2
CY	0	0	0	0	0	0	1
LZ	2	2	1	1	2	1	0
OA	3	1	1	2	0	2	1
BE	2	5	1	0	2	2	0
BO	0	2	3	2	0	2	1
CI1	1	3	2	1	0	1	0
CT	1	3	2	1	0	1	0
LZ1	3	2	1	0	0	2	1
OD	4	2	6	1	0	0	3
OI	4	5	4	0	1	1	0
OL	2	0	1	1	1	1	0
BD	0	1	2	0	2	0	1
BV	1	1	1	0	1	0	0
BW	1	4	0	1	3	0	0
BY	1	1	1	0	1	0	0
CC	1	2	0	0	2	0	1
CZ1	1	0	1	0	1	0	1
DC	0	1	1	0	1	1	0
DO	1	0	3	0	0	1	1
KERO	0	1	0	1	1	1	0
LZ2	0	1	0	0	1	1	1
OK	2	3	0	0	1	0	1
BR	1	0	2	0	1	0	0
CA1	2	0	0	1	2	0	0
CH1	0	1	0	0	1	0	1
CI	0	2	0	2	0	1	0
CP	0	1	4	0	0	0	1
DE	1	1	0	0	0	0	1
DJ	1	1	0	0	1	0	0
LO	1	1	0	0	0	0	1
LZ5	1	0	0	0	1	1	0
OC	1	0	1	0	1	0	0
BG	1	0	0	1	0	0	0
BK2	1	0	0	0	0	1	0
BZ1	0	3	0	0	2	0	0
CE small	0	0	1	0	0	1	0
CG	0	2	0	0	1	0	0
DA	0	1	0	0	1	0	0
LY1	0	0	1	0	0	0	1

Table 6. 2. Vessel forms with time.

Form	Period				
	MH/LIP	LIP	LIP/LH	LH	Colonial
BA1	1	0	0	0	0
BB1	1	0	0	0	0
BF	1	0	1	1	0
COS	1	0	0	0	0
DB	1	0	1	0	0
DL	1	0	0	0	0
LN	1	0	1	0	0
LY1	1	0	0	0	0
LZ8	1	0	0	0	0
ON	1	0	0	0	0
BA	1	1	0	0	0
BB	1	1	1	1	0
BH	1	1	1	0	0
BJ	1	1	1	1	0
BM	1	1	1	0	0
BT	1	1	1	0	0
BW	1	1	0	0	0
BY	1	1	1	0	0
BZ	1	1	1	1	0
BZ1	1	1	0	0	0
CB	1	1	1	0	0
CC	1	1	1	0	0
CE	1	1	1	1	0
CH	1	1	0	0	0
CI	1	1	1	1	0
CJ	1	1	1	1	0
CK	1	1	1	1	0
CL	1	1	1	1	0
CM	1	1	1	0	0
CN	1	1	1	0	0
CO	1	1	1	1	0
CS	1	1	1	0	0
CT	1	1	1	0	0
CU	1	1	1	0	0
CV	1	1	1	1	0
CX	1	1	1	1	0
CZ	1	1	1	0	0
CZ1	1	1	1	0	0
CZ4	1	1	1	1	0
CZ7	1	1	1	0	0
DD	1	1	1	1	0
DF	1	1	1	0	0
DH	1	1	1	0	0
DM	1	1	0	1	0

DO	1	1	1	0	0
LA	1	1	1	0	0
LB	1	1	1	0	0
LD	1	1	1	1	0
LE	1	1	1	0	0
LF	1	1	1	1	0
LJ1	1	1	1	0	0
LP	1	1	1	0	0
LR	1	1	0	0	0
LZ7	1	1	1	0	0
OB	1	1	1	0	0
OD	1	1	1	0	0
OF	1	1	1	0	0
OH	1	1	1	0	0
OI	1	1	1	1	0
OM	1	1	1	0	0
OO	1	1	0	0	0
BC	0	1	1	1	0
BK	0	1	1	1	0
CA	0	1	1	1	0
CC1	0	1	1	1	0
CQ	0	1	1	1	0
CW	0	1	1	1	0
CW1	0	1	1	1	0
CZ6	0	1	1	1	0
LG	0	1	1	1	0
LK	0	1	1	1	0
LQ	0	1	1	1	0
LX	0	1	1	1	0
LZ	0	1	1	1	0
BE	0	1	1	0	1
OP	0	1	1	0	1
BI	0	1	1	0	0
BN	0	1	1	0	0
BO	0	1	1	0	0
BO1	0	1	1	0	0
BR	0	1	1	0	0
BX	0	1	1	0	0
CA1	0	1	1	0	0
CD	0	1	1	0	0
CH1	0	1	1	0	0
CI1	0	1	1	0	0
CZ8	0	1	1	0	0
DJ	0	1	1	0	0
KERO	0	1	1	0	0
LC	0	1	1	0	0
LO	0	1	1	0	0
LZ1	0	1	1	0	0

LZ4	0	1	1	0	0
OA	0	1	1	0	0
OG	0	1	1	0	0
OK	0	1	1	0	0
OL	0	1	1	0	0
OQ	0	1	1	0	0
BG	0	1	0	1	0
DK	0	1	0	1	0
DN	0	1	0	1	0
BD	0	1	0	0	0
BV	0	1	0	0	0
CF	0	1	0	0	0
CG	0	1	0	0	0
CK1	0	1	0	0	0
CNQ1	0	1	0	0	0
CZ2	0	1	0	0	0
DA	0	1	0	0	0
DC	0	1	0	0	0
DG	0	1	0	0	0
LG2	0	1	0	0	0
LI	0	1	0	0	0
LS	0	1	0	0	0
LZ5	0	1	0	0	0
LZ6	0	1	0	0	0
OD1	0	1	0	0	0
BL1	0	0	1	0	0
BZ3	0	0	1	0	0
BZ4	0	0	1	0	0
BZ6	0	0	1	0	0
CE1	0	0	1	0	0
CO1	0	0	1	0	0
CQ1	0	0	1	0	0
CR	0	0	1	0	0
C-squash	0	0	1	0	0
CW2	0	0	1	0	0
CY1	0	0	1	0	0
DE	0	0	1	0	0
HORSESHOE	0	0	1	0	0
LG1	0	0	1	0	0
LH	0	0	1	0	0
LJ	0	0	1	0	0
LL	0	0	1	0	0
OC	0	0	1	0	0
CP	0	0	1	1	0
C--	0	0	0	1	0
CZ5	0	0	0	1	0
LW	0	0	0	1	0
LY	0	0	0	1	0

Table 6. 3. Number of sites with each color at different distances form the Pacific Ocean.

Color	Distance from Ocean						
	0 to 10 km	10 to 20 km	20 to 30 km	30 to 40 km	40 to 50 km	50 to 60 km	60 to 70 km
5A	5	9	10	6	5	3	3
5J	8	8	9	2	3	5	2
6J	5	8	9	5	3	5	5
7J	4	11	9	7	15	6	4
7K	2	3	4	3	3	3	1
8J	4	9	7	7	4	4	4
8L	1	1	4	2	2	1	1
13D	8	9	10	7	5	7	5
13G	11	8	8	4	4	2	4
14D	6	6	9	7	4	4	2
14G	10	10	8	8	5	8	4
15G	3	8	8	7	5	5	3
15J	6	10	9	7	4	7	2
15K	2	6	6	3	2	1	1
16J	2	5	4	4	3	1	1
15D	0	5	7	4	2	1	2
16A	2	4	5	0	3	1	1
4G	3	3	3	3	2	0	1
8K	1	5	3	3	2	0	2
14J	3	6	6	1	1	0	1
15H	1	7	6	4	2	0	2
4J	3	2	2	1	4	2	0
6H	3	2	2	1	3	1	0
7H	1	1	3	1	1	1	0
12D	1	4	7	2	1	2	0
13A	2	3	3	1	2	1	0
14H	1	5	5	2	3	2	0
16K	2	3	5	3	1	2	0
5G	1	3	4	2	1	0	0
6A	1	1	3	1	2	0	0
8F	1	3	5	1	1	0	0
16D	2	3	4	1	1	0	0
5H	2	1	3	0	3	2	0
12A	1	0	5	3	1	1	0
14B	1	1	3	1	0	1	0
7G	1	1	4	1	0	1	0
15A	3	2	5	0	3	0	1
16H	2	2	1	0	1	1	0
6B	1	1	2	1	0	0	0
8A	2	1	1	1	0	0	0
8G	1	1	2	1	0	0	0
16G	1	4	2	1	0	0	0
7B	2	1	2	0	0	1	0
7A	1	1	1	0	0	1	0
12G	1	2	3	0	2	0	0
12J	1	1	1	0	1	0	0
13J	1	4	4	0	1	0	0
16B	1	2	2	0	2	0	0
6G	2	2	2	0	1	0	0
8H	1	2	3	0	2	0	0
14K	0	2	1	1	1	0	0
1B	1	1	1	0	0	0	0
4A	2	1	1	0	0	0	0
4B	2	1	1	0	0	0	0
5B	2	1	1	0	0	0	0
8B	1	1	1	0	0	0	0
8D	1	1	1	0	0	0	0
11G	1	1	1	0	0	0	0
6K	0	1	0	0	2	1	0

6I	0	1	0	1	0	1	0
11D	2	0	0	2	1	0	0
13H	2	0	1	0	1	0	0
14A	1	1	0	0	0	1	0
16I	0	1	1	1	0	0	0
6L	1	0	0	1	0	0	0
13B	1	0	0	0	0	1	0
10D	0	0	1	0	1	0	0
13K	0	0	1	0	1	0	0
3B	1	0	0	0	0	0	0
5K	1	0	0	0	0	0	0
7E	1	0	0	0	0	0	0
11F	1	0	0	0	0	0	0
15B	1	0	0	0	0	0	0
15C	1	0	0	0	0	0	0
17C	1	0	0	0	0	0	0
1G	0	1	0	0	0	0	0
2G	0	2	0	0	0	0	0
3A	0	1	0	0	0	0	0
4C	0	1	0	0	0	0	0
4F	0	1	0	0	0	0	0
4K	0	1	0	0	0	0	0
5I	0	1	0	0	0	0	0
8C	0	1	0	0	0	0	0
14I	0	1	0	0	0	0	0
15L	0	1	0	0	0	0	0
5D	0	0	1	0	0	0	0
6F	0	0	1	0	0	0	0
9A	0	0	1	0	0	0	0
9G	0	0	1	0	0	0	0
11A	0	0	1	0	0	0	0
15E	0	0	2	0	0	0	0
16C	0	0	2	0	0	0	0
7L	0	0	0	1	0	0	0
4H	0	0	0	0	1	0	0
4L	0	0	0	0	1	0	0
7C	0	0	0	0	1	0	0
7F	0	0	0	0	1	0	0
12H	0	0	0	0	0	1	0

Table 6. 4. Sherd colors with time.

Color	Periods			
	MH/LIP	LIP	LIP/LH	Colonial
8J	1	1	1	1
13D	1	1	1	1
5A	1	1	1	0
5G	1	1	1	0
5J	1	1	1	0
6G	1	1	1	0
6J	1	1	1	0
7J	1	1	1	0
7K	1	1	1	0
8F	1	1	1	0
8K	1	1	1	0
8L	1	1	1	0
12D	1	1	1	0
13G	1	1	1	0
13J	1	1	1	0
14D	1	1	1	0
14G	1	1	1	0
14H	1	1	1	0
14J	1	1	1	0
15D	1	1	1	0
15G	1	1	1	0
15H	1	1	1	0
15J	1	1	1	0
15K	1	1	1	0
16D	1	1	1	0
16G	1	1	1	0
16H	1	1	1	0
16J	1	1	1	0
16K	1	1	1	0
6I	1	1	0	0
4A	0	1	1	0
4B	0	1	1	0
4G	0	1	1	0
4J	0	1	1	0
5B	0	1	1	0
5H	0	1	1	0
6A	0	1	1	0
6B	0	1	1	0
6H	0	1	1	0
7B	0	1	1	0
8G	0	1	1	0
11G	0	1	1	0
12G	0	1	1	0
14A	0	1	1	0
14K	0	1	1	0
16A	0	1	1	0
7G	1	0	1	0
8H	1	0	1	0
12A	1	0	1	0
13A	1	0	1	0
14B	1	0	1	0
15A	1	0	1	0
16I	1	0	1	0

2G	1	0	0	0
3B	0	1	0	0
4F	0	1	0	0
7E	0	1	0	0
9G	0	1	0	0
10D	0	1	0	0
11A	0	1	0	0
11F	0	1	0	0
13K	0	1	0	0
14I	0	1	0	0
15B	0	1	0	0
15L	0	1	0	0
16C	0	1	0	0
1B	0	0	1	0
1G	0	0	1	0
3A	0	0	1	0
4C	0	0	1	0
4K	0	0	1	0
5I	0	0	1	0
5K	0	0	1	0
6F	0	0	1	0
6K	0	0	1	0
7A	0	0	1	0
7H	0	0	1	0
8A	0	0	1	0
8B	0	0	1	0
8C	0	0	1	0
8D	0	0	1	0
9A	0	0	1	0
11D	0	0	1	0
12J	0	0	1	0
15E	0	0	1	0
16B	0	0	1	0

Chapter 7

SYNTHESIS, SUMMARY, CONCLUSION, and FUTURE DIRECTIONS

Overview

This chapter is the summary and conclusion of the last two chapters. In it, I discuss the distribution of people living in the Lurín at different times and in different geographical spaces. I attempt to address, albeit briefly, the ethnographic record as seen through ceramic-colored lenses. I conclude by highlighting some of the overall successes in this analysis, some of its shortcomings, and possible future directions of study.

People of the Lurín in Time

Although chapters 1-4 are split into four periods, my analysis shows that vessel forms, vessel decorations, and paste matrix of ceramics in the Lurín valley do not neatly or directly adhere into these accepted recognized periods. My data suggests that there is a continuity of ceramic manufacture, as reflected in ceramic vessel forms, ceramic colors, and clay used in their manufacture, which transcends period boundaries. Three examples illustrate this conclusion.

First, the transition between the Middle Horizon and the Late Intermediate Period in the Lurín valley seems misaligned with the definitions of Middle Horizon pottery traditions as being Huari influenced. Stylistically there is a continuation of some Huari themes that continue after the Middle Horizon —notably the ceramics styles

called Epigonal or Ischma Plain style, which resemble preceding Huari decorative motifs. This blurs any "clear cut" discontinuity between Huari influence in the central coast during the Middle Horizon and the proceeding ceramic makers living in the Lurín during the Late Intermediate Period.

Other scholars have observed similarly. Menzel (1968) for instance, vehemently proposes that during the second half of the Middle Horizon the Pachacamac polity overcame in importance the presence of Huari in the Lurín and Rímac valleys. She proposed that they carried over specific ceramic styles of the Huari into the Late Intermediate Period, particularly the religious Pachacamac-griffin iconography. This blurs the transition periods, as cultural groups, or at least as ceramics groups, as these carried over decorations across the span of Rowe's proposed and accepted periods. More recently other authors have come to re-affirm similar positions. Regarding the Huari influence in the central coast Quilter writes: "In short, the lima culture persisted although it was transformed by new ideas from Wari" (2014, 221). It carried over Huari ideas, transformed in their ceramics long after the Huari and Tiwanaku state apparatus disintegrated.

Beyond the specific styles that might have been carried past the Middle Horizon and into the Late Intermediate Period, I note that there are very few diagnostic vessel forms, few diagnostic colors, or few, if any, diagnostic pastes specific to the Middle Horizon (Chapter 6). Out of the sixty-one (61) vessel forms identified in Middle Horizon

assemblages only seven ceramic forms are not found in assemblages of other periods: Forms BA1, BB1, COS, DL, LY1, LZ8, and ON (Table 6.2). This suggests the majority of the shapes (~88.5%) continued to be manufactured from one period to the next. It can be inferred that a continuity of the majority of vessel forms endured the Middle Horizon to Late Intermediate Period transition. The same is true for ceramic colors. The only possible period diagnostic color for Middle Horizon sherds is color 2G; all other 37 colors associated with Middle Horizon ceramics are found in Middle Horizon, Late Intermediate Period, and Late Horizon assemblages as well (Table 6.4). Specific clay pastes are not strongly associated with any particular period either. That is to say, there are little if any differences in the clays used to manufacture ceramics during the Middle Horizon and Late Intermediate Period.

Second, we see a similar blurred-transition during the Late Intermediate Period to the Late Horizon. During this time, Smoked Blackware pottery associated with North Coast ceramics during the Late Intermediate Period (Chimór influenced) are found in contemporary sites with Lurín-Inca ceramics which by definitions are tethered to the Late Horizon. This is another example of how ceramic style do not obey neat "period-based" temporal associations. The fact that the transition from Late Intermediate Period to Late Horizon, in the central coast, saw a continuation of Chimú or Chimú-influenced ceramic consumption into the Late Horizon by people living in the central valley during these periods shows the overlapping importance of these styles in time. Perhaps the Inca were successful in usurping the Chimór leaders while positioning

themselves atop the social structure of those northern territories but what they did not do was put an abrupt stop to those smoked-Blackware ceramics which (on some level) represented those kingdoms. Those ceramics, if not continued to be produced, were continued to be consumed by central coast inhabitants; their emic meaning to those who consumed them perhaps lost or transformed, but their presence not.

Furthermore, beyond the specific styles that were carried over from the Late Intermediate Period to the Late Horizon, I note that there are few diagnostic vessel forms, diagnostic colors, or diagnostic pastes specific to either the Late Intermediate Period or Late Horizon periods ceramics. In fact, from the ninety-plus (90+) ceramic forms identified in Late Intermediate Period and Late Horizon assemblages, only sixteen (16) forms are probably shape-diagnostic to Late Intermediate Period assemblages — form BD, BV, CF, CG, CK1, CNQ1, CZ2, DA, DC, DG, LG2, LI, LS, LZ5, LZ6, and OD1; while only four forms are shape diagnostic to Late Horizon assemblages– forms C--, CZ5, LW, and LY. This suggests two things: 1) a much greater variety of forms during the Late Intermediate Period existed due to the de-centralization of ceramic manufacturing at the time; and 2) the vast majority, by which I mean upward of 75% of vessel the same vessel forms, were manufactured both during the Late Intermediate Period and Late Horizon (Table 6.2).

The same pattern is true for the colors of sherds. Of the seventy-two (72) colors identified in both Late Intermediate Period and Late Horizon assemblages only twelve

(12) were possibly associated with only Late Intermediate Period assemblages –colors 3B, 4F, 7E, 9G, 10D, 11A, 11F, 13K, 14I, 15B, 15L, and 16C, and twenty (20) of the seventy-two (72) were found only in Late Horizon assemblages —colors 1B, 1G, 3A, 4C, 4K, 5I, 5K, 6F, 6K, 7A, 7H, 8A, 8B, 8C, 8D, 9A, 11D, 12J, 15E, and 16B; the remaining forty (40) colors were found in both Late Intermediate Period and Late Horizon assemblages. That is to say, more than 55% of the colors identified for Late Intermediate Period assemblages carried over to the Late Horizon assemblages which suggests some continuities in the ceramic production capabilities of Lurín valley inhabitants during this transition (Table 6.4).

Lastly, there seems to be little differences in the way that clays were used in the manufacture of ceramics during the Late Intermediate Period and Late Horizon. This observation might be due partly to the shortcomings in the paste analysis discussed above, or it might be that there is no drastic change in clay sources from one period to the next. The latter possibility seems the likelier based on the previous two patterns discussed.

Third, the transition between the Late Horizon and Colonial Period, not just the transition between the Late Intermediate Period and Late Horizon, also sees continuities in vessel forms and continuities in sherd colors. Few local shapes were identified from Colonial Period assemblages [excluding the imported porcelain ones] but of those which were, they were of previously manufactured vessel shapes: forms BE and OP –shapes

also found in Late Intermediate Period and Middle Horizon assemblages (Table 6.2). Here we again see a continued tradition of ceramic forms. It is true that they are found with glossy coats of paint adorning them, an introduced element via Spanish hands, but on an "old" ceramic form, nonetheless.

All of these examples suggest a continuous, gradual, and gradient-like transition between the inhabitants of the Lurín during these periods of socio-political upheaval. There is no abrupt and sudden change in ceramic styles, forms, or colors. This agrees with other authors who suggest that chronological periods and cultural phases do not always coincide (Quilter 2014, 34); nor do "ceramic seriations" always accurately represent temporal changes (Vaughn et al. 2014). It also supports, to some degree, other authors who suggests that "periods" are inadequate imposed representations of "cultures" based on a biased material record which could be miss-interpreted; they tout an idea of "boundaryless" [cultural] ceramic phases (Cowgill 2015). If nothing else, they caution us to blindly accept any one valleys ceramic seriation sequences as proxy for the entirety of Peru and encourage us instead to form geographically specific seriation sequences.

People of the Lurín in Space

The occupation of areas converts geographical spaces into cultural places and it is the key of culture history approaches in archaeology to delineate them. In Peru, two major approaches to understanding the occupation of the land have been proposed.

One argument was made by Murra (1972, 1985) who proposed the "vertical archipelago" model first proposed for highland communities in the south. In essence, the model's argument is as follows: (1) Peru has a diverse range of ecosystems in relatively short distance due to the rapid elevation inclination of the landscape; (2) not all zones have the same economic opportunities or resources; (3) corporate familial groups, *ayllus*, settled on different "patches" of land in different ecological zones to exploit local resources; (4) which then are exchanged within their corporate group. The proposed model buffered against any particular food shortage or resource shortage at any one zone. Many scholars have argued for such a model in coastal societies (Earle 1972; Marcone and López-Hurtado 2002; Spalding 1984; Segura and Habetler 2008).

A second argument is championed by Rostworowski (1977; 2002) and emerged from her ethnohistorical work based on the records chronicled by the Spanish Viceroyalty of Peru shortly in the early Colonial Period. Rostworowski argued that the Central Andean coast inhabitants were composed of economically specialized, endogamous, fisher and farmer communities which traded goods with differently specialized endogamous communities. This argument is sometimes referred to as the "horizontality-model" (Shimada 1982, 1985). The horizontality-model, or variations of it, are used to explain supposedly differently appeared ceramic distributions between lowland and highland ceramics in certain valleys (Olivera 1998). Recently it has also been used to gauge different diet consumption between coastal and highlander sites (Marsteller, Zolotova, and Knudson 2017).

Which model best suits the Lurín valley post Middle Horizon? The answer is not straight forward, it depends on the analytical lens used on the data. A stylistic analytical lens provides one answer, a vessel-form analytical lens a different one. During the Middle Horizon the stylistic data analyzed suggests a concentration of Lima style ceramics only in low valley sites (Map 2.1) —an argument supported by previous studies. The observation that Lima sites are usually below 1,000 *masl* has been made by others in several central coast valleys (Olivera 1998). In other valleys, the Rímac and Chillón for instance, Lima style is found in several low valley sites (e.g. Kroeber and Wallace 1954; Patterson 1966; Stumer 1958; Espinoza et al. 2012). The style is rarely recovered in high valley sites of the same valleys although some exceptions are noted. Late Lima ceramics, for example, were recovered in the high lands of the Rímac valley at Chaclla and Collata —both about 3500 meters above sea level (Fulle 2012, 274, Fig.15.). However, at both places, the Lima ceramics are thought to be imported; Late Lima ceramics at Huancayo Alto (~3500 *masl*) in the Chillón valley have also been recorded (Dillehay 1976). These are rare examples of Lima style in high elevation sites and can be treated as the exception to the rule. Another stylistic example comes from the Chancay Black-and-White ceramics which are also found only in low-valley sites (Map 2.5); the majority of which are found in are within a 10-20 km from the ocean range. Some incursion of Chancay Black-and-White into high valley sites is present but it is rare in the Lurín. The analysis of this particular pattern is less secure than that of the Lima style association with low valley sites for the Middle Horizon. What is clearer however is that

there is a glazed-ware association with high valley sites during the Colonial Period. All but one example of Glazed ware is found in high valley sites –the majority at Sisicaya and further inland (Map 4.1). This speaks to the importance of the high valley sites in the early Colonial Period. However, the concentration of porcelain sherds at sites ~12-13 km inland also during the Colonial Period, obfuscates a clear, defensible position in the mater. It is further noted that spatial style patterns are more pronounced in the Middle Horizon and Colonial Period. The pattern is faint, but detectable, for these periods. There is no such pattern during the Late Intermediate Period. There are no clear demarcations, boundaries, or "culture areas" for Lurín Late Intermediate Period inhabitants.

While there is some patterning with stylistic differences associate with low or high valley sites, there is a more nuanced patterning of vessel form distributions. While there are ranges in which certain jar, olla, and bowl forms cluster in the landscape (discussed in Chapter 6), there are no clear forms or group of vessels associated with any one particular geographic region (Table 6.1). For the most part certain vessel forms are distributed throughout the valley. Any one assemblage has the same, or very similarly the same shapes as assemblages found in their proximity –both up and down-valley— while it has more differences with sites far away from it. This is particularly true for mid-valley sites. Mid valley sites, sites 10-20 km, 20-30 km, and to a lesser degree 30-40 km inland, have assemblages similar to the assemblages from sites found in the adjacent 10 km partitions (Table 6.1). This is true when looking at ceramic vessel

forms from assemblages grouped in 10 km partitions as explained in Chapter 6. Sites 10-20 km inland share 50% and `80% of vessel forms with their neighbors' sites ranging 0-10, and 20-30 km inland respectively. The similarities with sites further inland diminish quickly. Sites between 20 and 30 km inland share 76% and 47% similarities in vessel forms with sites 10-20 km and 30-40 km inland. The similarities with vessel forms from sites further away diminishes with distance also. The same is true for sites in the 30-40 km inland range; their similarities of vessel form with neighboring groups — assemblages from sites 20-30 km and 40-50 km inland— are 85% and 69% respectively. The percentage of similarities in vessel form from further away sites diminishes also.

In all, this suggests that the inhabitants of mid-valley sites were in frequent contact with their immediate neighbors. Or at least in enough contact to transmit to each other ideas and similarities of ceramic vessel forms. It is possible that mid-valley people were trading with each other, or traveling to each other's areas, or exchanging ideas with one another on some regularity. If this is the case, it undermines both models of "verticality" and "horizontality;" or at least, it complicates both of them. On the one hand, there is no clear cut, ceramic-delineated cultural boundary between "low-valley" and "high-valley" inhabitants. If low and high valley folks are exchanging goods, they are also exchanging ceramic ideas and/or ceramic forms during those interactions and obfuscating their ethnic differences in the archeological record. Or, it could indicate the Lurín valley ceramic makers did not use ceramics to demarcate their cultural/ethnic boundaries.

On the other hand, this pattern could indicate a porous and un-delineated boundary between low-valley ceramic makers and high-valley ceramic makers; or no boundary at all —just regional ceramic producers. A relatively multi-ethnic, or multi-cultural sphere in the mid-valley region of the Lurín, particularly during the Late Intermediate Period. A time perhaps where there was no standardization of ceramic production, no ceramic production centers, and a local tradition of intermingling with immediately adjacent valley inhabitants. If the Late Intermediate Period is a violent time, as scholars have suggested, perhaps a "befriending our adjacent neighbors" strategy was used to mitigate potential violence and threats. Patterson and his team, in their original field notes, have suggested a few defensible and fortified sites. These sites are the following: sites PV48-22, 86, 92, 93, 159, 286, 292, 303, 332, and 333 —many located in the mid valley and upper valley. This minimally suggests the possibility of violent conflict was present in the mind of the inhabitants of those sites.

It is curious to note that while fortified localities are found throughout the valley, the majority of the sites seem associated with Late Intermediate Period assemblages. This supports the notion of decentralization in the Late Intermediate Period and local manufacturing of regional ceramics, including differences in so many ceramic forms. This explains the differences in ceramic patterns observed well. It also supports a notion of multi-ethnic or multicultural landscape during the Late Intermediate Period in the Lurín valley. The mid-valley sites in particular are rich with a multitude of ceramic styles, ceramic forms, and ceramic colors. The richness of diversity in the valley was to

be short-lived. By the early Colonial Period, as consequences of the Inca state's machinations or from local efforts to avoid the Spanish in Lima, the low and mid valley's wealth (as reflected in ceramic diversity) had been syphoned off; it was now concentrated in Inca controlled, high valley Tambos like the one at Sisicaya.

Perhaps a somewhat similar ceramic pattern seems to occur in the In the Chillón valley where Dillehay (1976, 1977, 1979) surveyed all sites across the environmental diversity of the valley, and found correspondence with the documented locations of 15 pre-Hispanic “ethnic” groups which were correlated with nearby archaeological sites and which were identified with the same ethnic names by modern inhabitants. He found no specific correlation between ceramic variability and the Pre-Hispanic ethnic groups. However, Dillehay did find a coarser pattern: ceramics in the lower and middle parts of the valley were closely linked to specific ceramic types found in sites of those areas; there was no linkage between lower and upper valley site’s ceramic assemblages. The pattern supports the ethnohistorical record which merits that lower and middle valley peoples were politically sperate from upper valley folks during the Late Intermediate Period. However, because some middle valley Chillón folks had some ceramic links to upper-valley settlements during the Late Intermediate Period, Dillehay proposed that middle valley people were autonomous enough to secure alliances with the sierra peoples as their location, the mid-valley, precariously exposed them to sierra hostilities. It is tempting to hypothesis a similar scenario for people living in the Lurín valley during the Late Intermediate Period.

People of the Lurín in the ethno-historical record

The ceramic record analyzed here neither corroborates nor contradicts the ethnographic based suggested cultural areas in Lurín. Instead, it urges further refinement, additional material evidence, and closer ethnohistorical readings to understand the social organization of Lurín valley inhabitants if ceramic style distributions continue to be assumed representations of ethnic-cultural groups.

What is known is that the foundation of politics in the Andes revolved around localized kin groups (Quilter and Koons 2012); as it has been in all pre-industrialized societies for most of human existence (Gailey 1987). The Spanish were keenly interested in understanding the sociopolitical and economic systems they encountered because they looked for ways in which to maximize their exploitations of locals. To facilitate an understanding of those they encountered for audiences back home –or simply because they did not know any better— the Spanish would paint Andean sociopolitical categories into fixed European medieval socioeconomic terms: social classes equivalent to royal categories such as *rey*, or *príncipe* were used, and nobility titles such as *duque*, *marqués*, conde, *vizconde*, *barón*, as well as *señor* were recorded. On occasion they did record local terminology and titles, but these examples are rare.

From Colonial documents, Rostworowski (1970, 1977) describes the population of the central coast as organized into a series of ranked and nested moieties known as parcialidades. The largest socioeconomic entity was the *señorio* —translated to a

"dominion" or "feudal estate" (Rostworowski De Diez Canseco 1999a), but more recently conceptualized as "ethno-territorial blocks" (see Wernke 2006). The *señorio* were administrated by lords who controlled two or more *repartamientos*. Each *repartamiento* was composed of two or more *waranqas*, each headed by a *kuraka*. Each *waranqa*, in turn, was composed of several *ayllus*, each of which was each headed by a *heaca*. Rostworowski (1977) argues that prior to the Inca arrival the central coast valleys of Chillón, Rímac, and Lurín were controlled by two señorios: 1) the Colli, who controlled the lower and middle sections of the Chillón valley, and 2) the Ischma who controlled the lower and middle portions of the Lurín and Rímac valleys. Both the Colli and the Ischma polities were engaged in complex interactions —at later times increasingly violently, antagonistic ones— with polities which lived in their corresponding high valleys. Conflicts were primarily over access rights to arable land, particularly the *chaupiyunga* ecological zone which was the best land for production of coca (*Erythroxylum coca*) (Netherly 1988). The Colli interacted with the Canta polity in the upper Chillón valley, the Ischma with the Yauyuos in the highlands of Rímac and Lurín (Rostworowski De Diez Canseco 1977).

The Ischma *señorio* was centered at the oracular site of Pachacamac. While the oracle's influence in the Central Coast was singular, the people who revered it were not. Besides recognizing different socioeconomic groups of people, ethnohistorians (Rostworowski De Diez Canseco 1977, 1978; Spalding 1984) and anthropologists have identified different ethnic groups in the central coast. Case in point, the *señorio* de

Ischma incorporated "at least 10 *curacazgos*" (Segura and Habetler 2008, 3). In the early Colonial Period the majority of native populations in the central coast were the Yancas (or Yuncas) and the Yauyos (Rostworowski De Diez Canseco 1978; Salomon 1991). The Yauyos were further sub divided into Anan Yauyo (higher) and Urin Yauyo (lower) provinces. The former occupied the Lurín and Rímac river valleys, the latter the Mala river valley. Their intra-group [ethnic?] divides, alliances, and machinations, remain to be elucidated from a material perspective. Nevertheless, Rostworowski (1978) suggests a frontier and a rivalry between the Yuncas and the Yauyos, the latter being from the highlands and the former from costal zones. Rostworowski claims that during the Late Horizon the Inca distributed the cocoa fields in favor of the Yauyos, lands formerly held by the Yuncas, to curry favor from them (see Cornejo 2000 who affirms the same). The Huarachuri people were Yauyos. And the numerous references of dichotomy between upper and lower half are found throughout the Huarachuri manuscript itself suggests that they defined themselves, to some level, on those differences. Their recorded differences are backed by the archeological record.

Based on material differences, several cultural polities can be inferred in the Central Coast during Colonial times and prior. Stylistic differences in ceramics (Jijón y Caamaño 1949; Kroeber 1926; Kroeber and Wallace 1954; Shimada 1991), architecture (Makowski 2002), and in weaving design (Frame et al. 2012), materially differentiate the Chancay from the Ischma. The material differences observed between these two groups seem to corroborate historical sources regarding the language spoken by each

group. In the 17th century Bernabé Cobo wrote regarding two nations with different languages who inhabited the Chillón Valley. One language was apparently spoken from Carabayllo (some 5 Km up river from Zapallan) to Chancay in the north, while the other language was spoken from Carabayllo southward on to Pachacamac (Cobo 1979 [1639], as cited by Patterson and Lanning 1964, 116–17).

Ischma sites are also linked to a particular architecture type called the "pirámides con rampas," which were constructed from sandstone and adobe bricks (Lobatón 2004). There are two main interpretations for the possible function of the pyramids. Scholars have either interpreted ramped-pyramids as religious centers built and connected to the Pachacamac ceremonial center (Bueno Mendoza 1974, 1982; Lobatón 2004; Makowski et al. 2005; Makowski 2006), or as local palaces for the tombs of the lords of the *señorio* of Ischma (Eeckhout 1999c; Villacorta 2004, 2003).

Throughout the tributaries of the Lurín Valley, smaller, walled-in like structures are found; these appear to prolificate during the Late Intermediate period (Bueno Mendoza 1982, 1974; Eeckhout 1999a; Marcone and López-Hurtado 2002). These structures resemble similar ones found in Pachacamac and are often interpreted as local outposts of the Ischma (Shimada 1991, xiii). I suspect them to belong to the *heaca* of each *ayllu*. This reasoning is supported by the fact that most of the pyramids (except the ones in Pachacamac) are located in association with the heads of hydraulic systems. In the Central Coast of Peru, like much of the rest of Peru, identity and group formation

revolved to some extent around the organization and maintenance of water canals (Segura and Habetler 2008). The importance of water canals for group formation have been noted in the north and in the central highlands (Lane 2009; Quilter and Koons 2012) and seems to remain in place in some highland communities today still (William 1976; Trawick 2001).

Each *ayllu*, beyond sharing a common ancestor, also shared communal responsibilities to their corporate group in the form of an annual "upkeep" via lent labor. An upkeep to maintain the irrigation canals, for example, was a price paid for the inclusion into the groups lands agricultural output. Each water canal was allegedly managed by a specialist from different [and possibly "ethnic"] cultural groups (Segura and Habetler 2008). If this is the case, an argument for class genesis differentiation can be made. The "canal managers" might have been specialists of different *ayllus*. "Canal managers" were responsible for the maintenance of their canals; they perhaps are associated with temple complexes as early on as the Early Intermediate Period (Segura and Habetler 2008; Lumbreras 1974). The association between "owners" of irrigation canals, or "canal manager," and priests are recorded in later times. The Huarachuri manuscript describes the maintenance of dams in lakes and the maintenance of irrigation canals controlled by priests. The priests, for their efforts, were allowed to consume special foods and were given an agricultural subsidy to maintain the upkeep of various irrigation features; the annual laborers were fed with cocoa and Chincha as compensation for their labor (Salomon 1991).

Conclusion

This project began with three overarching goals. The first goal: to better gauge the distribution of different ceramic styles in space; the second goal: to better tease out the distribution of these ceramic styles temporally; and the third goal: to see if ceramics can either supplement, collaborate, or challenge the ethnohistorical record.

To one degree or another these three goals were met —some more successfully than others. The distribution of ceramic styles in the Lurín valley, an area today under constant threat of urban sprawl, was presented in Chapter 1-4 (see Appendix D also). The particular stylistic decorations were explored in great detail, often times updating and presenting a more nuanced and elaborate vessel forms description of otherwise often glossed over, or clumped-together, nominal forms like jar, olla, and/or bowl (in Appendices A, B, and C). The spatial distribution of these forms was explored in Chapter 5 and Chapter 6.

The temporal association of the different ceramic styles and sherds, in a detailed exploration of their form, color, and clay matrix were discussed in chapter 5 and chapter 6. Due diligence and much attention on the contemporaneity of not only certain styles, but of specific vessel forms, colors, and clay matrixes was attributed to different time periods. The multi-styled assemblages analyzed suggest a complex interaction of ceramics in time. Ultimately, I argued for a slow, gradual, transformation of one form to another, one color to another, with no particular attention paid to the ceramic matrix

used in the paste manufacture of ceramics. I argued for a "similar to my neighbor" distribution of ceramics in both time and space. While real events such as the strong presence of Inca during the Late Horizon, or the introduction to Spanish rule during the Colonial Period were taking place in the historical background, most potters seem to continue, more or less, with their previous pottery traditions unmolested. Traditions, I might add, that seem local and of small scale, as no kiln-sites have been discovered in the Lurín to my knowledge.

Although the ethnographic record, quickly glazed over in the first part of this chapter, provides tantalizing clues to differences between potentially different ethnic groups at different levels —say in *ayllu* groups in different *waranqa*s for example— this study can neither corroborate or dispute the interpretations of those scholars who work with it. In one sense it is a short-coming of the work presented here. I had hoped to speak more directly to the ethnographic record when the work was originally conceived. The archeological differences between the *ayllus* and *waranqa*s must be sought by examination of other material artifacts —ceramics alone do not provide clear delineation at these historically-known socio-political/cultural groups. Ceramic analysis is perhaps too coarse in this particular circumstance; too blunt a tool for this specific place and time. This is particularly noticeable when much ceramic stylistic "overlapping" is readily noticeable at some sites. That is to say, there are a remarkable variety of pottery wares and styles in simultaneous use during the Colonial Period and during the Late Horizon at the same sites. If at these are times, we can infer that there

are number of different groups all living in close proximity in the Lurín, one is tempted to assume a similar pattern before the Late Horizon also. Further ceramic analysis in the future may help elucidate those patterns recorded in the ethnohistorical record. If not ceramics, perhaps textile analysis in conjunction with ceramics.

Further detail could help aid in conclusions. For the moment we have to settle for relative dates based on stylistic seriation, relative comparisons of assemblages, visual paste analysis, and interpretive vessel shape approximations based on rim observations. In an ideal analytical world, one without time constrains or funding constrains, one might better approach this study with 1) a full thermoluminescence dating analysis for each representative ceramic sample from each site and each different decorative style, 2) a full chemical analysis of ceramic pastes for each representative ceramic sample at each site and each different decorative style, and 3) some form of high definition 3-D computer aided vessel shape analysis of all the rims to eliminate potential human error in discerning changing shapes.

Even if these idealized analytical processes would be undertaken, one potential obstacle in the interpretation of their ceramic analysis would remain: the etic and modern eye which analyzes it. The categories, the shapes, and the meanings of the ceramics analyzed were emically negotiated by those who produce them, those who interacted with them, and those who consumed them. Etically, the similarly between vessel shape from one assemblage at 15 km inland to another assemblage 25 km inland

means nothing more than a line on a map to me, a shading of particular opacity in a figure representing the assemblages shared vessel forms. Emically however, that same similarity might have reaffirmation of familial bonds to the potter; perhaps it meant a political alliance between inhabitants at those two sites, or maybe a marriage of two households, or the relocation of one potter from their natal community to their spouses,' or of both to a new locality, or perhaps the reassurance that one village was not going to get attacked by the next village over. These meanings are left to be further debated. From an etic point of view the cultural material differences observed between local neighboring groups suggest that in this valley, at this time, people negotiate their material cultural identities in a landscape of similarity organized, similarity powered local groups. These groupings temporally transcend Periods and Horizons and geographically blended into one another across the valley in a not so clear-cut cultural historical way. The nuanced continuations in the material culture, unbound by periods, horizons, or even local geography, leaves room to draw in a notion of diversity and variation rather than a notion of "difference" as embodying power differences between self and other. This suggests that local identities forged in the everyday interaction between local groups of similar power levels, outlive identities imposed by conquering outsiders with more power. This is most likely the case as today several *ayllu* endure – long after the Ischma, the Inca, and the Spanish empires have collapsed.

One other problematic level remains: the conceptualizing of ceramic differences from an Andean understanding of those differences. If ceramics forms themselves are

given anthropomorphized names and shapes –the “face” of a jar, “the body” of a jar, the “neck,” its “foot,” its “lip”— and because individuals form parts of groups —say at a family level, or at an *ayllu*, *waranqa*, *repartamiento*, and *señorio* level (all nested in a hierarchy)— then, should an ceramic analysis approached from this type of thinking be attempted? What would a “nested heretical ceramic analysis” look like? Would it approximate an emic understanding of the ceramic distributions? Or is it so far removed from our modern-day western capital modes of production, western religious understanding, or modern notions of identity that it cannot be understood at all?

The ceramics of the Lurín valley from days past were re-discovered, re-recorded, and re-analyzed today. A process made long after the original authors of those ceramics turned to dust; long after their works were scattered into the deserts in which they were recently re-found, rescued from obscurity. The stylistic decorations “Lurín-Inca,” “Ischma,” etc., are nothing but ghost of state level machinations; their indexical supra-structural presence ephemeral, like the states and artificers they supposedly represent. The day to day lives of the people who manufactured, interacted, and interpreted those ceramics, people who "read" and “consumed” those ceramics was real and ongoing — even to this day. Those clay artifacts, like these words, are best understood holistically and in the context in which they are re-discovered. Those worked clays, like these worked words, remain to be re-rediscovered, re-reanalyzed, and re-reread, yet again, long after these inadequate sentences are consumed; long after this author passes into obscurity.

Appendix A – Jar qualitative and quantitative descriptions

Jars are enclosed vessels. They have constricted openings, “necks,” and inner walls which cannot be directly observed from a top view. Seventy-one (71) different jar rim profiles are observed; their cross-cut profiles are illustrated in Figure Appendix A.1.

The mean diameter measurements for jar-forms was calculated from all measurable jar rims (Mean = 17.7 cm; SD = 6.1 cm; n = 1659). This process was repeated for the thickness of the rims (Mean = 8.52 mm, SD = 3.58 mm; n = 1659). A histogram of all the jar-form's diameters demonstrates their standard bell-shaped distribution (Figure Appendix A.2). A histogram of all the jar-form's wall thickness showed a positively skewed distribution (Figure Appendix A.3). The diameter of each jar form was nominally described as "small," "medium," or "large." The dimeter was labeled “small” if the mean diameter of a specific form is more than one standard deviation under the mean diameter of all jars’ diameters, "medium" if the average diameter is within one standard deviation from the mean diameter of all the jars diameter, and "large" if the average diameter is greater done one standard deviation over all the jar's mean diameter. A similar "thin," "slender," and "thick" nominal category is used to describe the average wall thickness of each jar form as compared to the average (mean) wall thickness of all jars.

The following qualitative descriptions are made of each jar type by describing, left to right, the contours of the rim profile if one holds a rim cross cut section with the inner wall to the left and the outer wall to the right.

1. Jar B1-Unique (n = 1, Diameter $\bar{x}$ = n/a cm, σ = n/a; Thickness $\bar{x}$ = 14.22 mm, σ = n/a): This jar's rim is unique; the inner wall has two concave and uneven crevasse which meet approximately three centimeters below the mouth of the jar. The lip is a sharp “upside-down-looking boot.” The outer wall has three "tiers" which cascade down the outer rim walls. These three-tier stair formed are at sharp and noticeable angles. The jar has slender walls (Plate 104, c4708). This form, as it is unlike any other, is imported from elsewhere; it is undecorated.

2. Jar BB (n = 13, Diameter $\bar{x}$ = 5.9 cm, σ = 1.7 cm; Thickness $\bar{x}$ = 6.97 mm, σ = 1.41 mm): These jars have a small-diameter mouth opening and have uniformly slender walls. The inner and outer neck angles are smooth and curved. The rim extends directly upward from the body of the vessel ending in a rounded lip (Plate 78, c5493).

3. Jar BC (n = 5, Diameter $\bar{x}$ = 18.3 cm, σ = 4.9 cm; Thickness $\bar{x}$ = 8.59 mm, σ = 0.49 mm): The neck of these medium-sized jars makes an approximately ninety-degree angle with their jar’s body. The neck of the jars is vertical, and their rims are beveled on the exterior surface below the jar’s mouth; the thickness of the neck below the rim is not uniform. The heights of the jar’s necks are variable. Necks may be decorated with either as Blackware (Plate 20, c3055) or Red Slip (Plate 29, c1185). A similar form is called a” domestic olla” at Pedregal, a Late Horizon site in the Jequetepeque valley and which is reported, there, to be a “Negro Pulido”

sherd (Cutright 2015, 72). If the forms are similar, as they seem to be, it is curious that the sherds at site PV48-22 are decorated in blackwash (the sherd's clay matrix is light colored, suggesting it is Chimú imitation made of local clays). If so, then these sherds are imitating Chimú Negro Pulido style —ceramics styles found further north during the Late Intermediate period and the Late Horizon.

4. Jar BD (n = 5, Diameter $\bar{x}$ = 17.0 cm, σ = 2.5 cm; Thickness $\bar{x}$ = 7.17 mm, σ = 1.39 mm): These are medium-sized jar with unevenly slender walls that end in a semi-globular-drop-like rounded lips (Plate 96, c6133).

5. Jar BE (n = 19, Diameter $\bar{x}$ = 18.6 cm, σ = 4.8 cm; Thickness $\bar{x}$ = 8.11 mm, σ = 3.04 mm): These are medium to large sized jars with slender walls and rims that extend away from a jar's body at about forty-five to fifty-five degrees. The rim walls are uniformly slender, except at the lip where they become thicker and form an upside down "shoe" shape. Both inner and outer rim walls curve gently (Plate 3, c2054); this form is often decorated in Red Slip.

6. Jar BF (n = 16, Diameter $\bar{x}$ = 17.9 cm, σ = 7.4 cm; Thickness $\bar{x}$ = 8.49 mm, σ = 2.76 mm): This medium jar's slender rim protrudes at an angle of about forty-five degrees with the jar's body. Its inner neck angle is sharp with most examples have a short rim wall. The rim ends in a pointed lip which is triangular in cross section. This form is often decorated in Red Slip (Plate 22, c3492) like jar BY (Plate 10, c3845), but differs in that these forms have thinner walls with a more "gracile" feel

to it. This jar's rim profile is remarkably similar to Menzel's (1966, Plt. XVII, Fig.85) Late Horizon pottery from Ica; particularly Ica 9 style "jars".

7. Jar BF1 (n = 2, Diameter $\bar{x}$ = 9.0 cm, σ = 2.8 cm; Thickness $\bar{x}$ = 7.64 mm, σ = 1.44 mm): These small jars have slender walls which extrude out of the jar's body at about eighty to ninety degrees. Their lips are rounded and "hook" outward; the form is mostly undecorated (Plate 25, c2701).

8. Jar BG (n = 3, Diameter $\bar{x}$ = 20.0 cm, σ = 9.9 cm; Thickness $\bar{x}$ = 10.17 mm, σ = 1.05 mm): These medium-sized jar's rim protrudes away from the jar's body at an approximate eighty to eighty-five degrees. The inner neck and outer neck angles are about ninety degrees and readily noticeable as they form a pronounced edge. The neck can be of various lengths and they are always wider than the vessels walls (Plate 46, c4433).

9. Jar BH (n = 20, Diameter $\bar{x}$ = 15.7 cm, σ = 4.3 cm; Thickness $\bar{x}$ = 8.26 mm, σ = 2.90 mm): These are medium-sized jars with rim walls which extend upward form the jar's body at about seventy to ninety degrees. The inner neck angle is sharp and pointed. The inner rim wall curves gently and ends in a rounded lip. The outer rim wall has a noticeable dip about 1/3 of the way down to the body which gives the outer rim wall a two-part look. The outer neck angle is slightly less pointed than its' inner counterpart (Plate 55, c5719). This form is often decorated in Red Slip; at

times it may be further decorated with a type of cream colored white-wash on the outer walls.

10. Jar BJ (n = 94, Diameter $\bar{x}$ = 11.9 cm, σ = 2.1 cm; Thickness $\bar{x}$ = 7.33 mm, σ = 1.37 mm): These are medium sized jars with uniformly slender walls which make a backward "c" shape in profile. The jar's rim extends away from the jar's body at about a forty-five-degree angle and concaves outwardly in a semispherical gently curving fashion; the inner and outer neck angles are pronounced (Plate 7, c201). This jar's form may have a handle which is attached at 3/4^{ths} of the rim's height. These handles are often cylindrical, as opposed to other jar's handles which can be more elliptical or even semi-rectangular in cross section. The handle forms can also be semi-rectangular in cross section. This form is often decorated in Red Slip but may also be further decorated with white bands on the handle, a white rim painted neck, as well as having a modeled snake on the outer walls of neck (Plate1, c430). Other times it has a modeled snake on the jar's body itself.

11. Jar BJ1-Unique (n = 1, Diameter $\bar{x}$ = n/a cm, σ = n/a; Thickness $\bar{x}$ = 14.22 mm, σ = n/a): This form's rim is fairly thick, short, and concaves outward aggressively before returning to a straight line and ending on rounded lip. The rim seems fairly uniform in its thickness (Plate 25, c566). This form is decorated in Red Slip.

12. Jar BK (n = 18, Diameter $\bar{x}$ = 9.3 cm, σ = 4.8 cm; Thickness $\bar{x}$ = 6.26 mm, σ = 1.37 mm): These are small jars with rims that protrude at about ninety-degrees from

the jar's body. The inner neck angle is extremely pronounced, much like the outer neck angle. The rim aggressively concaves outward and comes to a pointed lip (Plate 18, c4196). This form is a lot like jar BJ (Plate 35, c690), but differs in its pointed lip, thinner rim walls, and overall smaller mouth diameter.

13. Jar BK2 (n = 2, Diameter $\bar{x}$ = 10.5 cm, σ = 3.5 cm; Thickness $\bar{x}$ = 5.67 mm, σ = 0.62 mm): These are small jars with slender walls; these jars are unevenly thick; the walls become thinner as they approach the mouth of the vessel (Plate 97, c2387). The inner rim walls are not parallel to the outer rim walls which seem straighter and less curved than their inner counterparts. This jar is largely undecorated.

14. Jar BO (n = 18, Diameter $\bar{x}$ = 12.7 cm, σ = 4.0 cm; Thickness $\bar{x}$ = 7.43 mm, σ = 1.37 mm): These are medium jars with rims which protrude away from their body at about seventy to ninety degrees. In profile, the jars seem like three globular segments stacked on each other (Plate 7, c5949). This form is often not decorated.

15. Jar BR (n = 5, Diameter $\bar{x}$ = 15.8 cm, σ = 2.6 cm; Thickness $\bar{x}$ = 8.53 mm, σ = 1.50 mm): These are medium jars with rims which protrude at about eighty degrees away from the jar's body. Both inner and outer wall are straight; they end in a square-shaped lip. This form has no decorated motifs (Plate61, c744).

16. Jar BU (n = 2, Diameter $\bar{x}$ = 15.0 cm, σ = 4.2 cm; Thickness $\bar{x}$ = 10.16 mm, σ = 2.84 mm): These are medium jars whose rim protrudes away from the jar's body at

about eighty to ninety degrees. The rim is thicker close to the mouth of the jar. The rim has a rounded lip (Plate 25, c603).

17. Jar BV (n = 5, Diameter $\bar{x}$ = 19.6 cm, σ = 2.9 cm; Thickness $\bar{x}$ = 8.33 mm, σ = 1.52 mm): The long rims of this form extend outward, about eighty degrees away from the body of the jar. The rims have a fairly uniform slenderness to them, rounded lips, and a slight angle change towards their end —the rims turn slightly outwardly near the mouth of the jar. The inner neck angle is pointed, the outer neck angle is sharply angled (Plate 73, c6005).

18. Jar BW (n = 15, Diameter $\bar{x}$ = 14.1 cm, σ = 4.0 cm; Thickness $\bar{x}$ = 9.00 mm, σ = 3.84 mm): These are medium jars with slender rim walls which make an approximately seventy to eighty-degree angle with the jar's body. The inner and outer neck angles are slightly sharp; There is a drop-like shape to the lips at the mouth which often extending outward (Plate 65, c830).

19. Jar BY (n = 7, Diameter $\bar{x}$ = 14.6 cm, σ = 3.3 cm; Thickness $\bar{x}$ = 7.51 mm, σ = 1.35 mm): These are medium jars with slender rims that protrude at approximately an eighty-degree angle form the jar's body. The inner neck angle is sharp and pronounced, almost pointed. The inner rim wall is straight, cumulating in a semi-pointed lip which overall looks like a barbed hook in cross-section. The outer rim wall near the mouth of the jar are pointed in a triangle shape. The outer neck angle is rounded (Plate 10, c3845). This jar form is similar to jar CW1 (Plate 2,

c2106), except that jar BY's inner walls are less curved. These jars are also having similarities to jar BF (Plate 22, c3492). The latter having more gracile wall connections to their jar's body. This jar can be decorated with whitewash on the inner wall close to the mouth opening. These jar's rim profile resembles Menzel's Ica Style, Phase 6 jar rims from Chincha (Menzel 1966, Plt.XIII, Fig.42, Fig.46), which she labels as belonging to a "complex rim bowl." Alternatively, they may be like Kroeber and Strong's (1924, 16–17) bowls with "heavy lip with beveled edge".

20. Jar BZ (n = 28, Diameter $\bar{x}$ = 12.5 cm, σ = 2.7 cm; Thickness $\bar{x}$ = 7.54 mm, σ = 1.16 mm): These are medium jars with slender rim walls which protrude at about ninety degrees away from their bodies. The inner neck angle is smooth and rounded. The inner and outer rim walls are "s" shaped, they end in a rounded lip. These jars may have a small handle attached to the lip. The form can be decorated with Red Slip. It may also have a white painted lip and a white band circumferentially adorning the outer walls at the neck (Plate 25, c2666).

21. Jar BZ1 (n = 19, Diameter $\bar{x}$ = 18.2 cm, σ = 4.9 cm; Thickness $\bar{x}$ = 10.47 mm, σ = 3.04 mm): These are medium jars with slender walls whose rim protrudes upward at about ninety degrees from the jar's body. The inner neck angle is smooth. The inner wall is rounder than the straight outer rim wall which gives a half oblong rim profile. The rim is un-evenly slender, but the body of the vessel has evenly thick walls (Plate 19, c1355). This form is mostly un-decorated.

22. Jar BZ3 (n = 3, Diameter $\bar{x}$ = 12.3 cm, σ = 1.2 cm; Thickness $\bar{x}$ = 8.03 mm, σ = 2.31 mm): These medium jar's slender rims, protrude upward, in an aggressively concave profile, at almost an eighty to ninety-degree angle with the body of the jar. The inner neck angle is sharply pronounced. The lip is largely flat at the mouth opening. The outer walls of the rim convex and meets the jar with in a soft angle on the outside neck; the profile resembles the shape of the letter “E.” The neck area is the thickest part of the vessel (Plate 22, c1491). Soot usually covers the outside of most sherds fond in this form.

23. Jar BZ4 (n = 5, Diameter $\bar{x}$ = 25.2 cm, σ = 4.9 cm; Thickness $\bar{x}$ = 12.24 mm, σ = 3.16 mm): These are large jars whose rims, in cross cut profile, resembles the letter "E". The inner neck angles are sharp and pronounced. The inner rim walls undulate in an "s" shaped fashion. Their lips are rounded or semi-globular. The outer rim walls are usually less pronounced "S" shape, but they overall parallel the inner walls. The outer neck angles are less pronounced than their corresponding inner neck angles. The rim is un-evenly slender with the neck being the thickest part of the jar (Plate 25, c1702, c2677). This form resembles jar BZ3 but is larger in size. This vessel form is often decorated with Red Slip.

24. Jar BZ5 (n = 4, Diameter $\bar{x}$ = 14.0 cm, σ = 2.0 cm; Thickness $\bar{x}$ = 6.59 mm, σ = 1.39 mm): These medium jars’ rims make a ninety-degree angle with the jar’s body. The inner neck angles are smooth and rounded; so are the outer neck angles. The

inner wall of the rims is straight, ending in an upside-down foot-like lip shape which proceeds to concave “inward” and then back “outward” as the rim approaches the body of the vessel. The rims of these jars are slender (Plate 87, c2842). This form is decorated in Red Slip.

25. Jar BZ6 (n = 2, Diameter $\bar{x}$ = 16.0 cm, σ = 1.4 cm; Thickness $\bar{x}$ = 7.39 mm, σ = 1.08 mm): These are medium jars, with uniformly slender walls that somewhat resemble the letter "E" in cross cut profile. The rim extends upward, away from the body of the vessel at about eighty degrees, then concaves outward, before finally flaring outward at about forty-five degrees to the mouth of the jar. The lip is rounded. The outer rim walls are parallel to the inner walls, but with less pronounced turns than their inner counterparts (Plate 22, c4210). These jars are similar to form CZ8 (Plate 55, c5700), but have less top "flare" on the outer rim and a lesser distance of the flare to the mouth than their CZ8 counterparts.

26. Jar CA1 (n = 13, Diameter $\bar{x}$ = 16.3 cm, σ = 2.1 cm; Thickness $\bar{x}$ = 13.62 mm, σ = 2.46 mm): These are medium-sized jars with rims that extends outward of the jar’s body at about a seventy to ninety-degree angle. The inner walls smoothly curve and end on a large and rounded lip. The outer wall gently curves down to the body of the jar. The walls are thick close to the mouth of the jar but thin out away from the mouth (Plate 85, c5001).

27. Jar CC (n = 15, Diameter $\bar{x}$ = 24.5 cm, σ = 6.8 cm; Thickness $\bar{x}$ = 10.38 mm, σ = 2.99 mm): These are large jars with slender rims that makes an approximately sixty-degree angle with the jar's body. The inner neck angles are shallow and not particularly pronounced; they are smoothly curved. The inner rims are fairly uniform in their slenderness, ending in an upside-down shoe-like-shaped lip. The outer walls of the rim slightly concave outward (Plate 67, c3273). This form is often decorated in Red Slip.

28. Jar CE-Big (n = 209, Diameter $\bar{x}$ = 20.0 cm, σ = 5.8 cm; Thickness $\bar{x}$ = 7.57 mm, σ = 1.82 mm): These jars are plain looking, with little diagnostic features. The form comes in in two clear sizes: "big" and "small." Their cross-profile section looks identical to jar CE-Big is a medium-sized jar. These jars have long slender rims that extend away from their jar's body at about forty-five degrees. The inner and outer neck angles are at about ninety degrees; their rims are uniformly slender and end on a rounded lip (Plate 25, c1703). These forms are often undecorated but may also be decorated in Red Slip. At Chincha, Menzel calls a similar profile sherd "collard jar." She associates them with assemblages belong to the Late Intermediate Period Epoch 8 (Menzel 1966, Plt.X, Fig.14).

29. Jar CE-Small (n = 30, Diameter $\bar{x}$ = 8.30 cm, σ = 2.4 cm; Thickness $\bar{x}$ = 7.28 mm, σ = 2.44 mm): These jars have the same description as jar CE-Big; they are smaller in size and they have more slender walls (Plate 40, c3706, Plate 51, c1562).

30. Jar CG (n = 4, Diameter $\bar{x}$ = 17.3 cm, σ = 3.4 cm; Thickness $\bar{x}$ = 8.13 mm, σ = 1.84 mm): These are medium-sized jars with slender rims which protrudes form the body at about as forty-five degrees angle. The rims are almost "S" shaped, unevenly thick, with a pointed lip which points outward. The inner neck angles are sharp and pronounced. Th outside neck angles is less so inclined, but similar to the inner neck angles (Plate 62, c6529). This form is undecorated.

31. Jar CH (n = 6, Diameter $\bar{x}$ = 14.2 cm, σ = 3.6 cm; Thickness $\bar{x}$ = 9.21 mm, σ = 0.80 mm): These are medium-sized jars with thinning rims that extends out from the neck at about forty-five degrees form the jar's body. The rims have a concave inter surface which slightly points at the lip and come down in a straight angle in the outer wall. The rims are not uniform in thickness. The midpoint of the rims is their thickest, they then taper off and thin as they approach the lip. The lip is pointed (Plate 23, c1831). This form is not decorated.

32. Jar CH1 (n = 6, Diameter $\bar{x}$ = 19.3 cm, σ = 2.7 cm; Thickness $\bar{x}$ = 8.33 mm, σ = 1.48 mm): These are medium-sized jars with slender rims that protrude away from the body at forty-five degrees. The inner neck angle and the outer neck angle are both sharp and pronounced —they form approximately ninety-degree angles with the jar's body walls. The inner rim wall is straight, the lip pointed.

33. Jar CI (n = 3, Diameter $\bar{x}$ = 24.3 cm, σ = 0.6 cm; Thickness $\bar{x}$ = 8.61 mm, σ = 1.53 mm): These are large-sized jars with slender walls and a thinning rim that extends

away from the body at forty-five degrees. The outer rim walls are straight. The inner rim walls are oblong shaped (Plate 97, c2377).

34. Jar CI1 (n = 12, Diameter $\bar{x}$ = 16.0 cm, σ = 3.5 cm; Thickness $\bar{x}$ = 7.15 mm, σ = 1.26 mm): These are medium-sized jars with rims which protrudes from the body of the jar at approximately sixty to seventy degrees. The inner neck and outer neck angles are smooth and not readily pronounced. The rim slenderness is evenly skinny but thins even more, as it approaches the mouth of the vessel. The lip points outward and is semi-pointed (Plate 97, c2369). This form is largely undecorated.

35. Jar CJ (n = 80, Diameter $\bar{x}$ = 22.2 cm, σ = 7.8 cm; Thickness $\bar{x}$ = 8.86 mm, σ = 2.03 mm): These are medium sized jars with slender walls and short rims which end in a square-shaped lip. The rim extends away from the jars body at about forty-five to fifty-five degrees. Both inner and outer neck angles are sharp and pointed (Plate 2, c2108). This form may have a white wash on the outer walls near the mouth of the jar.

36. Jar CM (n = 184, Diameter $\bar{x}$ = 16.8 cm, σ = 3.3 cm; Thickness $\bar{x}$ = 7.70 mm, σ = 1.82 mm): These jars are uniformly slender. Their rims extend away from their body at approximately forty-five degrees. The inner neck angles are round and not very pronounced. The rim is medium in length and ends in a rounded lip (Plate 14 c6111). The form may have a handle connecting form the lip to the body of the

jar, is often decorated in Red Slip, and may additionally have white bands on the handle connections (Plate 7, c91), a white band on the outer neck (Plate 25, c2655), or white vertical stirpes on the inner walls of the rim (Plate 25, c2658). A molded snake with white dots may be added to the jar's body as well (Plate 25, c2655).

37. Jar CO (n = 169, Diameter $\bar{x}$ = 18.6 cm, σ = 4.7 cm; Thickness $\bar{x}$ = 7.58 mm, σ = 1.47 mm): These are jars with slender rims which extends away from the body at about forty to sixty degrees. The inner neck angle is sharp and contrasts the rounder outer neck angle. The neck ends with a square-shaped lip (Plate 34, c3595). This form may be decorated with Red Slip. It may also have large white stripes' extending down the body in semi-vertical pattern. The outer neck may also have a white band circumferentially decorating it.

38. Jar CP (n = 13, Diameter $\bar{x}$ = 18.8 cm, σ = 7.1 cm; Thickness $\bar{x}$ = 10.60 mm, σ = 4.57 mm): These are medium-sized jars with slender rims that protrude away from the body at approximately forty-five degrees. The inner and outer neck angles are soft and rounded. The lip has an outward flare which is angled and rounded at the tip (Plate 96, c6134). This form is undecorated.

39. Jar CQ (n = 46, Diameter $\bar{x}$ = 25.6 cm, σ = 5.5 cm; Thickness $\bar{x}$ = 12.00 mm, σ = 4.70 mm): These are large jars which have rounded inner and outer neck angles that are somewhat pronounced. The inner rim walls are smooth and gently curve

outward in a convex manner, paralleling the outer rim walls. The rims are fairly uniform in their slenderness except close to the mouth where the lip extends both inward and outward in a bi-bol fashion where the form is thickest (Plate 31, c1109); This form is very similar to the tri-bol lipped form of jar CR, differing on its lip decoration.

40. Jar CR (n = 2, Diameter $\bar{x}$ = 24.0 cm, σ = 5.7 cm; Thickness $\bar{x}$ = 20.89 mm, σ = 3.61 mm): These are large-sized jars with thick rims which protrudes from the body of the jar at approximately forty-five degrees. The inner neck angles are sharply pronounced. As are the outer neck angles which connect the rims to the body of the jars. The rims, in profile, are slightly convex and have a tri-bol-shaped lip. This form is decorated in Red Slip (Plate 28, c6275).

41. Jar C-shortneck (n = 11, Diameter $\bar{x}$ = 15.1, σ = 1.8 cm; Thickness $\bar{x}$ = 8.28 mm, σ = 1.71 mm): These are medium sized jars with uniform slender walls. Both the inner and outer neck angles are not pronounced; the rims bend outward and aggressively concaves in profile, ending with rounded lips pointing outward (Plate 52, c 1582). These jars are often decorated in Red Slip, undecorated. They resemble an Ica 9 style jar form the Late horizon, presented by Menzel (1966, Plt.XVII, Fig.84).

42. Jar C-squash (n = 2, Diameter $\bar{x}$ = 10.5 cm, σ = 0.7 cm; Thickness $\bar{x}$ = 6.78 mm, σ = 1.22 mm): These are small-sized jars with slender uniform in thickness walls. In

cross-cut profile they have a “double chamber” aspect which resembles the profile of a modern butternut squash (*Cucurbita moschata*). There can be a vertical —and fairly large— handle opening connecting the rim to the body of the jar. This form is decorated with Red Slip (Plate 7, c5948).

43. Jar CT (n = 15, Diameter $\bar{x}$ = 17.8 cm, σ = 4.0 cm; Thickness $\bar{x}$ = 9.18 mm, σ = 4.26 mm): These are face-neck jars. They are medium-sized jars with exceptionally long rims which extend outward and away from the jar’s body at about sixty degrees. The rims are overall evenly slender. The inner walls are slightly curved and end in an outward pointed lip. These jars are mostly decorated with Red Slip (Plate 7, c2591; Plate 25, c526). They may have white-painted facial features surrounded by dark outline (Plate 7, c2594; Plate 25, c525, c528; Plate 28, c4866; Plate 29, c1162). Other face neck jars have decorated ear spools with “hatched” patterns (Plate 7, c2598; Plate 25, c527) resembling Strong and Corbett’s (1943) “hatched” motif; or the jar may be decorated with stripped ear spools (Plate 28, c4867; Plate 30, c1080). One example of this jar from (Plate 25, c526) resembles Chincha style fancy ware “high ovoid jars” (see Menzel 1966, Plt.IX, Fig.1). Menzel relates these forms to the Late Intermediate Period Epoch 8 and the beginning Late Horizon in ceramics from Chincha.

44. Jar CU (n = 123, Diameter $\bar{x}$ = 18.7 cm, σ = 6.0 cm; Thickness $\bar{x}$ = 8.31 mm, σ = 1.82 mm): These are medium sized jars with overall slender walls. These jars’ rims

protrude at about ninety degrees from the jar's body. Their rims, in profile, are shaped like an oblanceolate leaf. They all have rounded lips. The rims are unevenly thick —being thickest or broadest close to the mouth of the jar and thinning as the rim approaches the body (Plate 27, c5469).

45. Jar CW1 (n = 14, Diameter $\bar{x}$ = 23.2 cm, σ = 8.0 cm; Thickness $\bar{x}$ = 9.84 mm, σ = 4.41 mm): These are large-sized jars with sharp inner and outer neck angles that extend away from the body at approximately fifty to sixty degrees. The inner rims re largely straight, slightly convex. The lips are pointed. The rims extend in a triangle shape to half the rim's height (Plate 2, c2106). This form is often undecorated and resembles Kroeber and Strong's (1924, 17) "beveled-lip bowl."

46. Jar CW2 (n = 5, Diameter $\bar{x}$ = 21.4 cm, σ = 4.8 cm; Thickness $\bar{x}$ = 11.21 mm, σ = 4.01): These are large jars which are readily recognizable by their unevenly thick rims which extends outward from the body of the vessel at about seventy or eighty degrees, before ending in a peculiarly pointed and thin lip. Their lips in turn, form the top of a larger outward rim protrusion extending centrifugally outward at different lengths. The outer rims necks connect sharply with the body of the vessels marking a sharp "L" shaped cross section (Plate 5, c4948). The form is similar to jar CW1 (Plate 2, c2106) and jar CW7 (Plate 1, c5978). These vessels have no immediate decoration on them.

47. Jar CW7 (n = 1, Diameter $\bar{x}$ = 27.0 cm, σ = n/a; Thickness $\bar{x}$ = 25.99 mm, σ = n/a): This large-sized jar has a very thick rim; the thickest rim encountered among the assemblages. The neck makes about a ninety-degree angle with the jar's body —it sticks straight out of the body. Noticeably peculiar is the un-uniform thickness of the entire rim. The lip is rounded at the top but extends outward in a semi-triangular fashion before it comes down and out-ward. The wall of the rim and meets the jar's body in a smooth connection (Plate 1, c5978). This jar form is rare in the assemblages analyzed but seen in other collections. For example, Menzel (1966, Plt.XII, Fig.25) presents a similar rimmed profile and describes it as "complex rim bowl" associated with Chincha Style, Late Intermediate period, Epoch 8 sherds.

48. Jar CX (n = 26, Diameter $\bar{x}$ = 14.9 cm, σ = 3.4 cm; Thickness $\bar{x}$ = 7.84 mm, σ = 2.14 mm): These are medium-sized jars with overall slender walls. Both inner and outer neck angles are smooth yet pronounced; the rim extends beyond the jar's body at approximately eighty to ninety degrees away from the jar's body. At the top of the rims, they flare away from the jar's body pointing the lip outward and ending in a lip shape that resembles upside-down shoe (Plate 7, c42). This form is undecorated.

49. Jar CY (n = 5, Diameter $\bar{x}$ = 16.8 cm, σ = 1.3 cm; Thickness $\bar{x}$ = 6.73 mm, σ = 0.81 mm): These are medium-sized jars with slender rims that flares away from the

body of the vessel. This form has a flat-topped lip (Plate 87, c2844) and resembles bowl LD but re shorter in their lip section. Jar in form CY are undecorated.

50. Jar CY1 (n = 25, Diameter $\bar{x}$ = 15.9 cm, σ = 5.1 cm; Thickness $\bar{x}$ = 8.55 mm, σ = 1.75 mm): These are medium jars with uniformly slender walls and relatively short rims. The inner and outer neck angles are curved and smooth. The inner rim walls are straight and end in an outward-facing hooked-like lip below the mouth of the jar (Plate 28, c4970). This jar from may be whitewashed on the outside, or undecorated.

51. Jar CZ (n = 10, Diameter $\bar{x}$ = 16.4 cm, σ = 5.9 cm; Thickness $\bar{x}$ = 7.92 mm, σ = 1.33 mm): These are medium sized jars, whose rims protrude at about eighty to ninety degrees away from the jar's body. The rims have a slight directional change about halfway through them, in where they suddenly jet out in a centrifugal direction, making way for a wider mouth than neck opening. The lip is round in shapes (Plate 101, c6200). These jars are largely and overall undecorated.

52. Jar CZ1 (n = 10, Diameter $\bar{x}$ = 18.6 cm, σ = 5.9 cm; Thickness $\bar{x}$ = 8.62 mm, σ = 2.09 mm): These are medium-sized jars that have an upward rim which extends away from the jars' body at about ninety degrees. The slender rim walls end on a rounded lip. The neck angles connecting the jar's body to the neck are smooth and gentle (Plate 69, c972; Plate 42, c2435). This jar form is undecorated.

53. Jar CZ6 (n = 12, Diameter $\bar{x}$ = 16.5 cm, σ = 4.9 cm; Thickness $\bar{x}$ = 8.19 mm, σ = 1.50 mm): These are medium-sized jars with slender rims that protrudes at about seventy degrees from the jar's body. It has a smooth uniform curve on the inner wall of the rim, rounding off into a semi-pointed outward protruding lip. The outer rim sherd has a neck "flare" which runs around the circumference of the rim looking like stair-steps. The inner neck angle is sharp and almost pointed, while the outer neck angle is smooth and less pronounced (Plate 28, c4871, Plate 29, c1186). This form is often decorated in Red Slip.

54. Jar CZ7 (n = 12, Diameter $\bar{x}$ = 13.9 cm, σ = 3.6 cm; Thickness $\bar{x}$ = 7.13 mm, σ = 1.46 mm): These are medium-sized jars with fairly uniform in its slender rim walls. The angles of the neck and rims, away from the jar's body, is about fifty to sixty degrees. The outside rim wall is slightly concave and parallels the inner wall (Plate 79, c1659). This form often is not decorated.

55. Jar CZ8 (n = 16, Diameter $\bar{x}$ = 13.5 cm, σ = 2.6 cm; Thickness $\bar{x}$ = 7.76 mm, σ = 1.77 mm): These are medium sized jars with slender walls. These jars' rims are unlike other jars in that they have two distinct sections to them. The first, the section which connected to the body of the jar, extends outward at about ninety degrees straight up and convexing outward. The second section, on top of the first one, connects to the first part to the lip; this section extends outward at about sixty to eighty degrees to the body of the vessel itself. The rims convex outward and ends

on a rounded lip at the mouth. The outer rim wall is smoothly curved; the rims are fairly uniformly slender, and their angles are all pronounced (Plate 22, c4213). Jars CZ8 are undecorated.

56. Jar DA (n = 2, Diameter $\bar{x}$ = 22.5 cm, σ = 12.0 cm; Thickness $\bar{x}$ = 9.33 mm, σ = 2.67 mm): These are large jars with wide mouths and rims that make a ten to twenty degrees angle with the body of the jar. The rims themselves are oblong shaped in profile, end in a round lip, and are unevenly thick (Plate 23, c1940). Jars DA are undecorated.

57. Jar DB (n = 3, Diameter $\bar{x}$ = 25.0 cm, σ = 2.7 cm; Thickness $\bar{x}$ = 12.47 mm, σ = 2.92 mm): These are large jars with slender rims that protrude at an approximately ten to twenty degrees away from the jar's body. The rims are unevenly slender. The lips are round and the rims oblong shaped. The necks are the thickest part of the vessels; the outer neck angles are less pronounced than the inner neck angels which, in comparison, seems sharp in contrast (Plate 25, c2694).

58. Jar DC (n = 7, Diameter $\bar{x}$ = 12.3 cm, σ = 3.5 cm; Thickness $\bar{x}$ = 6.55 mm, σ = 1.67 mm): These jars have rims that are fairly slender; the jars themselves, medium sized and globular shaped. The inner and outer neck angles are smooth and not pronounced. The rims are short in length and end in a rounded lip. This form may be decorated in Brownware style; at times further decorated with a mesh like

design (Plate 61, c3236) or with a white painted outer lip next to the mouth of the vessel (Plate 86, c1033).

59. Jar DE (n = 4, Diameter $\bar{x}$ = 14.0 cm, σ = 1.6 cm; Thickness $\bar{x}$ = 5.94 mm, σ = 0.63 mm): These are medium jars with slender walls and with triangular shaped pointed lips. The walls of the jars are fairly uniformly slender, with the exception of the triangular-shaped lip witch points outward and upward and is a bit thicker (Plate 96, c6144).

60. Jar DF (n = 68, Diameter $\bar{x}$ = 16.1 cm, σ = 3.4 cm; Thickness $\bar{x}$ = 7.85 mm, σ = 3.31 mm): These are medium-sized jars with rims that make an approximate thirty-five or forty-degree angle with the jar's body. The walls are not uniformly slender. The inner and outer neck angles are smooth. The lips are rounded, and the overall neck length are short (Plate 1, c6319). The lip may be painted red. This jar form is also decorated in Smoked Blackware style.

61. Jar DJ (n = 3, Diameter $\bar{x}$ = 16.0 cm, σ = 1.0 cm; Thickness $\bar{x}$ = 8.40 mm, σ = 1.98 mm): These jars are medium sized with s slender rim which protrudes at approximately forty-degrees away from the body of the jar. The rim walls are unevenly thick, and the lips are rounded, slightly facing outward (Plate 25, c2681). Menzel (1966, Fig.14, 85) calls these forms "collared jars."

62. Jar DL (n = 6, Diameter $\bar{x}$ = 33.2 cm, σ = 5.9 cm; Thickness $\bar{x}$ = 13.31 mm, σ = 3.30 mm): These are large jars whose profile shows fairly uniformly thick walls and a

square lip (Plate 53, c1600); this shape is uncommon; it is fairly large in diameter and here –it is assumed to be a jar but perhaps could be a bowl, or a plate.

63. Jar DM (n = 4, Diameter $\bar{x}$ = 20.3 cm, σ = 10.0 cm; Thickness $\bar{x}$ = 7.98 mm, σ = 3.06 mm): These are medium sized jars, with slender rims that protrudes away from the jar's body at approximately fifty degrees. The inner neck angle is sharp and pronounced; the outer neck angle much less so. The inner wall of the rims is fairly straight, ending in a square shaped lip. The outer rim wall concaves, connecting to the jars' body at the neck; the forms' thickest part (Plate 62, c6540). The cross-cut profile resembles that of jar DB (Plate 25, c2694); it differs in size, it is smaller and thinner, and also differs in lip shape —from DM is square, as opposed to round, the shape of the lip of form DB. Menzel (1966, Fig.14, 85) calls these form "collared jars".

64. Jar DN (n = 4, Diameter $\bar{x}$ = 11.8 cm, σ = 3.0 cm; Thickness $\bar{x}$ = 7.20 mm, σ = 0.64 mm): These are small jars, whose rims are fairly short and approximately at forty-five degrees with the vessels body. The inner and outer neck angles are shallow and not subtle. The rim is short and ends in a rounded lip. Overall it is uniform in slenderness (Plate 100, c6157). Jars in from DN are undecorated.

65. Jar DO (n = 14, Diameter $\bar{x}$ = 15.4 cm, σ = 3.5 cm; Thickness $\bar{x}$ = 8.85 mm, σ = 3.12 mm): These are medium jars with rims that jets upward from the jar's body at approximately eighty degrees. The inner walls are fairly straight, ending a in a

pointed lip. The other wall comes down in uniform thickness and connects to the body of the jar with a shallow outer neck angle. Jars DO have overall slender walls (Plate 27, c5367). They are largely undecorated.

66. Jar form CN (n = 75, Diameter $\bar{x}$ = 19.1 cm, σ = 5.6 cm; Thickness $\bar{x}$ = 7.74 mm, σ = 2.44 mm): These are small and medium sized jars whose rims extend away from their body at about forty-five to fifty degrees. The inner and outer neck angles are sharply pronounced and semi-pointed. The rim walls are uniformly slender and concaves outward before ending in a rounded lip (Plate 5, c3766). The form is similar to jar BJ but are different in that they are more open and wider mouthed; It is often decorated in Red Slip.

67. Jar form CNQ1 (n = 20, Diameter $\bar{x}$ = 23.5 cm, σ = 6.1 cm; Thickness $\bar{x}$ = 14.73 mm, σ = 4.66 mm): These are large-sized jars whose rims protrude from their bodies at approximately forty-five degrees. The thick rims convex outward, ending in a bi-bol shaped lip; there is an emphasis on the outer “leaf” which is much thicker (usually) than its inner counterpart. The rim is slender and uniform except on the lip end itself which is much thicker (Plate 43, c5793). This form is undecorated.

68. Jar J1 (n = 18, Diameter $\bar{x}$ = 16.0 cm, σ = 3.3 cm; Thickness $\bar{x}$ = 7.75 mm, σ = 1.48 mm): These are medium sized jars with slender walls. The inner and outer neck angles are smooth and curved. The inner rim walls extend outward at about sixty to seventy degrees away from the body of the vessel. The neck ends in a "drop-

like" lips. The outer walls are smooth and curved (Plate 20, c3052). Jars J1 are not decorated.

69. Jar W2-Unique (n = 1, Diameter $\bar{x}$ = 16.0 cm, σ = n/a; Thickness $\bar{x}$ = 6.12 mm, σ = n/a): This is a rare, medium-sized jar with slender walls. The decoration on the outer walls are close to the mouth of the jar, right below the jar's mouth. The decoration is a circumferential row of "impressed" circles with a dimeter of about 2.5 cm (Plate 53, c1601). Sherds impressed with these large circular decorations are presented for "storage vessels" from Podagral at Jequetepeque (Cutright 2015, 72). Another instance was a "a unique sherd" presented by Rowe (1944, Fig.15) at Chanapata in Cuzco —both examples associated and dated to assemblages belonging to the Late Horizon.

70. Jar X2-Unique (n = 1, Diameter $\bar{x}$ = 18.0 cm, σ = n/a; Thickness $\bar{x}$ = 14.78 mm, σ = n/a): This medium-sized, thick-rimed jar form has an unusual handle that resembles a half dome, attached below the jar's neck (Plate 29, c1165). Both the inner and outer neck angles are smoothly curved. The rim extends outward from the body at about forty-five degrees and ends in an unknown lip shape as the sample piece was broken off —I suspect it to be a rounded lip as most forms have rounded lips. The rim walls are thicker than the body's walls. This jar form is undecorated.

71. “Hour-glass stoppers;” (n = n/a, Diameter $\bar{x}$ = n/a cm, σ = n/a cm; Thickness $\bar{x}$ = n/a mm, σ = n/a mm): While not necessarily a jar-shape parse, I include these odd forms here. Although these are found throughout many sites, they seem fairly uniform in dimensions. That is to say, they are about four to five-centimeter rounded constrictions on a clay form but blocked off so as that there can be no transference of contents between the supposed chambers. On one side, the clay is fairly flat, as though it was to be placed on even ground.

Figure Appendix A.1 Jar cross cut profiles

a) Form BB; Diameter (cm): n = 13; mean = 5.9; σ = 1.7; Thickness (mm): mean = 6.97; σ = 1.41.
b) Form BC; Diameter (cm): n = 5; mean = 18.0; σ = 4.3; Thickness (mm): mean = 8.48; σ = 0.48.
c) Form BD; Diameter (cm): n = 8; mean = 17.0; σ = 2.5; Thickness (mm): mean = 7.17; σ = 1.39.
d) Form BE; Diameter (cm): n = 23; mean = 18.6; σ = 4.8; Thickness (mm): mean = 8.11; σ = 3.04.
e) Form BF; Diameter (cm): n = 16; mean = 17.9; σ = 7.4; Thickness (mm): mean = 8.49; σ = 2.76.
f) Form BF1; Diameter (cm): n = 2; mean = 9.0; σ = 2.8; Thickness (mm): mean = 7.64; σ = 1.44.
g) Form BG; Diameter (cm): n = 3; mean = 20.0; σ = 9.8; Thickness (mm): mean = 10.17; σ = 1.05.
h) Form BH; Diameter (cm): n = 21; mean = 15.7; σ = 4.3; Thickness (mm): mean = 8.26; σ = 2.90.
i) Form BJ; Diameter (cm): n = 97; mean = 12.0; σ = 2.1; Thickness (mm): mean = 7.38; σ = 1.35.
j) Form BK; Diameter (cm): n = 18; mean = 9.3; σ = 4.8; Thickness (mm): mean = 6.26; σ = 1.37.
k) Form BK2; Diameter (cm): n = 2; mean = 10.5; σ = 3.5; Thickness (mm): mean = 5.67; σ = 0.62.
l) Form BO; Diameter (cm): n = 18; mean = 12.7; σ = 4.0; Thickness (mm): mean = 7.43; σ = 1.37.
m) Form BR; Diameter (cm): n = 5; mean = 15.8; σ = 2.6; Thickness (mm): mean = 8.53; σ = 1.50.
n) Form BU; Diameter (cm): n = 2; mean = 15.0; σ = 4.2; Thickness (mm): mean = 10.16; σ = 2.84.
o) Form BV; Diameter (cm): n = 4; mean = 20.3; σ = 3.5; Thickness (mm): mean = 8.37; σ = 1.58.
p) Form BW; Diameter (cm): n = 17; mean = 14.1; σ = 4.0; Thickness (mm): mean = 9.00; σ = 3.84.
q) Form BY; Diameter (cm): n = 7; mean = 14.6; σ = 3.3; Thickness (mm): mean = 7.51; σ = 1.35.
r) Form BZ; Diameter (cm): n = 29; mean = 12.5; σ = 2.7; Thickness (mm): mean = 7.54; σ = 1.16.
s) Form BZ1; Diameter (cm): n = 20; mean = 18.2; σ = 4.9; Thickness (mm): mean = 10.47; σ = 3.04.
t) Form BZ3; Diameter (cm): n = 3; mean = 12.3; σ = 1.2; Thickness (mm): mean = 8.03; σ = 2.31.
u) Form BZ4; Diameter (cm): n = 5; mean = 25.2; σ = 4.9; Thickness (mm): mean = 12.24; σ = 3.16.
v) Form BZ5; Diameter (cm): n = 4; mean = 14.0; σ = 2.0; Thickness (mm): mean = 6.59; σ = 1.39.
w) Form BZ6; Diameter (cm): n = 2; mean = 16.0; σ = 1.4; Thickness (mm): mean = 7.39; σ = 1.08.
x) Form CA1; Diameter (cm): n = 13; mean = 16.3; σ = 2.1; Thickness (mm): mean = 13.62; σ = 2.46.
y) Form CC; Diameter (cm): n = 15; mean = 24.5; σ = 6.8; Thickness (mm): mean = 10.38; σ = 2.99.
z) Form CE; Diameter (cm): n = 223; mean = 19.4; σ = 6.1; Thickness (mm): mean = 7.64; σ = 1.93.
aa) Form CF; Diameter (cm): n = 3; mean = 12.0; σ = 4.0; Thickness (mm): mean = 8.99; σ = 1.09.
bb) Form CG; Diameter (cm): n = 4; mean = 17.3; σ = 3.4; Thickness (mm): mean = 8.13; σ = 1.84.
cc) Form CH; Diameter (cm): n = 6; mean = 14.2; σ = 3.7; Thickness (mm): mean = 9.21; σ = 0.80.
dd) Form CH1; Diameter (cm): n = 7; mean = 19.3; σ = 2.7; Thickness (mm): mean = 8.33; σ = 1.48.
ee) Form CI; Diameter (cm): n = 3; mean = 24.3; σ = 0.6; Thickness (mm): mean = 8.61; σ = 1.53.
ff) Form CJ; Diameter (cm): n = 84; mean = 22.2; σ = 7.8; Thickness (mm): mean = 8.86; σ = 2.03.
gg) Form CK1; Diameter (cm): n = 2; mean = 15.0; σ = 4.2; Thickness (mm): mean = 8.50; σ = 8.22.
hh) Form CL; Diameter (cm): n = 56; mean = 16.8; σ = 3.7; Thickness (mm): mean = 8.10; σ = 1.98.
ii) Form CM; Diameter (cm): n = 132; mean = 16.8; σ = 3.2; Thickness (mm): mean = 7.53; σ = 1.72.
jj) Form CN; Diameter (cm): n = 77; mean = 19.1; σ = 5.6; Thickness (mm): mean = 7.74; σ = 2.44.
kk) Form CNQ1; Diameter (cm): n = 26; mean = 23.7; σ = 6.6; Thickness (mm): mean = 13.55; σ = 5.18.
ll) Form CO; Diameter (cm): n = 171; mean = 18.6; σ = 4.7; Thickness (mm): mean = 7.53; σ = 1.44.
mm) Form CP; Diameter (cm): n = 13; mean = 18.8; σ = 7.1; Thickness (mm): mean = 10.60; σ = 4.57.
nn) Form CQ; Diameter (cm): n = 48; mean = 25.6; σ = 5.5; Thickness (mm): mean = 12.00; σ = 4.70.
oo) Form CR; Diameter (cm): n = 2; mean = 24.0; σ = 5.7; Thickness (mm): mean = 20.89; σ = 3.61.
pp) Form CSQUASH; Diameter (cm): n = 2; mean = 10.5; σ = 0.7; Thickness (mm): mean = 6.78; σ = 1.22.
qq) Form CT; Diameter (cm): n = 7; mean = 19.4; σ = 4.6; Thickness (mm): mean = 7.64; σ = 2.12.
rr) Form CU; Diameter (cm): n = 129; mean = 18.6; σ = 6.0; Thickness (mm): mean = 8.32; σ = 1.80.
ss) Form CW; Diameter (cm): n = 22; mean = 26.2; σ = 3.7; Thickness (mm): mean = 14.13; σ = 6.49.
tt) Form CW1; Diameter (cm): n = 7; mean = 29.8; σ = 4.4; Thickness (mm): mean = 12.57; σ = 5.60.
uu) Form CW2; Diameter (cm): n = 4; mean = 23.5; σ = 1.3; Thickness (mm): mean = 12.74; σ = 2.43.
vv) Form CX; Diameter (cm): n = 26; mean = 14.4; σ = 3.3; Thickness (mm): mean = 8.46; σ = 3.82.
ww) Form CZ; Diameter (cm): n = 11; mean = 16.4; σ = 5.9; Thickness (mm): mean = 7.92; σ = 1.33.
xx) Form CZ1; Diameter (cm): n = 10; mean = 18.6; σ = 5.9; Thickness (mm): mean = 8.62; σ = 2.09.
yy) Form CZ2; Diameter (cm): n = 2; mean = 9.0; σ = 0.0; Thickness (mm): mean = 5.98; σ = 1.51.
zz) Form CZ6; Diameter (cm): n = 15; mean = 16.5; σ = 4.9; Thickness (mm): mean = 8.19; σ = 1.50.
aaa) Form CZ7; Diameter (cm): n = 15; mean = 13.9; σ = 3.6; Thickness (mm): mean = 7.13; σ = 1.46.
bbb) Form CZ8; Diameter (cm): n = 15; mean = 13.5; σ = 2.7; Thickness (mm): mean = 7.91; σ = 1.71.
ccc) Form KERO; Diameter (cm): n = 46; mean = 15.9; σ = 3.9; Thickness (mm): mean = 8.22; σ = 1.56.
ddd) Form DA; Diameter (cm): n = 2; mean = 22.5; σ = 12.5; Thickness (mm): mean = 9.33; σ = 2.67.
eee) Form DB; Diameter (cm): n = 3; mean = 25.0; σ = 2.6; Thickness (mm): mean = 12.47; σ = 2.92.
fff) Form DC; Diameter (cm): n = 8; mean = 12.4; σ = 3.3; Thickness (mm): mean = 6.59; σ = 1.55.
ggg) Form DD; Diameter (cm): n = 16; mean = 20.5; σ = 6.4; Thickness (mm): mean = 28.78; σ = 8.81.
hhh) Form DE; Diameter (cm): n = 4; mean = 14.4; σ = 1.6; Thickness (mm): mean = 5.94; σ = 0.63.
iii) Form DF; Diameter (cm): n = 70; mean = 16.1; σ = 3.3; Thickness (mm): mean = 7.84; σ = 3.29.
jjj) Form DJ; Diameter (cm): n = 3; mean = 16.0; σ = 1.0; Thickness (mm): mean = 8.40; σ = 1.98.
kkk) Form DL; Diameter (cm): n = 6; mean = 33.2; σ = 5.9; Thickness (mm): mean = 13.31; σ = 3.30.
lll) Form DM; Diameter (cm): n = 4; mean = 20.3; σ = 10.0; Thickness (mm): mean = 7.89; σ = 3.06.
mmm) Form DN; Diameter (cm): n = 4; mean = 11.8; σ = 3.0; Thickness (mm): mean = 7.20; σ = 0.64.
nnn) Form DO; Diameter (cm): n = 13; mean = 15.5; σ = 3.6; Thickness (mm): mean = 8.77; σ = 3.24.
ooo) Form JAR UNIQUE; Diameter (cm): n = 1; mean = ?; σ = n/a; Thickness (mm): mean = ?; σ = n/a.
ppp) Form W2; Diameter (cm): n = 1; mean = 16.0; σ = n/a; Thickness (mm): mean = 6.12; σ = n/a.
qqq) Form X2; Diameter (cm): n = 1; mean = 18.0; σ = n/a; Thickness (mm): mean = 14.78; σ = n/a.

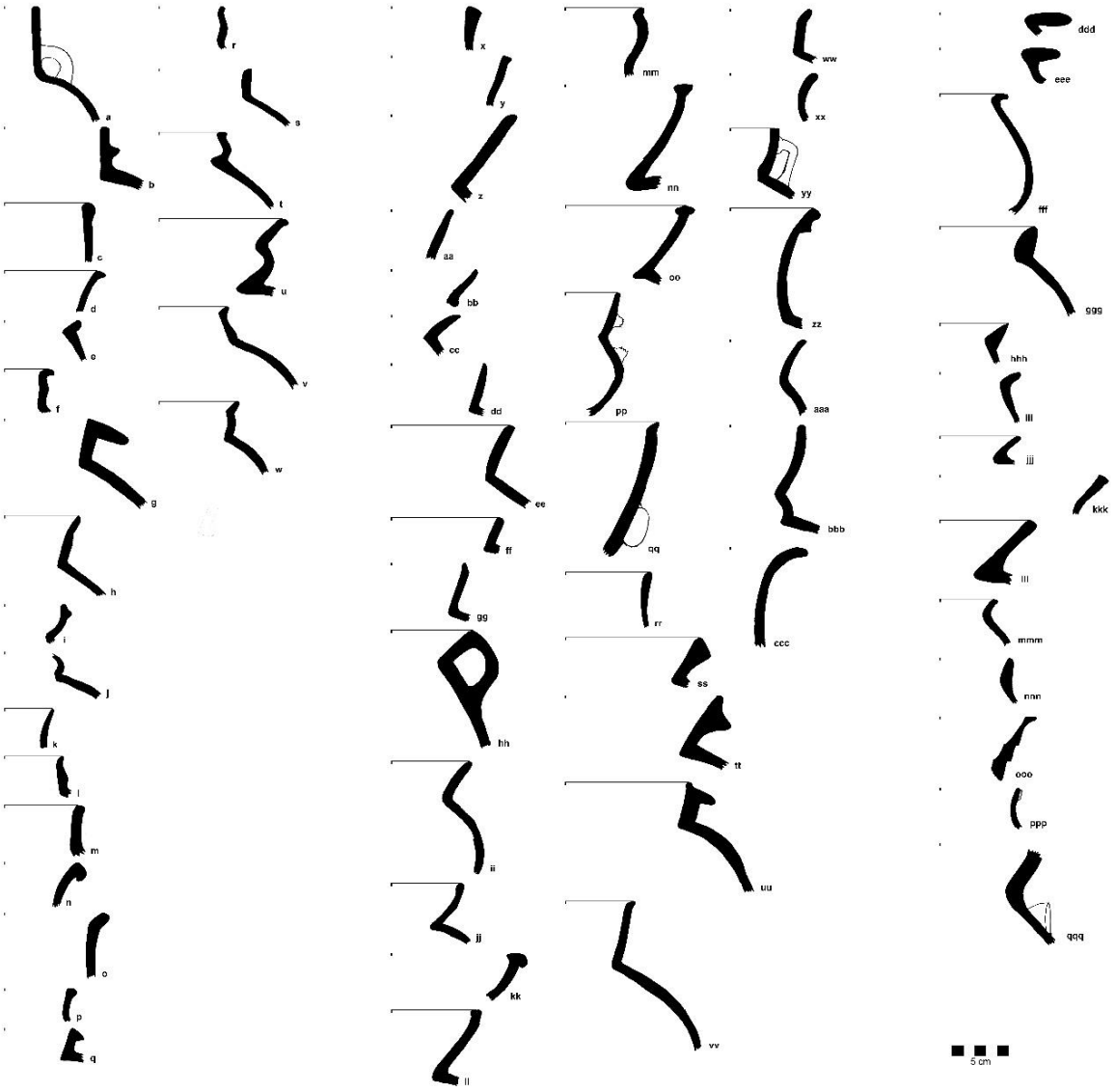


Figure Appendix A. 1. Jars cross cut profiles cont.

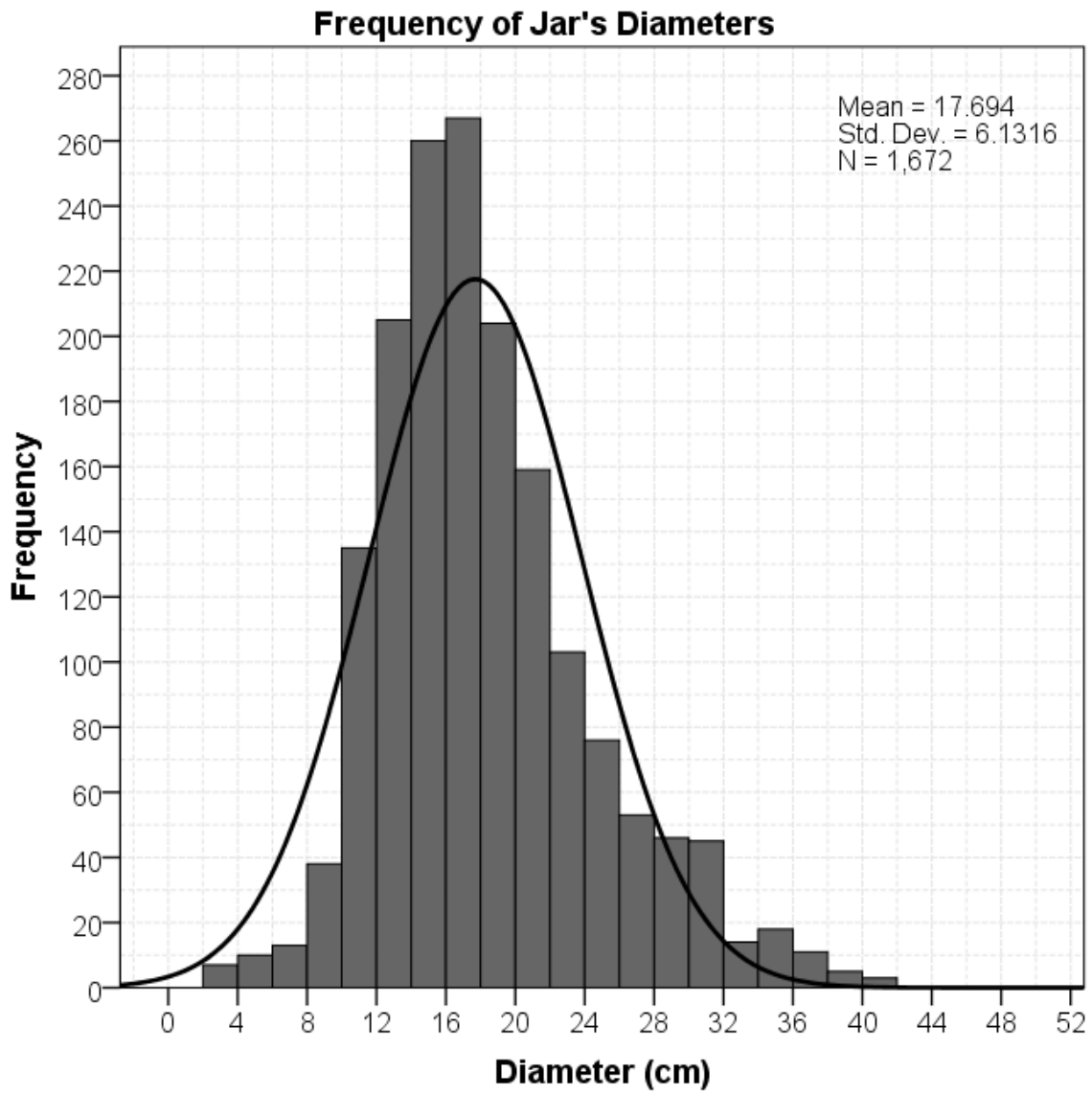


Figure Appendix A. 2. Agglomerated jar diameters for ceramics found in the Lurín Valley.

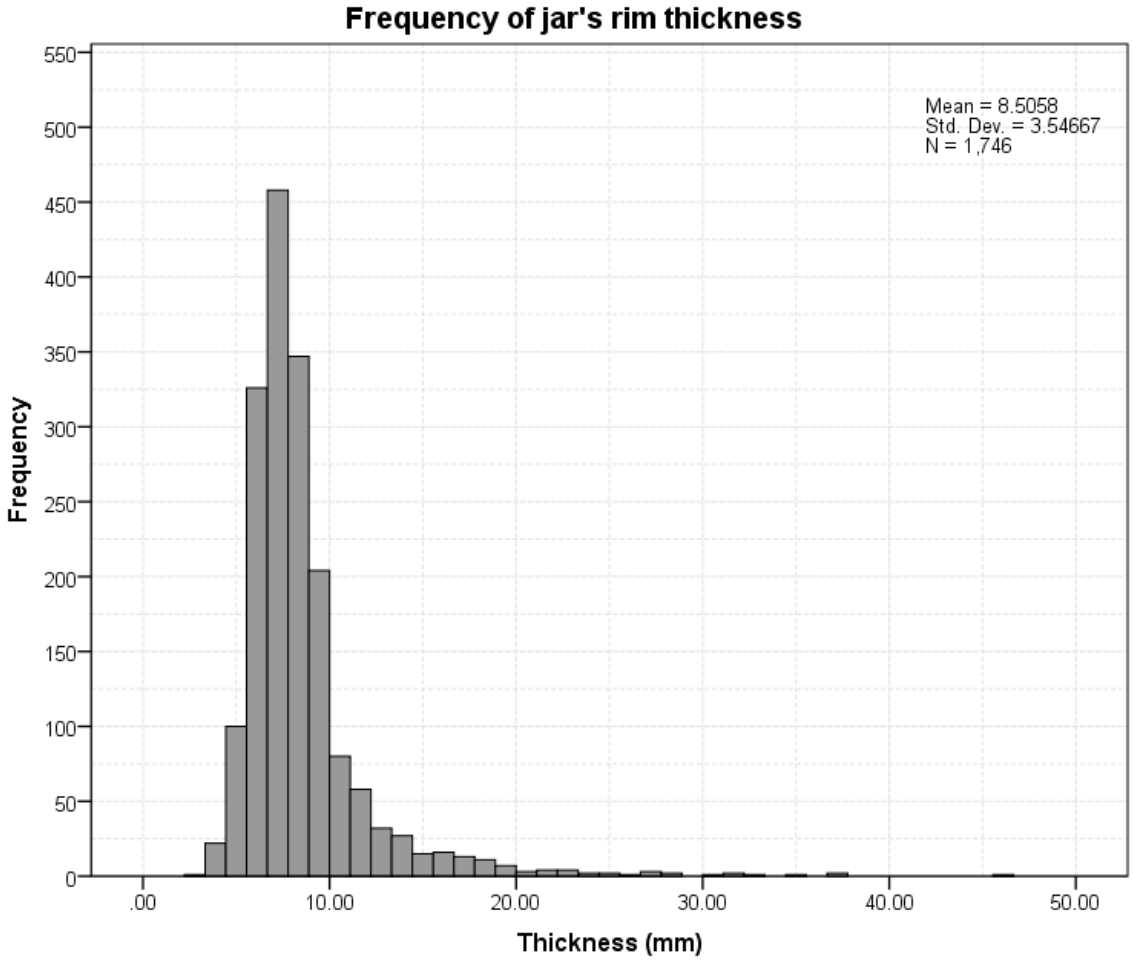


Figure Appendix A. 3. Agglomerated jar wall thickness for ceramics found in the Lurín Valley.

Appendix B – Olla qualitative and quantitative descriptions

Ollas are enclosed vessels, they have a constricted opening like jars but differ from jars in that they lack a "neck." They may have short collars, if any, but this if often not the case. Twelve (12) different olla rim profiles are observed; their cross-cut profiles are illustrated in Figure Appendix B.1.

The mean diameter measurement of all twelve olla forms was used to calculate the mean diameter for all the ollas (Mean = 20.6 cm; SD = 8.2 cm). This process was repeated for the wall thickness of all olla forms (Mean = 12.37 mm, SD = 7.11 mm). A histogram distribution of ollas diameter demonstrated a bimodal distribution with two clusters peaks around 20 cm and 35 cm centimeters (Figure Appendix B.2). As the distribution was noticeable with almost no overlapping, two nominal descriptions are used to describe an olla's diameter: "large" and "small" —the former have an average diameter greater than 25 cm while the latter have one less than 25 cm. A histogram distribution of the ollas' wall thickness, similarly to the histogram distribution for their diameter reveals a positively skewed distribution with no overlapping clusters groups around 10.00 mm and 35.00 mm thickness (Figure Appendix B.3). Therefore, two nominal descriptions describe an olla's thickness: "slender" or "thick" –the former category applies to all olla's whose average wall thicknesses is below 19.00 mm, the latter for wall thicknesses greater than 19.00 mm.

The following qualitative descriptions are made of each olla type by describing, left to right, the contours of the rim profile if one holds a rim cross cut section with the inner wall to the left and the outer wall to the right.

1. Olla OA (n = 12, Diameter $\bar{x}$ = 23.1 cm, σ = 7.6 cm; Thickness $\bar{x}$ = 11.11 mm, σ = 4.11 mm): These are small to large sized ollas with relatively uniformly slender walls and an almost square-shaped lip at the mouth of the vessel (Plate 45, c5202).

2. Olla OB: (n = 46, Diameter $\bar{x}$ = 17.3 cm, σ = 7.4 cm; Thickness $\bar{x}$ = 9.27 mm, σ = 2.13 mm): These are small sized ollas which have a relatively uniformly slender wall with a slightly thicker rim near the mouth opening. The rounded lip looks semi-globular in shape. This olla form is decorated in Red Slip. In one instance, there is a unique incised motif of flowers circumferentially lined up beneath a thick white fringe on the outer wall close to the mouth of the olla (Plate 98, c2241, c2242).

3. Olla OC (n = 2, Diameter $\bar{x}$ = 23.0 cm, σ = 12.7 cm; Thickness $\bar{x}$ = 14.04 mm, σ = 1.93 mm): These are small ollas with slender walls which are thicker near the mouth of the vessel than in the body of the vessel. That is to say, the thickness seems maximum a few centimeters below the olla's mouth opening. The lip of the sherd is semi-pointed as the mouth is pinched from both the inner and outer sides (Plate 67, c3276). This form seems undecorated.

4. Olla OF (n = 3, Diameter $\bar{x}$ = 16.0 cm, σ = 3.6 cm; Thickness $\bar{x}$ = 10.70 mm, σ = 7.54 mm): These are a small sized olla with flat, almost square-shaped lips. The walls are not evenly thick. They are thickest on the inner side near the mouth of the vessel (Plate 27, c5351). The overall wall thickness is relatively slender, except near the vessels opening. The walls are smooth and gently curving; the inner wall is less linear than its outer counterpart. A similar olla profile is reported as a "storage vessel" associated with Chimú assemblages during the Late Horizon, in the Jequetepeque valley by Cutright (2015, Fig.4, 72).

5. Olla OH (n = 52, Diameter $\bar{x}$ = 20.8 cm, σ = 7.4 cm; Thickness $\bar{x}$ = 11.27 mm, σ = 3.62 mm): These are small sized ollas with uniformly slender walls and a relatively flat horizontal opening as seen in a crosscut profile. The outer wall is fairly evenly convex. The lip of the olla is rounded. The inner walls close to the mouth and opening are wider and thicker than the rest of the vessel's walls; the inner lip forms a triangular-like point facing inward, a few centimeters below the mouth opening on the inside of the jar (Plate 82, c1631).

6. Olla OI (n = 33, Diameter $\bar{x}$ = 19.9 cm, σ = 6.9 cm; Thickness $\bar{x}$ = 11.54 mm, σ = 4.23 mm): These are small sized ollas with slender walls and an outer "barbed" lip facing outward at the mouth of the vessel. The lip is otherwise rounded. The rim itself may be decorated with a thick white strip on the outer walls beneath the mouth of the olla (Plate 9, c4927; Plate 13, c3974). Other times it may be

decorated with a thick red painted lip (Plate 22, c1475). This form may be common during the Late Horizon; it is present thought-out the coast at this time. In the Jetequepeque valley the same form is presented as a Chimú-Inca Smoked Blackware olla (Cutright 2015, Fig.4, 72).

7. Olla OK (n = 10, Diameter $\bar{x}$ = 18.4 cm, σ = 4.1 cm; Thickness $\bar{x}$ = 8.06 mm, σ = 2.23 mm): These are small sized ollas with a slightly flaring rounded lips that barely perturbs upward at ollas opening —this lip is sometimes painted red. These ollas' walls are slender (Plate 95, c2283).

8. Olla OL (n = 7, Diameter $\bar{x}$ = 15.4 cm, σ = 5.7 cm; Thickness $\bar{x}$ = 7.82 mm, σ = 3.23 mm): These are small ollas with relatively uniformly slender walls and a square lip which slightly points outward at the vessel's opening (Plate 61, c3245).

9. Olla OM (n = 8, Diameter $\bar{x}$ = 22.6 cm, σ = 10.6 cm; Thickness $\bar{x}$ = 19.11 mm, σ = 10.04 mm): These are small ollas with thick walls and an unusually thick outer lip at the mouth of the vessel. The rounded, coma like, lip is about 3 to 4 times thicker than the average thickness of the vessel's walls themselves (Plate 10, c3888; Plate 76, c648).

10. Olla ON (n = 7, Diameter $\bar{x}$ = 39.0 cm, σ = 2.9 cm; Thickness $\bar{x}$ = 31.88 mm, σ = 12.45 mm): These are large ollas with very thick walls. The walls of the olla may slightly thin away from the mouth of the vessel, but near the mouth they are quite thick. The lip is semi-triangular in appearance. That is to say, the corners of this

large lip seem to have been "pinched" to give it a semi-triangular appearance on each of the corner points. This form is most often undecorated (Plate 33, c4130) but can be seen in some examples with a thin white wash on the outside.

11. Olla OO (n = 10, Diameter $\bar{x}$ = 31.5 cm, σ = 7.1 cm; Thickness $\bar{x}$ = 25.22 mm, σ = 10.35 mm): These are a flat lipped, almost triangular rimed, large olla with overall thick walls. One of the larger olla forms from all the assemblages observed, this form in undecorated. In one example, c3840 at PV48-16, the outer wall has a double “bump” decoration on about it, about three centimeters below the mouths opening (Plate 10, c3840).

12. Olla OP (n = 18, Diameter $\bar{x}$ = 17.8 cm, σ = 2.5 cm; Thickness $\bar{x}$ = 13.24 mm, σ = 5.00 mm): These are small sized ollas with slender walls. This form is similar to Olla ON but on a smaller and thinner scale. The lip of the olla, in profile, is relatively square-shaped. The corners of this vessel’s lip seem to have been “pinched” to give rounded corners and a cross-cut profile that looks somewhat like the letter “Y.” This form can be decorated with thick white paint on the outer walls close to the mouth of the vessel (Plate 2, c2108).

Figure Appendix B.1 Olla cross cut profiles

a) Form OA; Diameter (cm): n = 15; mean = 22.1; σ = 7.3; Thickness (mm): mean = 10.58; σ = 3.84.
b) Form OB; Diameter (cm): n = 46; mean = 17.3; σ = 7.4; Thickness (mm): mean = 9.27; σ = 2.13.
c) Form OC; Diameter (cm): n = 2; mean = 23.0; σ = 12.7; Thickness (mm): mean = 11.04; σ = 1.93.
d) Form OF; Diameter (cm): n = 2; mean = 16.0; σ = 3.6; Thickness (mm): mean = 10.70; σ = 7.54.
e) Form OG; Diameter (cm): n = 6; mean = 22.7; σ = 65; Thickness (mm): mean = 12.35; σ = 5.96.
f) Form OH; Diameter (cm): n = 46; mean = 20.6; σ = 7.6; Thickness (mm): mean = 11.14; σ = 3.30.
g) Form OI; Diameter (cm): n = 33; mean = 19.9; σ = 6.8; Thickness (mm): mean = 11.54; σ = 4.23.
h) Form OK; Diameter (cm): n = 10; mean = 18.4; σ = 4.1; Thickness (mm): mean = 8.06; σ = 2.23.
i) Form OL; Diameter (cm): n = 7; mean = 15.4; σ = 5.7; Thickness (mm): mean = 7.82; σ = 3.23.
j) Form OM; Diameter (cm): n = 8; mean = 22.6; σ = 10.6; Thickness (mm): mean = 19.11; σ = 10.04.
k) Form ON; Diameter (cm): n = 7; mean = 39.0; σ = 2.9; Thickness (mm): mean = 31.88; σ = 12.45.
l) Form OO; Diameter (cm): n = 10; mean = 31.5; σ = 7.1; Thickness (mm): mean = 25.22; σ = 10.35.
m) Form OP; Diameter (cm): n = 18; mean = 17.8; σ = 2.5; Thickness (mm): mean = 13.24; σ = 5.00.

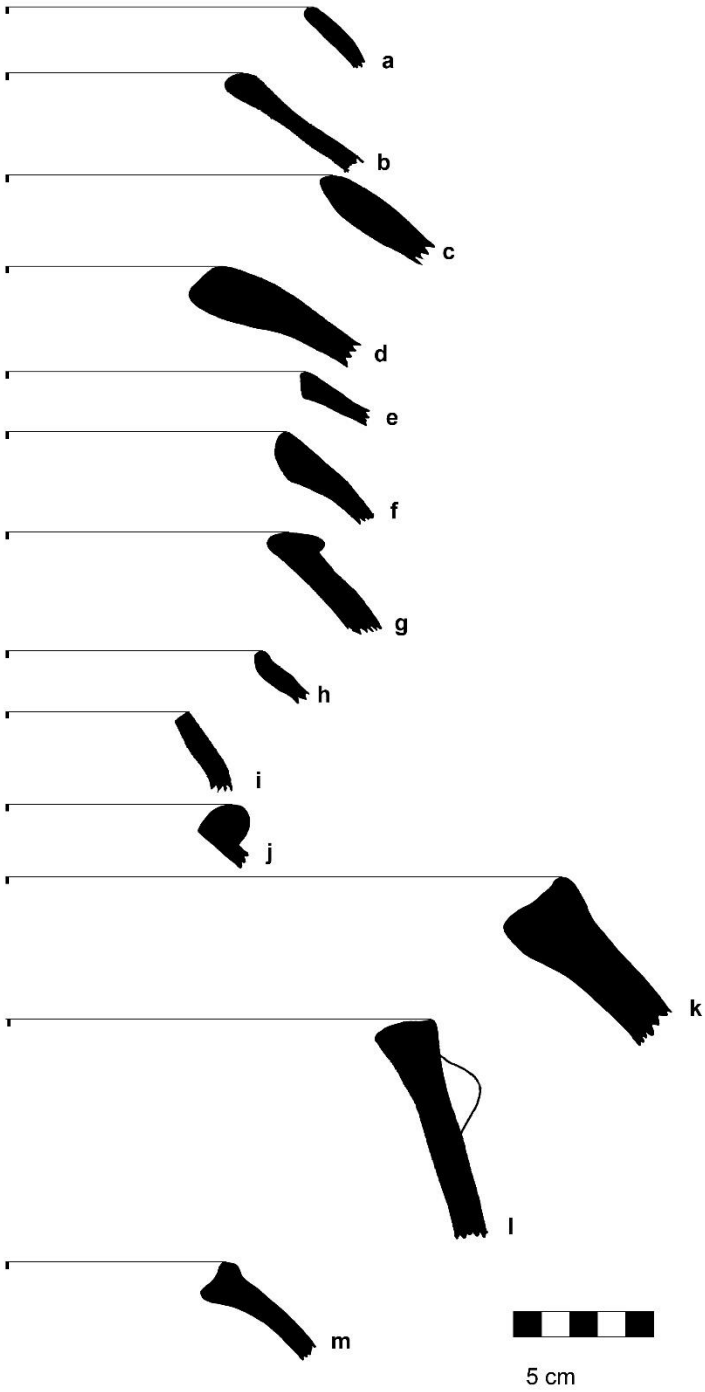


Figure Appendix B. 1. Ollas cross cut profiles cont.

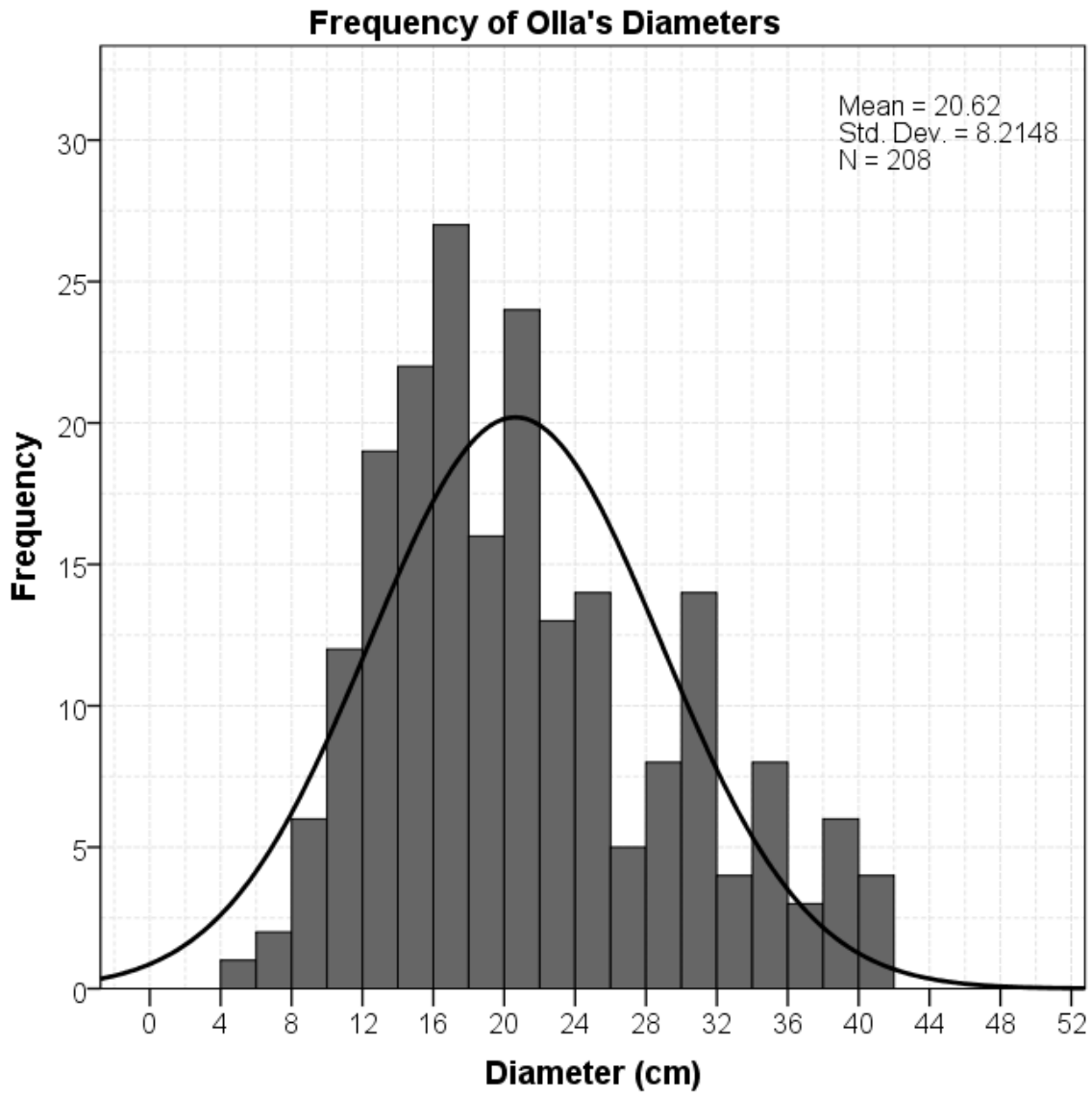


Figure Appendix B. 2. Agglomerated olla diameters for ceramics found in the Lurín Valley.

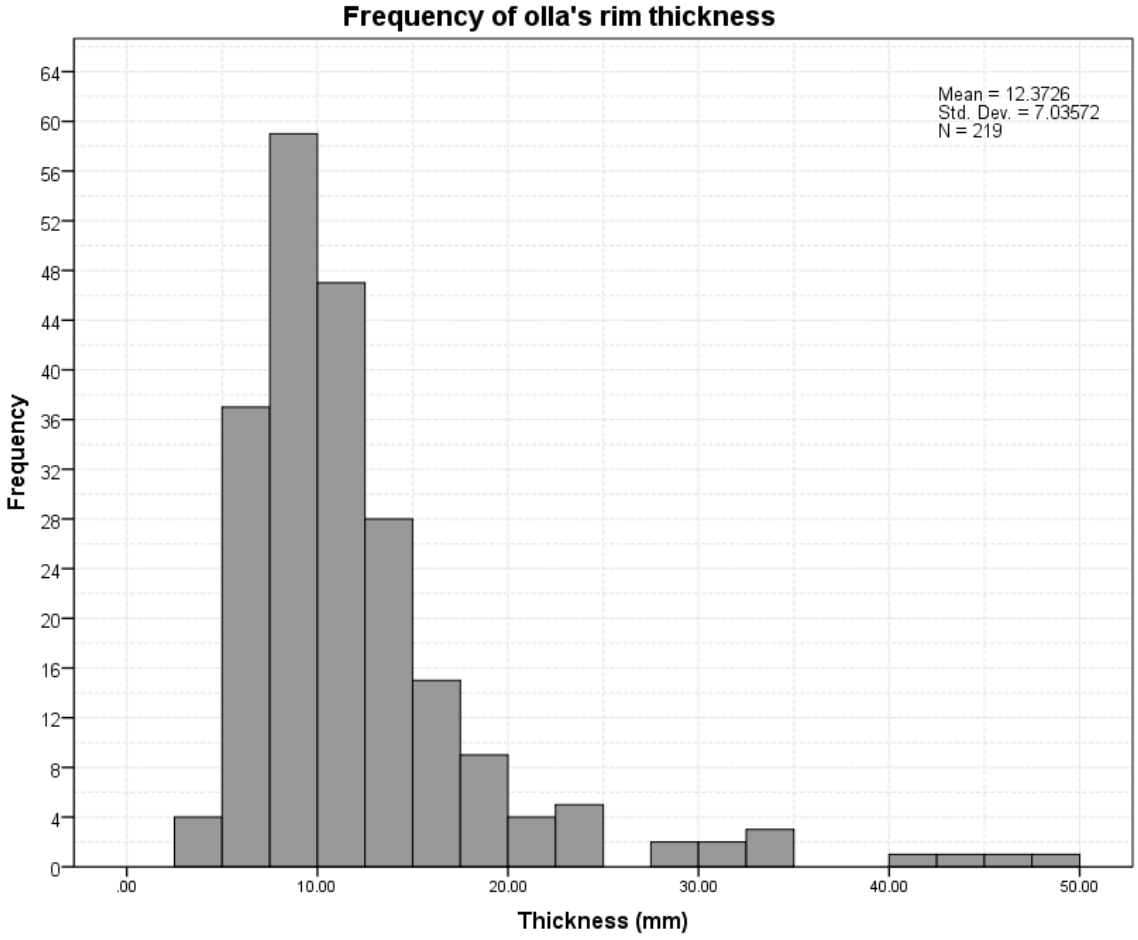


Figure Appendix B. 3. Agglomerated olla wall thickness for ceramics found in the Lurín Valley.

Appendix C – Bowl qualitative and quantitative descriptions

Bowls are open mouthed vessels; their inner walls are visible to a viewer who is looking down on the vessel. Twenty-four (24) different bowl rim profiles are observed; their cross-cut profiles are illustrated in Figure Appendix C.1.

The mean diameter of all bowl forms was calculated (Mean = 15.9 cm; SD = 5.8 cm). This process was repeated for the wall thickness of all bowls (Mean = 7.11 mm, SD = 2.79 mm). A histogram of all the bowls diameters, as well as one for their thickness, showed a standard bell-shaped distribution for both (Figure Appendix C.2 and Figure Appendix C.3). The histogram for the bowl wall thickness showed a standard bell-shaped distribution, slightly positively skewed (Figure Appendix C.3). The diameter of each specific bowl form was described, nominally, as "small," "medium," or "large" — “small” if the mean diameter of a particular bowl form is more than one standard deviation under the mean of all the bowls, "medium" if the average diameter is within one standard deviation from the mean diameter of all the bowls, and "large" if the average diameter is greater than one standard deviation over all the mean diameter of all bowls. A similar "thin," "slender," and "thick" nominal categories was used to describe the average thickness of each bowl form in comparison to the average (mean) thickness of all the bowls.

The following qualitative descriptions are made of each bowl type by describing, left to right, the contours of the rim profile if one holds a rim cross cut section with the inner wall to the left and the outer wall to the right.

1. Bowl LY (n = 8, Diameter $\bar{x}$ = 8.5 cm, σ = 2.0 cm; Thickness $\bar{x}$ = 6.05 mm, σ = 1.70 mm): These are small mouthed bowls with uneven yet slender walls. The rims extend beyond the bowl's body at about an eighty to ninety-degree angle, gently curving out and in before ending in a semi-pointed, yet blunted square-shaped lip. The inner rim walls are smooth and slender (Plate 48, c5659). This form is often undecorated.

2. Bowl LK (n = 4, Diameter $\bar{x}$ = 18.5 cm, σ = 5.7 cm; Thickness $\bar{x}$ = 6.27 mm, σ = 1.13 mm): These are medium-sized bowls with slender rim walls. The cross-cut section makes a letter "S" shape with rounded lip that points up and outward at the mouths of the vessel. Decorations of this form include modeled snakes with white dots and overall whitewash (Plate 22, c4233). Menzel presents a similar rim profile as "central to north-coast styles" which she associates with post-Chincha assemblages at Chincha (1966, Plt.XVI, Fig.69).

3. Bowl LD (n = 57, Diameter $\bar{x}$ = 16.4 cm, σ = 3.2 cm; Thickness $\bar{x}$ = 7.30 mm, σ = 2.41 mm): These are medium-sized, deep bowls with outward protruding rims. The bowls have a rounded lip. They have a consistently slender and uniform rim wall (Plate 1, c6366).

4. Bowl LF (n = 5, Diameter $\bar{x}$ = n/a cm, σ = n/a cm; Thickness $\bar{x}$ = n/a mm, σ = n/a mm): This bowl form is uniquely identified; it is identified by the shape of its base bottom and not its rim and mouth. The characteristic which sets this form apart is the additional clay material added to the vessel base —a material that has been called "an annular" ring (Plate 94, c1500). I call these forms "P'uku-like" (Loffler 2016) —so named after morphological similarities to the "P'uku" vessels described by Cháves in her ethnographic work on pottery production at Raqchi'I, Cuzco in the 1980s. These bowls are small hemispherical bowls with annular bases which Cháves calls tianachayoq, in Quechua (1985, 164). This bowl form can be decorated with a thick whitewash, both on the outside and on the inside of the bowl.

5. Bowl LG1 (n = 3, Diameter $\bar{x}$ = 8.7 cm, σ = 5.5 cm; Thickness $\bar{x}$ = 5.26 mm, σ = 1.89 mm): These are small mouthed bowls with rims that aggressively concave outward, a curvature in the slender walls that ending in a square-shaped lip which points outward (Plate 1, c5274). This form comes in decorated in Blackware style. This form matches the deception that Menzel gives to "central to north-coast styles" of "football shaped bowls" which she associates with post-Chincha assemblages (1966, Plt.XVI, Fig.74.).

6. Bowl LJ1 (n = 44, Diameter $\bar{x}$ = 16.7 cm, σ = 6.2 cm; Thickness $\bar{x}$ = 6.29 mm, σ = 1.34 mm): These are medium-sized, deep bowls with uniformly slender walls.

These bowls have a semi-pointed or rounded lip (Plate 78, c5505). This bowl form is mostly undecorated.

7. Bowl LN-big (n = 2, Diameter $\bar{x}$ = 22.5 cm, σ = 2.1 cm; Thickness $\bar{x}$ = 7.64 mm, σ = 0.72 mm): These bowls are similar to bowl LN-small, only that they are much larger. These bowls have a large lip area which decorates the outer rim as it extends centrifugally away from the center of the vessel. These bowls have a sharp —almost pointed— outer wall which are not uniform in thickness. While the other wall is pointed, the inner wall is smooth and gently curved. I suspect that these bowls are slab manufactured. This form is decorated in Red Slip. It may also have snake applique decorations, or cane-stamped incisions (Plate 7, c5943).

8. Bowl LN-small (n = 7, Diameter $\bar{x}$ = 9.0 cm, σ = 2.0 cm; Thickness $\bar{x}$ = 6.25 mm, σ = 1.28 mm): These are medium-sized bowls with slender walls. This form is shallow with a particularly large protruding lip at about forty-five degrees from the bowl's main body. Various thickness can be observed in cross-cut profile sections; of note is the sharp (almost pointed) mid-body section on the outside walls which concave aggressively outwardly. The inside walls on the other hand, are much more gradually round and smooth. These bowls cross cut profile closely resembles bowl LN-big but are much smaller in size. This form is mostly undecorated and may be constructed by joining clay slabs together.

9. Bowl LO (n = 3, Diameter $\bar{x}$ = 17.0 cm, σ = 1.7 cm; Thickness $\bar{x}$ = 8.50 mm, σ = 1.40 mm): These are medium sized bowls, with uniformly thick walls which gently bend on the outside, and which end in a rounded lip at the mouth of the vessel. This form also has small handles with a vertical opening (Plate 7, c92). bowls LO are mostly undecorated.

10. Bowl LP (n = 8, Diameter $\bar{x}$ = 17.8 cm, σ = 2.9 cm; Thickness $\bar{x}$ = 6.19 mm, σ = 0.56 mm): These are medium-sized, deep bowls, with gently concaving and flaring thin rims. The walls of this form are slender. Their lip is blunted-square in shape (Plate 23, c1921).

11. Bowl LR (n = 4, Diameter $\bar{x}$ = 19.0 cm, σ = 7.4 cm; Thickness $\bar{x}$ = 6.88 mm, σ = 0.51 mm): These are bowls are medium sized, with slender walls, and overall a shallow depth. The bowl has a small rim extending outward which ends in a rounded lip (Plate 63, c854). The overall slenderness of the bowl is uniform except where the rim protrudes outward which is greater in thickness than in other parts. This could be a “Plate” or “dish” similar to Incan forms. This form is decorated in Red Slip.

12. Bowl LT (n = 3, Diameter $\bar{x}$ = 12.3 cm, σ = 7.6 cm; Thickness $\bar{x}$ = 5.26 mm, σ = 1.32 mm): These are exceptionally fine clayed and thin walled bowls. They have a detailed and pointed lip. Overall a small and fairly shallow form. Bowls LT are not decorated.

13. Bowl LW-Unique (n = 1, Diameter $\bar{x}$ = 25.0 cm, σ = n/a cm; Thickness $\bar{x}$ = 6.62 mm, σ = n/a mm): This large bowl has uniformly slender rim walls which end on a round lip. The angles the clay make are almost all close to ninety degrees and form an "S" shape as observed in a cross-cut profile (Plate 29, c1205). Bowl LW-Unique is in Smoked Blackware style. I suspect it is imported from the north coast as it is the only form found in all of the assemblages analyzed.

14. Bowl LY1 (n = 2, Diameter $\bar{x}$ = 28.5 cm, σ = 9.2 cm; Thickness $\bar{x}$ = 17.23 mm, σ = 10.23 mm): These are large-sized deep bowls, with unevenly thick walls. Their lips are described as an "upside down foot" pointing outwards. The rim of this bowl is the thickest part of the bowl, with a quickly narrowing rim walls further away from the mouth (Plate 91, c5324). This form is undecorated.

15. Bowl LZ (n = 18, Diameter $\bar{x}$ = 12.2 cm, σ = 3.8 cm; Thickness $\bar{x}$ = 6.49 mm, σ = 1.99 mm): These are medium sized bowls. They are likely shallow and have a small outward facing rim. The bowl is fairly uniform in slenderness, the lip almost square at the mouth. This form may have relatively complex decoration painted on the outer walls. For example, c3239 from PV48-164a has red-poke-a-dot in white circles painted on a brown fringe one centimeter below the bowl's mouth (Plate 61, c3239).

16. Bowl LZ1 (n = 9, Diameter $\bar{x}$ = 17.8 cm, σ = 2.8 cm; Thickness $\bar{x}$ = 6.96 mm, σ = 1.49 mm): These are medium-sized, slender walled, and medium-depth bowls similar to

bowl LY 1except that they are thinner walled, and they have an overall smaller diameter. This form has an angling lip which protrudes outwards near the rim at an approximately a forty-five-degree angle. The lip is a blunted square in shape (Plate 85, c4998). This form is decorated with white wash on the outer walls or is otherwise left undecorated.

17. Bowl LZ2 (n = 5, Diameter $\bar{x}$ = 26.2 cm, σ = 8.5 cm; Thickness $\bar{x}$ = 10.50 mm, σ = 5.32 mm): These are large mouthed bowls with slender rim walls which end in a "T" shaped lip (Plate 97, c2378). Bowls LZ2 are decorated in Red Slip and in Ischma bichrome.

18. Bowl LZ3 (n = 4, Diameter $\bar{x}$ = 20.0 cm, σ = 3.4 cm; Thickness $\bar{x}$ = 13.15 mm, σ = 4.73 mm): These are medium bowls similar to bowl LZ5 but slightly larger in diameter and with relatively thicker walls (Plate 1, c210). This form also has a small handle with a small hole in it —something that would accommodate a string perhaps. This particular bowl form seems less shallow than its counterpart in bowl form LZ5. This form can be decorated with a thick white band on the outer walls right below the mouth.

19. Bowl LZ5 (n = 3, Diameter $\bar{x}$ = 8.7 cm, σ = 2.1 cm; Thickness $\bar{x}$ = 4.55 mm, σ = 0.65 mm): These are small bowls, shallow, and uniformly slender. This form has little handles with a hole small enough for a string. The lip is rounded at the end of a straight rim which slightly curves inward at the bowls mouth. The inner rim wall

can be decorated with horizontal stirpes or a white band on the inner lip (Plate 1, c6365). It may also be decorated with a white painted band (Plate 1, c6363).

20. Bowl LZ6 (n = 3, Diameter $\bar{x}$ = 16.7 cm, σ = 2.5 cm; Thickness $\bar{x}$ = 6.74 mm, σ = 1.26 mm): These are deep bowls, with a medium-sized mouth, and evenly slender walls that end in rounded lips (Plate 1, c6315). This form is not decorated.

21. Bowl LZ7 (n = 6, Diameter $\bar{x}$ = 21.3 cm, σ = 4.5 cm; Thickness $\bar{x}$ = 7.16 mm, σ = 1.52 mm): These are medium-sized bowls with long rims which extends at an upward angle of about ninety degrees with the bowl's body. Close to the mouth of the bowls, the rim opens up outward and ends in a round-shaped lip which points outwards. The walls of these bowls are largely being uniformly slender (Plate 41, c6464). This bowl is often decorated in Red Slip but can also be undecorated.

22. Bowl LZ8 (n = 2, Diameter $\bar{x}$ = 16.0 cm, σ = 2.8 cm; Thickness $\bar{x}$ = 8.09 mm, σ = 1.53 mm): These are medium-sized, shallow, and un-uniformly slender bowls. They have an uncommonly pointed lip which faces straight upward. The bowl was likely scrapped to such a sharp pointed lip when the clay was semi dry but before being fired. This rare form seems to be undecorated, but perhaps is burnished to a semi-polished finish with a cloth like material when it was semi-dry and before being fired (Plate 27, c5482).

23. Bowl LZ-Unique (n = 1, Diameter $\bar{x}$ = 5.0 cm, σ = n/a cm; Thickness $\bar{x}$ = 3.61 mm, σ = n/a mm): This is a very thin and small mouthed bowl —likely a bottle. A rounded

lip forms an “s” shape which meets with a very thin rim which in turn, meets with the bowls slender body (Plate 63, c861).

24. Bowl-Kero-like (n = 8, Diameter $\bar{x}$ = 16.1 cm, σ = 3.0 cm; Thickness $\bar{x}$ = 8.01 mm, σ = 1.20 mm): The profiles of this medium-sized, slender-walled bowl form, resemble that of a Kero, an Incan form by association. In the examples I have examined here, there is aggressively concave opening of the rim as it approaches the mouth of vessel (Plate 7, c164), aggressively flaring outward, centrifugally. At times, they resemble aryballoi vessels tops.

Figure Appendix C.1. Bowl cross cut profiles

a) Form LD; Diameter (cm): n = 55; mean = 16.6; σ = 3.4; Thickness (mm): mean = 7.30; σ = 2.55.
b) Form LG1; Diameter (cm): n = 3; mean = 8.7; σ = 5.5; Thickness (mm): mean = 5.26; σ = 1.89.
c) Form LJ1; Diameter (cm): n = 48; mean = 16.7; σ = 6.2; Thickness (mm): mean = 6.29; σ = 1.34.
d) Form LK; Diameter (cm): n = 3; mean = 20.0; σ = 6.0; Thickness (mm): mean = 6.49; σ = 1.27.
e) Form LN; Diameter (cm): n = 9; mean = 12.0; σ = 6.2; Thickness (mm): mean = 6.56; σ = 1.29.
f) Form LN-BIG; Diameter (cm): n =; mean =; σ =; Thickness (mm): mean =; σ =.
g) Form LO; Diameter (cm): n = 3; mean = 17.0; σ = 1.7; Thickness (mm): mean = 8.50; σ = 1.40.
h) Form LP; Diameter (cm): n = 8; mean = 17.8; σ = 2.9; Thickness (mm): mean = 6.19; σ = 0.56.
i) Form LR; Diameter (cm): n = 4; mean = 19.0; σ = 7.4; Thickness (mm): mean = 6.88; σ = 0.51.
j) Form LT; Diameter (cm): n = 2; mean = 7.0; σ = 0.0; Thickness (mm): mean = 4.69; σ = 0.72.
k) Form LY; Diameter (cm): n = 17; mean = 13.2; σ = 2.4; Thickness (mm): mean = 6.46; σ = 1.59.
l) Form LY1; Diameter (cm): n = 2; mean = 28.5; σ = 9.2; Thickness (mm): mean = 17.23; σ = 10.23.
m) Form LZ; Diameter (cm): n = 18; mean = 12.2; σ = 3.8; Thickness (mm): mean = 6.49; σ = 1.99.
n) Form LZ-Uni; Diameter (cm): n = 1; mean = 5.0; σ = n/a; Thickness (mm): mean = 3.61; σ = n/a.
o) Form LZ5; Diameter (cm): n = 5; mean = 9.6; σ = 2.4; Thickness (mm): mean = 5.69; σ = 1.71.
p) Form LZ3; Diameter (cm): n = 5; mean = 19.8; σ = 2.9; Thickness (mm): mean = 12.96; σ = 4.12.
q) Form LZ6; Diameter (cm): n = 4; mean = 16.7; σ = 2.5; Thickness (mm): mean = 6.74; σ = 1.26.
r) Form LZ7; Diameter (cm): n = 5; mean = 21.6; σ = 5.0; Thickness (mm): mean = 7.09; σ = 1.69.
s) Form LZ8; Diameter (cm): n = 2; mean = 16.0; σ = 2.8; Thickness (mm): mean = 8.09; σ = 1.53.
t) Form LF; Diameter (cm): n = 6; mean = n/a; σ = n/a; Thickness (mm): mean = n/a; σ = n/a.

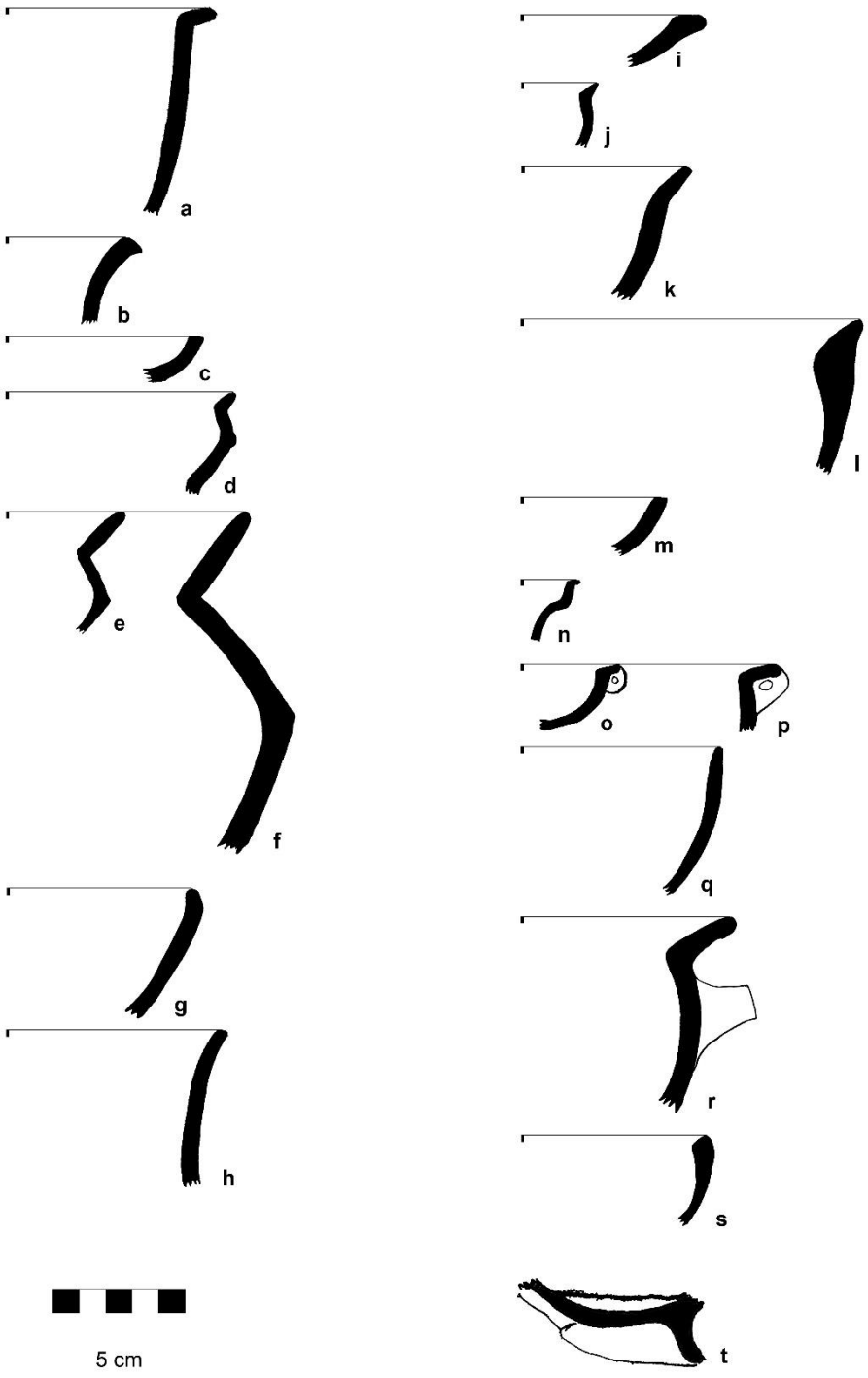


Figure Appendix C. 1. Bowls cross cut profiles cont.

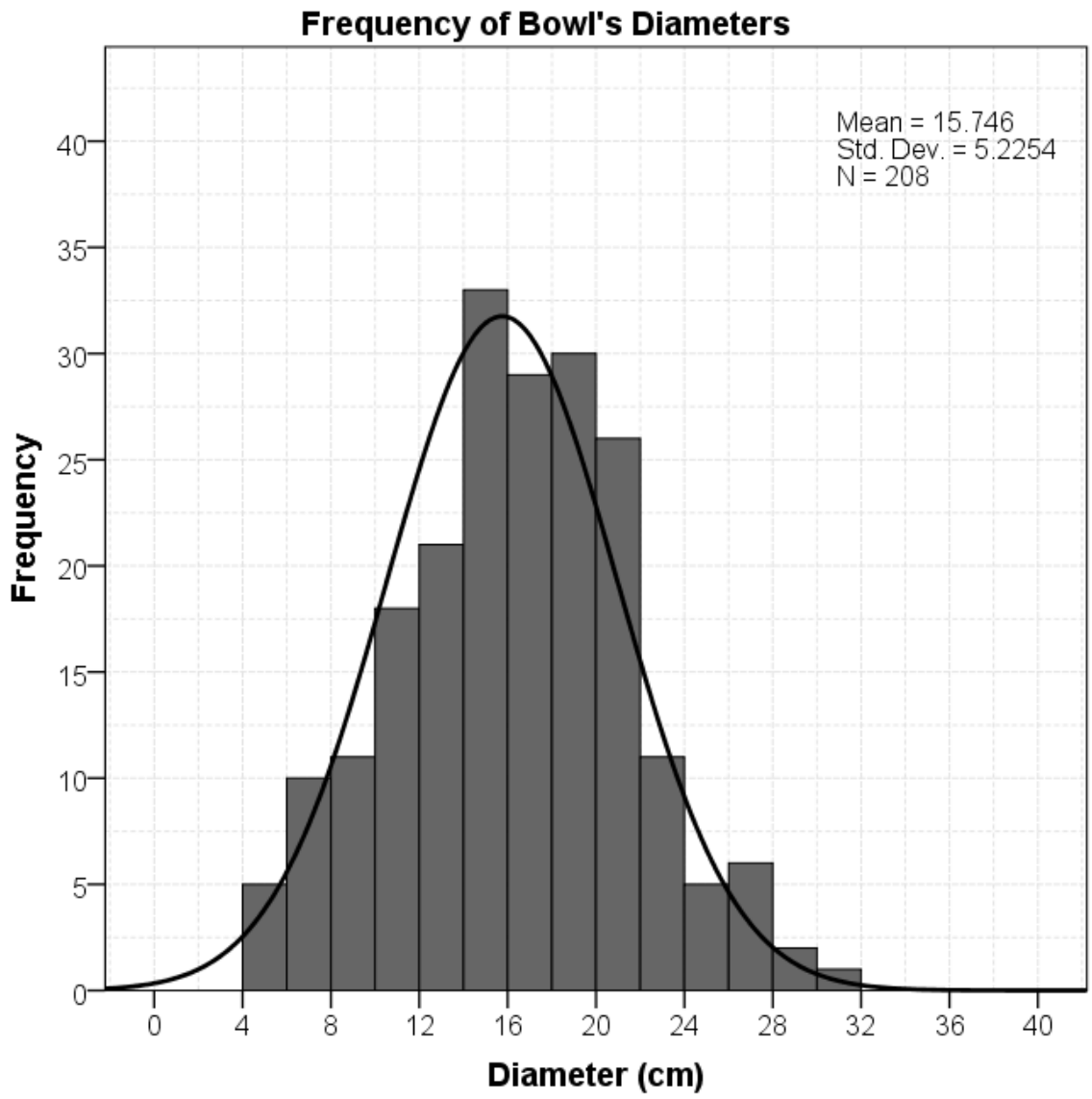


Figure Appendix C. 2. Agglomerated bowl diameters for ceramics found in the Lurín Valley.

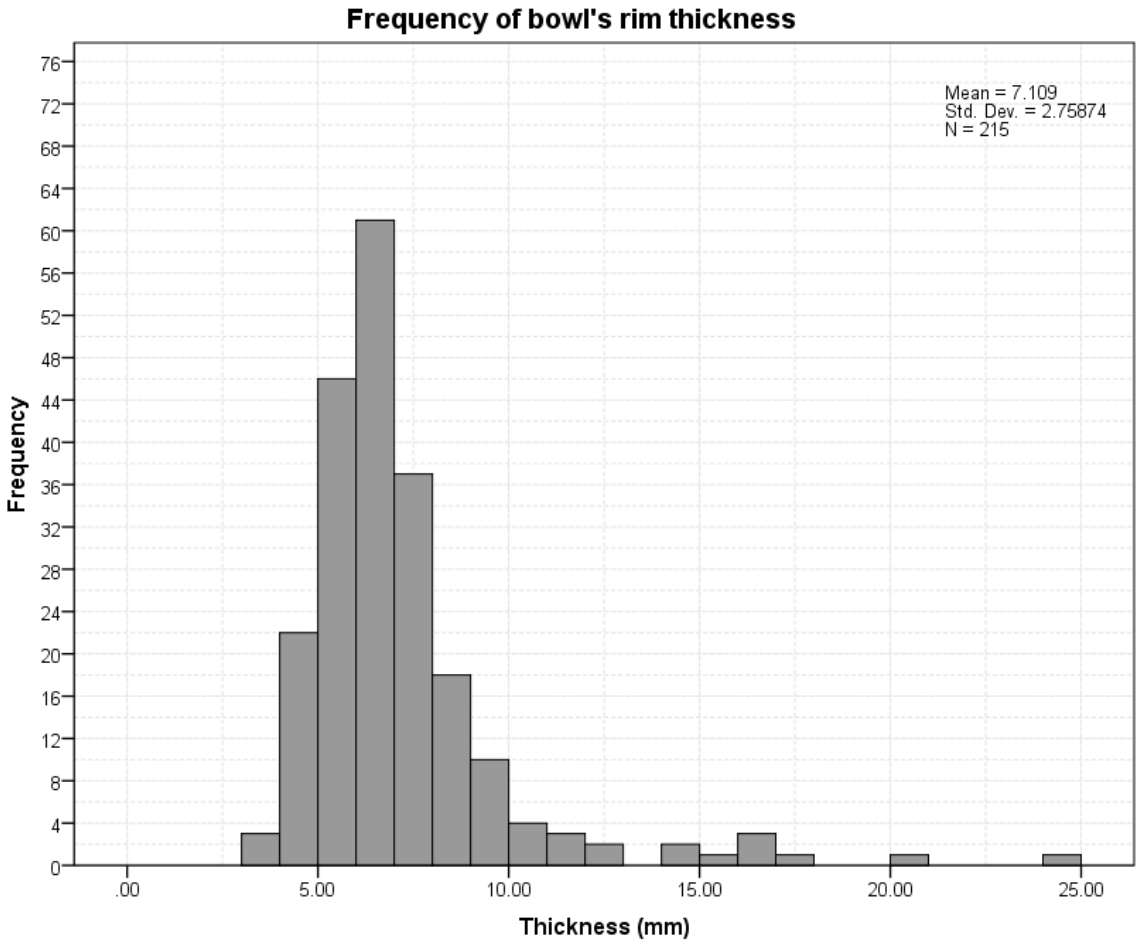


Figure Appendix C. 3. Agglomerated bowl wall thickness for ceramics found in the Lurín Valley.

Appendix D – Site locations, site descriptions, and site assemblage contents

For this work, I analyzed 105 surface collections. In this appendix I briefly describe each sites location in the Lurín valley and their approximating site elevations using Google Earth software. Where and when possible, I give a short synopsis of each site at the time the surface collections were made by transcribing and summarizing original field notes taken by the field crew led by Dr. Patterson in the Lurín Project between 1966-1968. All description, field notes, and observations of features are summaries of his crew's fieldnotes (Patterson, personal communication). Furthermore, each site's surface assemblage components analyzed is summarized. For sherds with readily identifiable vessel form, these forms are presented and accompanied with their corresponding color categories, as described in Appendix D. These break down of each assemblage informs the type, number, and color of each sherd —denoted, shorthand (and hereafter) as "Form "TYPE": NUMBER OF SHERDS [in that type] (COLOR CATEGORY [of that type])." For instance, at a site where there are two sherds recovered were in form BF and both had color 16J, I will write: "form "BF": 2 (16J)". If instead at that site two sheds recovered where in form BF, but one had color 16J while the other had color 12A, I would instead write: "form "BF": 2 (16j), (12A)", and so on. Each site's assemblage, or representative examples of sherds from its assemblage, are illustrated in Appendix G.

PV48-1

Site PV48-1 is the archeological complex at Pachacamac. Pachacamac is a monumental coastal site of immense and increasing importance as a religious, ceremonial, political, and economical centers in the central coast of Peru after the Early Intermediate Period when the site becomes permanently occupied. The site is about 17 miles south of Lima. Pachacamac is situated about half a kilometer from the Pacific Ocean near the mouth of the Lurín River, at an elevation of approximately 20 *masl*. The site covers approximately 600 hectares in size. In general, the ruins are divided into four parts: 1) a western ceremonial sector; 2) a central sector with monumental architecture; 3) an eastern urban area; and 4) a northern urban area (Daggett 1989). About one third of the site are spaces for monumental architecture. The monumental sector divides into two sub-sectors by two enclosures. The first enclosure, The Sacred Precinct, includes the Old Temple of Pachacamac, the Painted Temple, the Temple of the Sun built by the Inca during the Late Horizon, a cemetery, and a large rectangular structure. The second enclosure has several streets, cemeteries, plazas, open spaces, and several ramped pyramids (see Shimada (1991)and Eeckhout and Owens (2008) for a more detailed layout of Pachacamac). The site is also famous for at least fifteen (15) pyramids with ramps within the complex; their function is still debated. They are large enclosed rectangular adobe walled complex with limited openings and narrow passages. They derived their name from the truncated terraced levels which were accessible through central ramps at one end of each enclosure.

Surface collections at Pachacamac were made in the southeast side of the site, around a local children's soccer field (at the time) near El Puente. Five-hundred and fort-three (543) sherds were observed at PV48-1; 131 of them were rim sherds. These break down into the following type, number, and colors: form "BF": 1 (16J); form "BG": 1 (16A); form "BJ": 2 (no color recorded), 1 (15A), 1 (16A), 1 (5A), 2 (5B), 1 (5G), 1 (5J); form "BJ": 1 (6G); form "BK": 1 (7J); form "BK2": 1 (16K); form "BR": 1 (8B); form "BW": 1 (16B); form "BY": 1 (6J); form "CE": 1 (15G), 1 (16B), 1 (16D), 1 (5A), 1 (6J), 1 (7J); form "CE-SMALL": 1 (14D); form "CF": 1 (5B); form "CJ": 1 (13G), 1 (16G), 1 (16K), 1 (5A), 1 (8D); form "LCL": 3 (no color recorded), 1 (14D), 1 (16J), 1 (4B); form "CM": 1 (no color recorded), 2 (15J), 1 (15K), 1 (8K); form "CNQ1": 1 (15J), 1 (5H); form "CO": 1 (no color recorded), 1 (15G), 1 (15J), 1 (5A), 1 (5H), 1 (7B); form "CQ": 1 (4G); form "CT": 1 (13D); form "CU": 1 (15C), 1 (16K); form "CW": 1 (no color recorded), 1 (16B), 1 (7B), 1 (7H), 1 (8H), 1 (8L); form "CW7": 1 (5J); form "CX1": 1 (16B); form "CZ1": 1 (4B); form "CZ2": 1 (4A), 1 (5G); form "CZ7": 1 (8F); form "DF": 1 (no color recorded), 1 (13A), 1 (14D), 1 (15G), 1 (15H), 2 (16A), 1 (1B), 1 (5H), 1 (5J), 1 (7G), 1 (8F); form "LDL": 1 (8F); form "DO": 1 (4J); form "J1": 1 (no color recorded); form "Kero-like": 1; form "LC": 1 (14G), 1 (no color recorded), 1 (7J); form "LD": 1 (no color recorded), 1 (14D), 1 (15G); form "LG1": 1 (16A), 1 (8F); form "LJ1": 1 (13G), 1 (14B), 1 (16A), 1 (16D), 1 (5B), 1 (6B), 1 (6J), 1 (7A); form "LK": 1 (no color recorded); form "LO": 1 (13G); form "LP": 1 (6J), 1 (7G); form "LZ": 1 (14G), 1 (8L); form "LZ3": 1 (4B), 2 (4J); form "LZ5 (Aryballo)": 2 (4J), 1 (5A); form "LZ6": 1 (13H), 1 (16G), 1 (6B), 1 (8J); form "OA": 1 (16D); form "OB": 1 (13D), 1

(8A); form “OF”: 1 (16A); form “OH”: 1 (11D), 1 (16A), 1 (6G); form “OI”: 1 (14G), 1 (16G), 1 (6B); form “OK”: 1 (13G); form “OL”: 1 (6L); form “OP”: 3 (4J); form “W1”: 1 (8J); and form “LY1”: 1 (5A), 1 (7K).

In sum, PV48-1 has sherds in the following colors: 1B, 4A, 4B, 4G, 4J, 5A, 5B, 5G, 5H, 5J, 6B, 6G, 6J, 6L, 7A, 7B, 7G, 7H, 7J, 7K, 8A, 8B, 8D, 8F, 8H, 8J, 8K, 8L, 11D, 13A, 13D, 13G, 13H, 14B, 14D, 14G, 15A, 15C, 15G, 15H, 15J, 15K, 16A, 16B, 16D, 16G, 16H, 16J, and 16K. A sample of this sites’ sherds are illustrated in Plate 1.

PV48-2

Site PV48-2 is on the northwest bank of the Lurín river, approximately 19 km upstream at an elevation of about 189 *masl*. The site is split into three components, each a sub-cluster of PV48-2, differentiated by spatial clustering of assemblage components. Two clusters, PV48-2b and PV48-2c, had diagnostic sherds. In summation PV48-2 has sherds in the following colors: 5A, 6J, 7J, 8J, 13A, 13D, 13J, 14G, 14J, 15G, 15K, 16A, and 16K.

PV48-2b

From the 122 total sherds observed at this PV48-2b, thirteen (13) of them are rim sherds which allowed for vessel type classification. These break down into the following vessel shapes and colors: form “BJ”: 1 (13D), 1 (13J), 1 (5A); form “BW”: 1 (7J); form “CE-SMALL”: 1 (16A); form “CJ”: 1 (14G), 1 (15K); form “CM”: 1 (14J), 1 (16K); form

"CO": 1 (7J); form "W1": 1 (8J); and form "OP": 1 (13A), 1 (16A). A sample of this sites' sherds are illustrated in Plate 2.

PV48-2c

From the fifty-two (52) total sherds observed at PV48-2c, five of them are rims, allowing for vessel type classification. These break down into the following shapes and colors: form "BE": 1 (15G), 2 (6J); form "CJ": 1 (13D); and form "LD": 1 (5A). A sample of this sites' sherds are illustrated in Plate 3.

PV48-3

Site PV48-3 is on the north-west bank of the Lurín river, approximately 18 km upstream from the Pacific Ocean, at about 190 *masl*. This site is approximately 225 m^2, approximately 15-meter (north to south) x 15 meters (east to west). The site includes some walls of irregular heights and several looted burials. Initial field notes suggested that the date the site to the Late Intermediate period. From the twenty-five (25)total sherds observed at this site, seven of them are rims; these break down into the following shapes and colors: form "BF": 1 (14G); form "CG": 1 (14D); form "CJ": 1 (8J); form "LCL": 1 (13G); form "CN": 1 (7J); form "CNQ1": 1 (14G); and form "LY": 1 (15G). In sum, PV48-3 has sherds in the following colors: 7J, 8J, 13G, 14D, 14G, and 15G. A sample of this sites' sherds are illustrated in Plate 4.

PV48-9

Site PV48-9 is a medium-sized site on the north side of the Lurín River, approximately 14 km upstream from the Pacific Ocean, about 110 *masl*. The site is on a large Quebrada on the northeast of Cerro Huamani. Field notes impressed the notion that the site clearly belonging to the Late Horizon based on the ceramics associated with it. This site has a large burial site with several Pachacamac face neck jar fragments, and a piece of Inca associated ware.

In sum, PV48-9 has sherds in the following colors: 4G, 5A, 5J, 6J, 7J, 8J, 13D, 13G, 14G, 14H, 15D, 15J, and 15K. From the eighty-one (81) total sherds observed at PV48-9, thirty (30)of them are rims; these break down into the following vessel shapes and colors: form “BB”: 1 (5A); form “BJ”: 1 (4G); form “BZ”: 1 (14G); form “CE”: 1 (14G); form “CE”: 1 (14H); form “CE”: 1 (15D); form “CE”: 1 (15K); form “CE”: 2 (6J); form “CE”: 2 (7J); form “CI”: 1 (6J); form “LCL”: 1 (15J); form “CM”: 1 (14G); form “CM”: 1 (5J); form “CN”: 1 (6J); form “CO”: 1 (13G); form “CU”: 1 (13G); form “CW2”: 3 (13G); form “CW”: 1 (5J); form “CZ”: 1 (13G); form “CZ8”: 1 (13D); form “CZ8”: 1 (7J); form “J1”: 1 (8J); form “LD”: 1 (7J); form “LX”: 1 (14H); form “OB”: 1 (5J); and form “LY1”: 1 (4G). A sample of this sites’ sherds are illustrated in Plate 5.

PV48-10

Site PV48-10, christened Manchay, is a large site on the north bank of the Lurín river approximately 15 km upstream from the Pacific Ocean, at an elevation of 180 *masl*. The site is adjacent and overlooking the river. That site is located in a large Quebrada

across the road from Manchay Alto. Field impression suggests that the site was largely Late Horizon or a Colonial Period site. Uncollected vessel sherds included green glaze pottery which crumbled upon picking up because of "salt damage." PV48-10 has several constructed features. These including a large complex, a shrine area, as well as rectangular houses made of grounded cobbles and mortar along with Adobe. There was a double wall feature at the site. A fourth type of construction was that of regular stones embedded it in Adobe mortar. The site has a series of large walls. Close to the site there was an irrigation ditch. Much of the site is underneath modern structures and facilities. The site also has terraces on the hillside. Much of that sherds collected are surface collections and some of them seem quite modern.

From the thirty-six (36) total sherds observed at PV48-10, five of them are rims; these break down into the following vessel shapes and colors: form "BE": 1 (5A); form "BH": 1 (15J); form "BW": 1 (16G); form "CE": 1 (14G); and form "OB": 1 (15H).

In sum, PV48-10 has sherds in the following colors: 5A, 14G, 15H, 15J, and 16G. A sample of this sites' sherds are illustrated in Plate 6.

PV48-11

Site PV48-11 is approximately 15 km upstream from the Pacific Ocean. It does not overlook the Lurín River but is instead is located adjacent to sites PV48-10 and PV48-9, uphill in atop a small Quebrada. The site is fairly small, especially compared to its bigger neighbor's. From the eight total sherds observed at PV48-11, eight of them

are rims; these break down into the following vessel shapes and colors: form “BK”: 1 (15J); form “BW”: 1 (15J); form “CE”: 1 (16B); form “CO”: 1 (7J); form “CZ6”: 1 (6J); form “LC”: 1 (16B); form “LD”: 1 (15D); and form “LX”: 1 (8J). In sum then, site PV48-11 has sherds in the following colors: 6J, 7J, 8J, 15D, 15J, and 16B.

PV48-12

Site PV48-12 is a large site that overlooks the south bank of the Lurín river, approximately 15 km upstream from the Pacific Ocean, at about 180 *masl*.

In sum, site PV48-12 has sherds in the following colors: 1B, 1G, 3A, 4A, 4B, 4C, 4G, 4J, 4K, 5A, 5B, 5G, 5H, 5I, 5J, 6A, 6B, 6G, 6H, 6J, 6K, 7A, 7B, 7H, 7J, 7K, 8A, 8B, 8C, 8D, 8G, 8H, 8J, 8K, 12D, 12J, 13A, 13D, 13G, 13J, 14A, 14D, 14G, 14H, 14J, 14K, 15A, 15D, 15G, 15H, 15J, 15K, 16A, 16B, 16D, 16G, and 16J. Three-hundred and five (305) sherds were observed; 151 of them were rims. Vessel shape and color breakdown is are as follows: form “BB”: 1 (15D), 1 (15G), 1 (6H), 1 (7K); form “BE”: 1 (3A), 1 (5A), 1 (6K); form “BF”: 1 (12D); form “BH”: 1 (4K), 1 (6K); form “BJ”: 1 (12D), 1 (14G), 1 (14K), 1 (15A), 1 (1G), 1 (4A), 1 (5G), 1 (5H), 1 (6A), 3 (8G); form “BK”: 1 (5G), 1 (7J); form “BO”: 1 (13A), 1 (15J), 1 (6J); form “BZ1”: 1 (5B); form “BZ4”: 2 (5A); form “CC”: 1 (5A), 1 (8H); form “CE”: 1 (13D), 1 (13G), 1 (13J), 1 (14A), 2 (14G), 1 (14H), 1 (14J), 2 (15A), 2 (15D), 1 (5B), 1 (5I), 3 (5J), 1 (6G), 1 (7J), 1 (8K); form “CE-SMALL”: 1 (4J); form “CH”: 1 (5J); form “CI1”: 1 (4J); form “CJ”: 1 (16G), 1 (1B), 1 (5H), 1 (6A), 2 (6G), 1 (7A), 2 (7J); form “LCL”: 1 (14G), 1 (15A), 1 (15G), 1 (6G), 1 (6H), 2 (6J); form “CM”: 1 (13G), 1 (14D), 2 (14G), 1 (15A), 1

(15K), 1 (16A), 1 (16B), 1 (4C), 1 (4J), 1 (5A), 1 (5H), 1 (6J), 1 (7J), 1 (8C), 1 (8G); form "CN": 1 (5A), 1 (5H); form "CO": 1 (13G), 1 (15A), 1 (16G), 1 (5B), 1 (7A), 1 (7J), 1 (8D), 1 (8J); form "CP": 2 (4B), 1 (7H); form "CQ": 1 (6B), 1 (7B), 1 (8B); form "C-squash": 1 (14G), 1 (4J); form "CT": 1 (8A); form "CU": 1 (14A), 1 (5A), 1 (5I), 1 (6J); form "CW": 1 (6K); form "CW": 1 (5H), 1 (6G); form "CZ": 1 (7A); form "CZ7": 1 (15H), 1 (16D), 1 (5H); form "DB": 1 (6B); form "DF": 1 (5G), 1 (6J); form "Kero-like": 1 (5J), 1 (8B); form "LC": 1 (12J), 1 (7A); form "LD": 1 (4A), 1 (5A), 1 (6G), 1 (6J), 1 (8B); form "LF": 1 (15D); form "LN": 1 (14G), 1 (5B), 1 (6J); form "LN-BIG": 1 (7H); form "LO": 1 (6J); form "LX": 1 (16A); form "LZ": 1 (4G), 1 (5H), 1 (5J); form "OA": 1 (5A); form "OG": 1 (14G); form "OI": 1 (4A), 1 (6J); form "OK": 1 (7J), 1 (8D); form "OO": 1 (5A); and form "LY1": 1 (no color recorded), 1 (16J), 1 (4G), 1 (6H), 1 (8K). A sample of this sites' sherds are illustrated in Plate 7.

PV48-13

Site PV48-13 is a medium-sized site on the south-bank of the Lurín River, overlooking it. The site is approximately 15 km upstream from the Pacific Ocean, at an elevation of 180 *masl*. The site itself is on the end of the road between sites PV48-12 and PV48-14. The site is set on the east side of a hill, against the hill, almost directly on a road. The site has several features including stone plastered walls; yellow colored plaster which "we have begun to associate with the walls of this type and it is visible throughout the site" (Patterson Field notes 1996). The walls have been tumbled over

with time. The highest remaining one being three-meter-high, when encountered in the field, extending approximately for 5 meters in length. The foundation of the walls was built on larger stones which are also mortared with Adobe. The walls, 40 to 50 cm in thickness, are made of rounded pebbles and rocks cemented in place by the plaster. Other walls have angular mountain stones. Wall surfaces varies from very thin plaster just covering the rocks to a greater thickness of about 4 cm in some places. A type of yellow paint has been applied to the plaster. Above the main structure are several walls of l stone with no mortar or plaster. The major one of these is just below an irrigation ditch which may have been associated with the building of the irrigation ditch near site PV48-193.

From the sixteen (16) total sherds observed at this site, one was a rim sherd with recognizable vessel form: form "CE": 1 (7K). But overall, site PV48-13 has sherds in the following colors: 4F and 7K. A sample of this sites' sherds are illustrated in Plate 8.

PV48-14

Site PV48-14 is located on the south banks of the Lurín River approximately 15 km upstream from the Pacific Ocean, at an elevation of 180 *masl*. Site PV48-14 is a complex constructed of stone walls covered with Adobe plaster and heavily mortared with Adobe. The widest wall was about 30 cm and 2 to 3 meters of it remained standing at the time, the fieldnotes were taken. Stones protruded at the height of the tall wall, suggesting the building probably has a second story at some point. PV48-14 had room

structures; the rooms are overall small, about 2 x 3 meters in dimension. Many of the rooms must have had fire as they have blackened corners. One distinctive features of the rooms are niched doorways. Some, but not all of the wall had niches in them. These niches vary quite a bit. Some walls have only one niche. Other walls had more than one. Some niches are meters above floor level, while others seem to be less than one meter off the floor. One niche was measured to be 25 cm horizontally, x 13 cm vertically, x 30 cm in depth. Some rooms show evidence of stone floor. These floors are made of large flat slabs of stone tightly set together; each about 15 cm thick. Several cooking pots have been associated with the site, suggesting a domestic site.

All in all, site PV48-14 has sherds in the following colors: 5A, 5J, 8J, 11G, 12G, 13D, 13G, 15G, 15H, 15J, 15K, and 16H. From the thirty-six (36) total sherds observed at this site, twenty four (24) of them are rims; these break down into the following vessel shapes and colors: form “BJ”: 1 (13D), 1 (15J); form “BO”: 1 (12G); form “BV”: 1 (15G); form “CJ”: 1 (15G), 2 (15J), 1 (15K); form “LCL”: 1 (13D); form “CM”: 1 (15G); form “CNQ1”: 1 (15J), 3 (8J); form “CQ”: 1 (16H); form “CT”: 1 (15G); form “CZ8”: 1 (5J); form “DF”: 1 (5A); form “LY”: 1 (13G); form “OB”: 1 (15H); form “OI”: 2 (15G); and form “OP”: 1 (11G), 1 (5J). A sample of this sites’ sherds are illustrated in Plate 9.

PV48-16

Site PV48-16, a medium sized site, overlooks the Lurín river, is approximately 16 km upstream from the Pacific Ocean, and is about 190 *masl*.

All in all, site PV48-16 has sherds in the following colors: 2G, 5A, 5G, 5J, 6I, 6J, 7G, 7J, 7K, 8F, 8H, 8J, 8K, 8L, 12D, 13A, 13D, 13G, 13J, 14D, 14G, 14J, 15A, 15D, 15G, 15H, 15J, 16D, 16G, 16H, 16I, 16J, and 16K. One-hundred and thirty-nine (139) sherds were observed; ninety-eight (98) are from diagnostic rims. These break down into the following vessel shapes and colors: form "BF": 1 (5G), 1 (6J); form "BG": 1 (14D); form "BJ": 1 (14G); form "BW": 1 (13D), 1 (14D), 1 (5A), 1 (8K); form "BY": 1 (15J), 1 (6J), 1 (7J); form "CC": 2 (15G), 1 (7G); form "CE": 1 (13D), 1 (14J), 1 (15J), 1 (16I), 1 (7J), 1 (8F); form "CI": 1 (13A); form "CJ": 2 (13D), 1 (13G), 1 (15G), 1 (15J), 1 (16G), 1 (16J), 1 (5A), 1 (6I), 3 (7J), 1 (8K), 1 (8L); form "LCL": 1 (14J), 1 (8F); form "CM": 1 (5A); form "CN": 1 (15H), 1 (7K); form "CO": 1 (14D), 1 (14G), 1 (15D), 1 (15G), 1 (15J), 2 (16K), 2 (6J), 2 (8J); form "CT": 1 (5A); form "CU": 1 (14J), 1 (15A), 1 (16D), 1 (1G), 1 (5A), 1 (5J), 1 (7J), 1 (7K), 2 (8H); form "CZ": 1 (16J); form "CZ7": 1 (14D), 1 (5A); DB": 1 (16J); form "DD": 1 (13G); form "LDL": 1 (8F); form "J1": 1 (14G); form "LD": 1 (14G), 1 (8J); form "LF": 1 (13D); form "LN-BIG": 1 (15G); form "LR": 1 (16D); form "LZ7": 1 (16J), 1 (6I); form "OB": 2 (14G), 1 (15G), 1 (5A), 1 (5G); form "OH": 1 (15D), 1 (16J), 1 (8K); form "OI": 1 (14G), 1 (15J); form "OL": 1 (15G); form "OM": 1 (13D); form "ON": 1 (14D); form "OO": 1 (12D), 1 (5A), 1 (7J); form "OP": 1 (13D), 1 (13J), 1 (16H), 1 (16J), 1 (5A); and form "LY1": 1 (14D). A sample of this sites' sherds are illustrated in Plate 10.

PV48-18

Site PV48-18 is on the southeast bank of the Lurín River, approximately 15 km upstream from ocean, and at an elevation of approximately 150 *masl*. Although seventeen (17) total sherds observed at this site, none of them are shape diagnostic.

PV48-19

Site PV48-19 overlooks the south side of the Lurín River, it is a large site, subdivided into eight sections; PV48-19 a-h. PV48-19 is approximately 14 km upstream from the Pacific Ocean at an elevation of 165 *masl*. The site is south of the river in a Quebrada that overlooks it. Site PV48-19 has sherds in the following colors: 2G, 4J, 5A, 5J, 6J, 7J, 8F, 8K, 12D, 13D, 13G, 14B, 14D, 14G, 14H, 14J, 15G, 15H, 15J, 16G, and 16J. A sample of this sites' sherds are illustrated in Plate 11.

PV48-19a-e

From the fifty-five (55) sherds observed at this site, fifteen (15) of them are diagnostic rims. They break down in the following vessel types and colors: form "BB": 1 (7J); form "BK": 1 (14G); form "CE": 1 (14D), 1 (4J), 2 (5A); form "CH": 1 (14D); form "CJ": 1 (13G); form "LCL": 1 (13D); form "CM": 2 (13D), 1 (13G); form "J1": 1 (15H); form "OI": 1 (15G); and form "OO": 1 (5J).

PV48-19f

From the thirteen (13) total sherds observed at PV48-19f, three of them are diagnostic rims: form "BH": 1 (14H); form "DF": 1 (15J); and form "LY": 1 (1G). A sample of this sites' sherds are illustrated in Plate 12.

PV48-19g

Twenty-four (24) sherds were observed from PV48-19g; eleven (11) of them, diagnostic rims. These break down into the following vessel shapes and colors: form "BU": 1 (15G); form "CE-SMALL": 1 (15J); form "CJ": 1 (16J); form "CM":1 (12D), 1 (14G); form "CQ": 1 (16G); form "CU": 1 (14J); form "OI": 1 (14B), 1 (16G); form "ON": 1 (14G); and form "W1": 1 (15G). A sample of this sites' sherds are illustrated in Plate 13.

PV48-19h

From the twenty (20) total sherds observed at PV48-19h, nine are shape diagnostic rims. These break down into the following shapes and colors: form "CE": 1 (no color recorded; form); form "CE-SMALL": 1 (8K); form "CJ": 1 (14G), 1 (8F); form "CM": 1 (7J); form "CW": 1 (5J); form "DE": 1 (6J); form "LD": 1 (14J); and form "LY1": 1 (15J). A sample of this sites' sherds are illustrated in Plate 14.

PV48-20

Site PV48-20 is approximately 14 km upstream from the Pacific Ocean at an elevation of 110 *masl*. The site is sandwiched between two other sites; it is northwest of site PV48-19 and southeast of site PV48-12. Although relatively small, the site has five distinct sections labeled PV48-20 a-e. Not all sherds observed are clearly associated to one of the sections. From the forty-four (44) total sherds observed that did not have clear spatial association, six of them are diagnostic rims. They break down as follows: form "CI1": 1 (14J); form "LCL": 1 (6J); form "CU": 1 (14J); form "CZ": 1 (14G); form

"CZ6": 1 (16J); and form "OP": 1 (12G). A sample of this sites' sherds are illustrated in Plate 15.

PV48-20a

From the eleven (11) sherds observed at PV48-20a, four of them are shape diagnostic rims. They fall into the following shape and color categories: form "CM": 1 (15J); form "CO": 1 (16K), 1 (6H); and form "LZ": 1 (15J).

PV48-20b

Twenty-one (21) sherds were observed at PV48-20b; fifteen (15) are shape diagnostic rims. These break down into the following shapes and colors: form "BJ": 1 (16A), 1 (5A); form "BO": 1 (13D); form "CE-SMALL": 1 (13G); form "CM": 1 (16A), 1 (5J), 1 (6J); form "CU": 1 (15D), 1 (15H); form "CW1": 1 (16A), 1 (8K); form "CZ": 1 (14G); form "LJ1": 1 (5J); form "OK": 1 (13G); and form "OO": 1 (5J). A sample of this sites' sherds are illustrated in Plate 16.

PV48-20c

Eleven (11) sherds were observed at PV48-20c; six of them diagnostic rims that break down in shape and color as follows: form "BJ": 1 (14H); form "CJ": 1 (7J); form "CO": 1 (15H); form "LF": 1 (15J); form "OM": 1 (6G); and form "LY1": 1 (15G). A sample of this sites' sherds are illustrated in Plate 17.

PV48-20d

From the fifteen (15) total sherds observed at PV48-20d, eight of them are shape diagnostic rims. They break down as follows: form “BJ”: 1 (13D); form “BK”: 1 (13G); form “CJ”: 1 (13D), 1 (14G); form “CU”: 1 (15G), 1 (15J); form “LZ1”: 1 (15G); and form “LZ4”: 1 (15G). A sample of this sites’ sherds are illustrated in Plate 18.

PV48-20e

From the thirty-nine (39) sherds observed at PV48-20e, eight of them were shape diagnostic rims; these break down into the following forms and colors: form “BH”: 1 (14G); form “BZ1”: 1 (14G); form “CM”: 1 (14D), 1 (16K); form “OG”: 1 (7J); and form “OI”: 2 (13D), 1 (14G). In sum, PV48-20 has sherds in the following colors: 5A, 5J, 6G, 6H, 6J, 7J, 8K, 12G, 13D, 13G, 14D, 14G, 14H, 14J, 15D, 15G, 15H, 15J, 16A, 16J, and 16K. A sample of this sites’ sherds are illustrated in Plate 19.

PV48-22

Site PV48-22 is a large site, north of the Lurín river, approximately 22 km upstream of the Pacific Ocean at an elevation of 260 *masl*. The site is adjacent to the Lima Cinegua freeway, and does not overlook directly the Lurín river. Site PV48-22 consists primarily of a low rubble mound located at the south end of the site. The site has a series of stone walls, some running partway across, and others running into the Quebrada. The rubble mound is approximately 15 to 17 meters long and stands approximately 3 meters high. There is little evidence of walls in the mound itself. To the east of this mound, however, there is a double wall of piled stones with no mortar

plaster between them. The exterior of the wall made of large angular chunks of granite, with small rubble filling the gap between them. That wall ran into the Quebrada for about 150 meters with its terminating point unclear. There were two additional walls, each 150 meters long and approximately 150 meters apart. The southern wall is another double wall construction about 1 meter thick and rubble filled. Opposite of these two walls, on the other side of the Quebrada, is another double wall construction 80 to 100 cm thick and running intermediately covered with aeolian deposition of several meters in depth. John Rowe suggested that the walls most likely served the purpose of channeling runoff water from the hills. He claimed that they probably deflected into the river, and not necessarily into an irrigation ditch. Field impression suggest the site to be Late Horizon.

All told, site PV48-22 has sherds in the following colors: 5A, 6J, 7J, 8F, 13D, 14D, 14J, 15G, 15J, and 16K. From the 127 total sherds observed at this site, only thirteen (13) of them were shape diagnostic rims; these break down into the following vessel types and colors: form “BC”: 1 (8F); form “BV”: 1 (14J); form “LCL”: 1 (7J); form “DD”: 1 (14D); form “J1”: 1 (15J), 2 (16K), 1 (5A); form “OB”: 1 (13D); form “OH”: 1 (14D), 1 (15G); and form “OO”: 1 (5A), 1 (6J). A sample of this sites’ sherds are illustrated in Plate 20.

PV48-27

Site PV48-27 is a small site, north-east of the Lurín river, approximately 19 km upstream from the Pacific Ocean at an elevation about 190 *masl*. Fieldnote impressions suggest the site was a late Early Intermediate Period site. Twenty (20) sherds were observed at PV48-27, eight of which were diagnostic rims. Their shape and color breakdown are as follows: form "BE": 1 (7J), 3 (8F); form "CW": 1 (16A), 2 (8F); and form "LC": 1 (8F). In summation then, site PV48-27 has sherds in the following colors: 7J, 8F, and 16A. A sample of this sites' sherds are illustrated in Plate 21.

PV48-28

Site PV48-28 is a medium-sized site, at the foot of a Quebrada, north-eat of the Lurín river, approximately 26 km upstream of the Pacific Ocean and at an elevation of 365 *masl.*

One-hundred and eighty (180) sherds were observed at PV48-28, 138 of which are shape diagnostic rims; they break down into the following types and colors: form "BF": 1 (14B), 1 (6F), 1 (8J); form "BH": 1 (13G), 1 (14G); form "BJ": 1 (12A), 1 (14G), 1 (4J), 1 (5A); form "BK": 1 (13D), 1 (14D), 1 (5J), 1 (6J); form "BR": 1 (7G); form "BW": 1 (13G); form "BZ": 1 (15J), 1 (5J); BZ3": 1 (15G), 1 (16A); form "BZ6": 1 (14G); form "CA1": 1 (15J); form "CE": 1 (12D), 2 (13D), 1 (13G), 3 (14G), 1 (15A), 1 (16I), 1 (16K), 1 (5A), 2 (6J), 1 (9A); form "CI1": 1 (13G), 1 (15K), 1 (5J), 1 (8L); form "CJ": 1 (14D), 2 (14G), 1 (8J); form "LCL": 2 (14G), 1 (15D), 1 (5G), 1 (6J); form "CM": 1 (12A), 4 (13D), 4 (13G), 1 (14D), 3 (14G), 2 (14H), 1 (15G), 1 (15H), 1 (16J), 1 (16K), 3 (5A), 2 (5J), 1 (6A), 1 (6J); form "CN":

1 (14D), 1 (15A); form “CO”: 1 (13D), 1 (14D), 1 (14G), 1 (14H), 1 (15G), 1 (8K); form “CP”: 1 (15H), 1 (15J), 1 (7H); form “CQ”: 1 (12D), 1 (13D), 1 (15J), 1 (16G); form “CT”: 1 (5A); form “CU”: 1 (12D), 1 (13G), 1 (5J), 1 (8J); form “CW”: 1 (15J), 1 (8F), 1 (8J); form “CW1”: 1 (16D), 1 (7G); form “CW2”: 1 (7G); form “CW”: 1 (15J), 1 (8J); form “CZ8”: 1 (12A), 1 (13A), 1 (13D), 1 (13G), 1 (14D); form “DC”: 1 (5J); form “DF”: 1 (13G), 1 (15G), 1 (8G); form “LDL”: 1 (14J); form “DO”: 1 (13G), 1 (8J); form “J1”: 1 (13D), 1 (15H), 1 (15J), 1 (4G); form “Kero-like”: 1 (8J); form “LC”: 1 (16J); form “LD”: 1 (12A); form “LK”: 1 (16J); form “LN”: 1 (8J); form “LX”: 1 (13G); form “LZ2”: 1 (5A), 1 (7J); form “OB”: 1 (15J); form “OF”: 1 (13D); form “OH”: 1 (8K); form “OI”: 1 (13G), 1 (13J), 1 (15G); form “OM”: 1 (13D); form “ON”: 1 (13A); form “OP”: 1 (12J), 1 (14J); and form “LY1”: 1 (12G), 1 (14H). In summation then, site PV48-28 has sherds in the following colors: 4G, 4J, 5A, 5G, 5J, 6A, 6F, 6J, 7G, 7H, 7J, 8F, 8G, 8J, 8K, 8L, 9A, 11G, 12A, 12D, 12G, 12J, 13A, 13D, 13G, 13J, 14B, 14D, 14G, 14H, 14J, 15A, 15D, 15G, 15H, 15J, 15K, 16A, 16D, 16G, 16I, 16J, and 16K. A sample of this sites’ sherds are illustrated in Plate 22.

PV48-29

Site PV48-29 is north-east of the banks of the Lurín river, approximately 20 km upstream from the Pacific Ocean, at an elevation of 260 *masl*. The site is long and follows the contour of the land and the river. The site is south of the Lima-Cinegua freeway and is located on a large alluvial fan cut by arroyos. On top of the fan are numerous depressions with are frequently filled with angular basalt rubble. The site

appears to be a looted cemetery, with a fair amount of late materials scattered about. Sherds with punctate designs and incised line outlines were observed in the field.

Overall, site PV48-29 has sherds in the following colors: 5A, 5G, 5J, 6J, 7J, 8J, 8K, 12D, 13D, 13G, 13J, 14D, 14G, 14H, 14I, 14J, 14K, 15G, 15H, 15J, 15K, 15L, 16D, and 16J. From the two-hundred and thirty-nine (239) sherds observed at PV48-29, seventy-nine (79) were diagnostic rims; their type and color being: form "BC": 1 (14G); form "BD": 1 (14J); form "BH": 1 (14G), 1 (14I), 1 (15K), 1 (15L), 1 (7J); form "BJ": 1 (5J), 2 (7J); form "BZ1": 1 (15H), 1 (5A); form "CE": 1 (12D), 1 (13G), 2 (14G), 1 (15G), 1 (15K), 1 (15L), 1 (5J), 1 (6J), 1 (7J), 1 (8J); form "CG": 1 (14J), 1 (15J); form "CH": 1 (8J); form "CH1": 1 (13D), 1 (14G), 2 (5J), 1 (8J); form "CI1": 1 (14H); form "CK1": 1 (5A); form "CM": 1 (12D), 1 (13G), 1 (13J), 1 (14D), 3 (14G), 1 (14H), 2 (14J), 1 (5A), 1 (5G), 1 (5J), 1 (7J); form "CO": 1 (14D), 1 (14K), 1 (15J), 1 (8K); form "CU": 1 (13D), 1 (14D), 2 (14G), 1 (14J), 1 (15H), 1 (15J), 1 (5A), 1 (5J); form "CZ": 1 (8J); form "CZ6": 1 (14H), 1 (5A); form "CZ7": 1 (16J), 1 (7J); form "DA": 1 (14D); form "DC": 1 (5A), 1 (5J); form "DE": 1 (15J); form "DF": 1 (13G), 1 (5A), 1 (6J); form "DJ": 1 (14G), 1 (5A); form "J1": 1 (14G); form "LP": 1 (16D), 1 (7J); form "OH": 1 (6J); and form "OK": 1 (6J). A sample of this sites' sherds are illustrated in Plate 23.

PV48-31

Site PV48-31, is a medium sized site, south of the Lurín River, approximately 25 km upstream of the Pacific Ocean, and at an elevation of 365 *masl*. It is immediately northwest of site PV48-33. Site PV48-31 has five loci to it, A, B, C, D, E, and F.

Locus A is a series of stone walls going all the way up the rock face of mesa. Field impression of this loci suggest them to be retaining walls. The walls were constructed of angular fieldstones with a great deal of variation in sizes of stone. One wall is only 50 cm tall in the field with no plaster or mortar. Locus B contain at least two oval crypts, so-called because of associated burials with them. One of them was 2.3 x 2 meters, the other was a 2 x 1-meter crypt. There might have been a roofless stone layer, across the top of the ovals, to complete the structure. Locus B walls were made of roughly angular fieldstones with characteristics similar to those in locus A. However, the stones at locus B were in with Adobe mortar. There was no evidence for use of plaster. The crypts had skeletal materials in them. There was much variation of wall constructions, both in use of adobe plaster, and stone size and shapes. For example, one wall is set with particularly heavily mortar, probably because it sat directly over an 8-meter bluff. That particular wall was 5-meter-long and of varying heights of up to 1.5 meter. Inside the construction was another construction; a U-shaped one. It may once have had a fourth wall, but the scatter of stones makes it difficult to ascertain. The same is true for its roof, which is nonexistent and difficult to ascertain. The walls in this section were roughly 40 to 50 cm thick, variable in construction. Just below this locus, towards locus D was another set of two oval crypt stone structures; these two had no mortar in their

construction Locus D appeared to be on a larger talus slope, which had structures on it. The structure consists of the angular field stone walls made mortared with adobe. The walls are of equal thickness, about 25 cm. The walls that remain stood to height of about 1.4 meter. There is evidence of looting throughout the site.

From the 165 sherds observed at this site, forty (40) of them diagnostic rims; these break down into the following shapes and colors: form "BD": 1 (6J); form "BK": 1 (14G); form "BO": 1 (11A), 1 (13D), 1 (13G); form "CE": 1 (10D), 1 (12D), 1 (13D), 1 (13G), 2 (14D), 1 (14G), 1 (14H), 1 (15J), 1 (15K), 2 (6J), 1 (7J); form "CJ": 1 (15J); form "CM": 1 (14D), 1 (7J), 1 (9G); form "CN": 1 (13G); form "CO": 1 (15G); form "CU": 1 (13D), 1 (14D), 1 (15J), 1 (5A), 1 (5J), 1 (8J); form "CW": 1 (13G); form "CZ7": 2 (13D); form "DF": 1 (14G), 1 (16A), 1 (7J); form "LP": 1 (16C); form "LR": 1 (14G); form "OG": 1 (16J); and form "OH": 1 (6J). In all, site PV48-31 has sherds in the following colors: 5A, 5J, 6J, 7J, 8J, 9G, 10D, 11A, 12D, 13D, 13G, 14D, 14G, 14H, 15D, 15G, 15J, 15K, 16A, 16C, and 16J. A sample of this sites' sherds are illustrated in Plate 24.

PV48-32

On the north bank of the Lurín river, sits the site PV48-32, approximately 23 km upstream from the Pacific Ocean, at about 260 *masl*.

All told, site PV48-32 has sherds in the following colors: 1B, 4A, 4B, 4J, 5A, 5B, 5D, 5H, 5J, 6A, 6B, 6J, 7A, 7B, 7G, 7H, 7J, 7K, 8B, 8D, 8F, 8H, 8J, 8K, 8L, 12A, 12D, 13D, 13G, 13J, 14D, 14G, 14H, 14J, 15A, 15D, 15G, 15J, 16A, 16B, 16D, 16J, and 16K. From the

four-hundred and twenty-eight (428) sherds observed at this site, 126 of them were rims; these break down into the following vessel shapes and colors: form “BB”: 1 (7K), 1 (8B), 1 (4B); form “BD”: 1 (7B); form “BF”: 1 (5D), 1 (8J); form “BF1”: 1 (15D), 1 (16K); form “BH”: 1 (8B); BJ”: 1 (12D), 1 (13G), 1 (14D), 1 (14G), 1 (14H), 1 (16D), 1 (16J), 1 (1B), 1 (4J), 1 (5J), 1 (7G), 2 (7J), 2 (8F), 1 (8K), 1 (8B); form “BR”: 1 (5D); form “BU”: 1 (8B); form “BZ”: 1 (13D), 1 (13G), 1 (16J), 1 (6J), 1 (7A), 1 (8D), 1 (8K); form “BZ3”: 1 (15G); form “BZ4”: 1 (15G), 1 (8K), 1 (8L); form “BZ6”: 1 (7J); form “CA1”: 1 (15A); form “CBJ1-Unique”: 1 (4B); form “CE”: 1 (15J), 1 (5A), 1 (5H), 1 (6B), 1 (6J), 2 (7J), 1 (8B); form “CE-SMALL”: 1 (8B); form “CI1”: 1 (5A), 1 (8D); form “CJ”: 1 (5B), 1 (7B); form “CL”: 1 (12D), 1 (14G), 2 (15J), 1 (8F); form “CM”: 1 (14G), 1 (15J); form “CN”: 1 (8B); form “CO”: 1 (12A), 1 (13D), 1 (14D), 1 (14D), 1 (14D), 1 (14D), 1 (5J), 1 (7J), 1 (8B), 1 (8F), 1 (8J); form “CP”: 1 (13D), 1 (14J), 1 (16A), 1 (5A); form “CQ”: 1 (15J), 1 (16B), 1 (16J), 1 (7G), 1 (8J), 1 (no color); form “CU”: 1 (14G), 2 (15J), 1 (5A), 1 (6A), 2 (7J); form “CW”: 1 (7J); form “CW1”: 1 (14D), 1 (14G); form “CX”: 3 (13J), 2 (15J), 1 (7H); form “CY1”: 1 (14H), 2 (5D); form “CZ”: 1 (14D), 1 (14G), 1 (8J); form “CZ6”: 1 (5A), 1 (6B); form “DB”: 1 (16J); form “DC”: 1 (7B); form “DF”: 1 (8K); form “J1”: 1 (8D); form “LD”: 1 (16B), 1 (8B), 1 (8H); form “LJ1”: 1 (7J); form “LZ”: 1 (15D), 1 (15J); form “OC”: 1 (4A); form “OH”: 1 (5J); form “OI”: 1 (14G), 1 (6B), 1 (7B); and form “OP”: 1 (13D), 1 (1B). A sample of this sites’ sherds are illustrated in Plate 25.

PV48-33

A small site, south-east of site PV48-31, PV48-33 is approximately 25 km upstream from the Pacific Ocean, at an elevation of 365 *masl*. Although in close proximity to each other, site PV48-33 was split from PV48-31 based on architectural differences between the two. Site PV48-33 is composed mostly of standing and plaster walls, which were lacking at site PV48-31. Although they are in the same Quebrada, this site's walls have adobe plaster walls along with, occasionally, a few un-plastered walls. This site contained a number of crypts which are similar to those described for PV48-31. This site, unfortunately, has also been heavily looted. Of the plastered walls, many of them are made of rough angular field stones of assorted sizes. The shapes are quite irregular and some of the larger stones measure between 25 cm x 13 cm x 8 cm in dimension. Though roughly 40 cm thick, the highest wall still stands at about 2 meters high. Several of the walls had indicators for a second-story capacity.

Seventeen (17) sherds were observed here, fourteen (14) of them shape-diagnostic rims: form "BK": 1 (13D); form "CE": 1 (14G), 1 (5A), 1 (6J), 1 (8J); form "LCL": 1 (5J); form "CU": 1 (13D), 1 (7J); form "CZ8": 1 (15H); form "DF": 1 (13D), 2 (15J); form "OB": 1 (13G); and form "OM": 1 (14D). In total then, site PV48-33 has sherds in the following colors: 5A, 5J, 6J, 7J, 8J, 13D, 13G, 14D, 14G, 15H, and 15J. A sample of this sites' sherds are illustrated in Plate 26.

PV48-34

A medium sized site, north-east to the Lurín, and close to the Quebrada de Molle, site PV48-34 is approximately 27 km upstream from the Pacific Ocean at an elevation of 365 *masl*. Field impressions suggest and Early Intermediate period hill-top site overlooking PV48-30. The surveyors collected several diagnostic Lima Phase 9 sherds with narrow white and red lines on bright orange paste. The site included terrace walls made from small angular chunks of fieldstone, laid, more or less, regularly in horizontal courses mortared with adobe. Some of the walls were plastered over. The wall, largely less than a meter high for the most part, also extend up to 2 meters in height at some places.

Overall, PV48-34 has sherds in the following colors: 5A, 5G, 5J, 6G, 6J, 7G, 7J, 12A, 12D, 13A, 13D, 13G, 14B, 14D, 14G, 14H, 14J, 15A, 15D, 15G, 15H, 15J, and 15K. One-hundred and forty-one (141) sherds were observed, eighty-two (82) of them diagnostic rims. They break down in shape and color as follows: form “BH”: 1 (13D), 1 (6J); form “BY”: 1 (15J); form “BZ1”: 1 (13A); form “CE”: 2 (13D), 1 (14B), 1 (15G), 1 (5A), 1 (7G); form “CH”: 1 (14D), 1 (14H), 1 (5G); form “CJ”: 1 (7J); form “CM”: 1 (15J), 1 (5A); form “CU”: 2 (13D), 1 (13G), 1 (14D), 4 (14G), 2 (14H), 1 (15D), 2 (15G), 1 (15H), 2 (15J), 1 (5A), 1 (5J), 1 (6J), 1 (7J); form “CW”: 1 (12D); form “CZ1”: 1 (14G), 1 (15G), 1 (5A); form “DD”: 1 (12A), 6 (13D), 3 (14D), 2 (14G), 1 (15K); form “DF”: 1 (13D), 1 (14G), 1 (15J); DM”: 1 (15J); form “DO”: 1 (13D), 2 (15G), 2 (15H), 1 (15J), 1 (5J), 1 (7J); form “LD”: 1 (15J); form “LJ1”: 1 (13D), 1 (14G); form “LP”: 1 (15J), 1 (6J); form “LY1”: 1 (14D); form “LZ8”: 1 (13D), 1 (14G); form “OB”: 1 (14G); form “OF”: 1 (14D); form “OH”: 1 (13D), 1

(14G), 1 (14J), 1 (15A), 1 (6G), 1 (7J); and form “OM”: 1 (5A). A sample of this sites’ sherds are illustrated in Plate 27.

PV48-35

A medium-sized site adjacent to site PV48-33, PV48-35 is also25 km upstream from the Pacific Ocean, at 365 *masl*.

Altogether, site PV48-35 has sherds in the following colors: 4G, 5A, 5G, 5J, 7G, 7J, 7K, 8H, 8J, 8K, 8L, 12D, 12G, 13D, 13G, 14B, 14D, 14G, 14J, 14K, 15A, 15D, 15E, 15G, 15H, 15J, 15K, 16A, 16B, 16D, and 16K. From the 135 sherds observed here, seventy-six (76) were shape-diagnostic rims. They break down as follows: form “BB”: 1 (15K); form “BC”: 1 (8H); form “BF”: 1 (7G); form “BJ”: 1 (14D), 1 (14G), 1 (15G), 1 (16A), 1 (4G), 1 (5J); form “BK”: 1 (5A), 1 (5G); form “BO”: 1 (15D); form “BZ”: 1 (12D), 1 (15G), 1 (15J); form “BZ5”: 1 (14G); form “CE”: 1 (13D), 1 (13G), 1 (14D), 1 (14G); form “CE-SMALL”: 1 (7J); form “CJ”: 1 (5A); form “LCL”: 2 (14D), 1 (15J), 1 (7J), 1 (8K); form “CM”: 1 (13D), 2 (13G), 1 (14B), 1 (14D), 1 (14G), 1 (16D), 1 (5A), 1 (8J); form “CO”: 1 (13D), 1 (14K), 1 (15A), 1 (15G), 2 (7G); form “CP”: 1 (8J); form “CQ”: 1 (14G), 1 (16K), 1 (8L); form “CR”: 1 (15G), 1 (8J); form “CU”: 1 (13G), 1 (15E), 1 (15J), 1 (7K); form “CW”: 1 (7J); form “CZ6”: 1 (14J), 1 (15G), 1 (7J); form “CZ7”: 1 (13D); form “DF”: 1 (13D), 1 (5A), 1 (5J); form “DO”: 1 (12D); form “Kero-like”: 1 (14D), 1 (15J); form “LC”: 1 (16B); form “LD”: 2 (16A); form “LG1”: 1 (7J); form “LN”: 1 (12G); form “LP”: 1 (15J); LT”: 1 (16A); form “LZ1”: 1 (13G); form

"LZ7": 1 (15H); form "OA": 1 (14G); form "OI": 1 (13G); form "OO": 1 (14G); and form "LY1": 1 (15G). A sample of this sites' sherds are illustrated in Plate 28.

PV48-45

A large site on the south banks of the Lurín River, site PV48-45 is approximately 24 km upstream from the Pacific Ocean, at 260 *masl*. The site overlooks the river. There are two geographically adjacent sites, site PV48-43, which is on the south east to it, and site PV48-49 which is adjacently northwest to it. Site PV48-45 has three spatial sectors identified in the field. Overall, PV48-45 has sherds in the following colors: 4G, 5A, 5H, 5J, 6B, 6H, 6J, 7B, 7H, 7J, 7K, 8A, 8F, 8H, 8J, 8L, 12A, 12D, 13D, 13G, 13J, 14D, 14G, 14J, 15A, 15D, 15G, 15H, 15J, 15K, 16A, 16D, 16G, 16H, and 16J.

PV48-45a

From the eighty-four (84) sherds observed at PV48-45a, forty-four (44) were rims; they break down as follows: form "BC": 1 (7K); form "BF": 1 (6J); form "BJ": 1 (15H); form "BK": 2 (14D), 1 (15A); form "BZ": 1 (13D), 1 (14J), 1 (15H), 1 (5J), 1 (7J); form "CE": 1 (13G), 1 (14G), 1 (16G), 1 (8F), 2 (8J), 1 (8L); form "CE-SMALL": 1 (6J); form "CJ": 1 (13D); form "LCL": 1 (5A), 1 (6B); form "CNQ1": 1 (13D); form "CO": 1 (14G); form "CP": 1 (7J); form "CQ": 1 (16J), 1 (7J), 1 (8J); form "CU": 1 (15K), 1 (8J); form "CW1": 1 (16H); form "CZ6": 1 (7J); DM": 1 (15G), 1 (5A); form "Kero-like": 1 (15D); form "LD": 1 (16D); form "LF": 1 (12D); form "LK": 1 (13G); form "LX": 1 (14D), 1 (8J); form "OI": 1

(14G), 1 (6J); U-X2-Unique": 1 (8A); and form "LY1": 1 (5J). A sample of this sites' sherds are illustrated in Plate 29.

PV48-45b

Twenty-eight (28) sherds were observed at PV48-45b, twelve (12) of them rims; these break down into the following vessel types and colors: form "BJ": 1 (13J); form "BZ": 1 (14G); form "CE": 1 (no color recorded), 1 (12A), 1 (5A), 1 (5H); form "CE-SMALL": 1 (15J); form "CF": 1 (4G); form "LCL": 1 (5A); form "CO": 1 (7B); form "DF": 1 (16A); and form "LX": 1 (16A). A sample of this sites' sherds are illustrated in Plate 30.

PV48-45c

Twenty-five (25) sherds were observed here, nineteen (19) of which were rim. Their shapes and colors were: form "BC": 1 (8H); form "BZ": 1 (16D); form "CO": 1 (13D), 1 (13G), 1 (5A); form "CQ": 1 (12D), 1 (15J), 1 (5A), 3 (5J), 1 (6H), 1 (7H); form "LC": 1 (16A); form "LD": 1LD": 1 (16A); form "OI": 1 (16A), 1 (7J); and form "LY1": 1 (5A). A sample of this sites' sherds are illustrated in Plate 31.

PV48-57

In a Quebrada, approximately 26 km upstream from the Pacific Ocean and at an elevation of about 365 *masl*, is the small site PV48-57. It is surrounded by adjacent smaller sites; these include site PV48-59 northwest of it, and site PV48-56 which is southeast of it. In field notes break the site into four sections. Overall however, site

PV48-57 has sherds in the following colors: 5A, 5J, 6H, 6J, 7J, 7K, 8F, 8G, 8J, 12A, 12D, 12G, 13A, 13D, 13G, 13H, 14D, 14G, 14H, 15D, 15E, 15G, 15H, 15J, 15K, 16C, and 16K.

PV48-57a

Fifty-eight (58) sherds were observed at PV48-57a, none of them were rims.

PV48-57b

From the fifty (50) sherds observed at PV48-57b, twenty-five (25) were rims. Their shapes and colors are broken down as follows: form “BF”: 1 (12D); form “BF”: 1 (15H); form “BJ”: 1 (14D); form “BO”: 1 (13D); form “CC”: 1 (16K); form “CE”: 1 (13D); form “CJ”: 1 (15J); form “CM”: 1 (14G), 1 (8J); form “CNQ1”: 1 (15J), 1 (7J); form “CO”: 1 (14G); form “CQ”: 1 (13A), 1 (15G), 1 (7J); form “CU”: 1 (14D), 1 (5J); form “CW”: 1 (15E); form “CZ6”: 1 (14H), 1 (7K); form “CZ8”: 1 (15D); form “LD”: 1 (5A); form “LJ1”: 1 (16C), 1 (7J); and form “ON”: 1 (12G). A sample of this sites’ sherds are illustrated in Plate 32.

PV48-57c

One-hundred and thirty-two (132) sherds were observed; thirty-one (31) were rims. Their break down are as follows: form “BE”: 1 (15D), 1 (5J); form “BJ”: 1 (12A), 1 (5J), 1 (7J); form “CE”: 3 (14D), 1 (7K); form “LCL”: 1 (13D), 1 (15H); form “CM”: 1 (15J), 1 (6J); form “CN”: 1 (15G); form “CO”: 1 (13A), 1 (13G), 1 (15K); form “CU”: 1 (14G), 1 (15J), 1 (5J); form “CW”: 1 (14H); form “CZ6”: 1 (13D); DN”: 1 (15K); form “Kero-like”: 1 (15K); form “OB”: 1 (13H), 1 (5A); form “OL”: 1 (7J); and form “ON”: 2 (13G), 1 (14D). A sample of this sites’ sherds are illustrated in Plate 33.

PV48-57d

From the eight sherds observed at PV48-57d, eight were rims. Their type and colors are: form "BE": 1 (8F), 1 (8G); form "CE": 1 (13D), 1 (5J), 1 (7J); form "CO": 1 (15H), 1 (15J); and form "CU": 1 (8J). A sample of this sites' sherds are illustrated in Plate 34.

PV48-80

Site PV48-80 is approximately 30 km upstream of the Pacific Ocean, lies just south of the Lurín River, and is about 470 *masl*. It is a medium-sized site close to two watersheds which drain next to it. The site is on the ridge were Huaycan Alto is located. The site is approximately 140-meter-long x 10-15 meters-wide at some parts and 40-meter-wide at others. There are a few stone-faced walls remaining, and they form "platforms in an area above a modern road which run almost through the site. These are likely house platforms for approximately 15 to 20 structures. There are some rectangular Adobe structures also. Field impressions of the site suggested and Early Intermediate period occupation. However, later sherds were probably association with the Late Intermediate period and the Late Horizon. All told, site PV48-80 has sherds in the following colors: 5A, 5G, 5H, 5J, 6A, 6G, 6J, 13D, 13J, and 13K. From the thirty-two (32) sherds observed at this site, eleven (11) were rims; their shapes and colors are as follows: form "BJ": 1 (13J), 1 (6J); form "CE": 1 (5H); form "CU": 1 (5A), 1 (5J), 1 (6G);

form “Kero-like”: 1 (13D), 1 (6A); form “OH”: 1 (5G), 1 (5J); and form “W1”: 1 (13K). A sample of this sites’ sherds are illustrated in Plate 35.

PV48-86

Site PV48-86 is approximately 36 km upstream from the Pacific Ocean at an elevation of 470 *masl*. It is south of the Lurín River. Site PV48-86 is a small site, approximately 40 x 40 meters. It is a structure complex made with double wall-filled construction. Walls are made of large stone set in Adobe mortar, at points, the mortar is 6 cm thick. The walls were about 1 meter wide, the interior of these double walls was filled with adobe and small stones; their exterior surfaces plastered. Overall, site PV48-86 had sherds in the following colors: 5A, 7J, 8J, 13G, 14D, 14G, 16I, and 16K. From the twenty-two (22) sherds observed at this site, thirteen (13) were rims; their shapes and colors are as follows: form “CN”: 1 (14D); form “CN”: 1 (14G), 1 (7J); form “CO”: 1 (16K), 1 (5A), 2 (7J), 1 (8J); form “CQ”: 1 (5A), 1 (16I); form “CU”: 1 (14G); form “LC”: 1 (13G); and form “LD”: 1 (13G). A sample of this sites’ sherds are illustrated in Plate 36.

PV48-87

Site PV48-87 is approximately 32 km upstream from the Pacific Ocean, on the north side of the Lurín River, at an elevation of about 470 *masl*. This site had a few architectural features. Structures included walls made of stone set in mortar. The stones are rough angular field stones, some river stones, and partial boulders that have fallen from the hillside. The walls are built to incorporate all three types of these lithic

materials. Plaster that contains a large amount of granite gravel chips, was used to plaster the walls. The walls are approximately 20 to 25 cm wide. All in all, site PV48-87 has sherds in the following colors: 5A, 6J, 7J, 7K, 8J, 13D, 14G, 15G, 15H, and 15J. From the twenty-five (25) sherds observed at this site, fifteen (15) were rims; their shapes and colors are broken down as follows: form "BZ1": 1 (14G), 1 (8J); form "CE": 1 (13D), 1 (14G), 1 (15G), 1 (15J), 1 (6J); form "CJ": 1 (7K); form "LCL": 1 (5A); form "CM": 1 (15G); form "CO": 3 (7J); form "OM": 1 (15H); and form "OP": 1 (7J). A sample of this sites' sherds are illustrated in Plate 37.

PV48-88

Site PV48-88 is approximately 35 km upstream of the Pacific Ocean. It is on the south side of the Lurín River at an elevation of about 470 *masl*. The site consists of two circular structures with double stone walls mortared with adobe. The structures are approximately 2-3 meter in diameter; remaining standing walls, roughly 2 meters tall. From the twenty-four (24) sherds observed at this site, three were rims; their shapes and colors are as follows: form "CN": 1 (14G), 1 (8J); and form "CO": 1 (14G). In sum then, site PV48-88 has sherds in the following colors: 8J, and 14G. A sample of this sites' sherds are illustrated in Plate 38.

PV48-91

The small site PV48-91 is approximately 34 km upstream from the Lurín River, on is found on the south banks of river, at an elevation of about 470 *masl*. This site is about

150 meters down valley from the east edge of site PV48-96. Site PV48-91 is composed of several stone retaining walls, supporting platforms made of earth and rock which are about 3- 5-meter-long and about 1-2 meter in width. From the six sherds observed at this site, two were rims; their shapes and colors are as follows: form "CZ": 1 (8K); and form "OA": 1 (15K). All in all, site PV48-91 has sherds in the following colors: 8K, and 15K. A sample of this sites' sherds are illustrated in Plate 39.

PV48-93

Site PV48-93 is a medium-size site on the south banks of the Lurín River, approximately 34 km upstream of the Pacific Ocean, and 470 *masl*. The site is located about 25 meters down valley from site PV48-91. The site consists of platforms and retaining walls made from irregular courses of local large stones. An area of the site contains platforms which extends for about 150 meters along the hill and up the hill for approximately 20 meters. Overall, site PV48-93 has sherds in the following colors: 5J, 7J, 13D, 13G, 14B, 14D, 14H, 15G, and 15J. From the seventy-three (73) sherds observed at this site, thirteen (13) were rims; their shapes and colors are as follows: form "BJ": 1 (13G), 1 (14H), 1 (5J), 2 (7J); form "BZ": 1 (13D), 1 (14B); form "CE": 1 (14D), 1 (15G); form "CE-SMALL": 1 (5J); form "LF": 1 (7J); form "OB": 1 (14D); and form "OO": 1 (15J). A sample of this sites' sherds are illustrated in Plate 40.

PV48-96

A medium-sized site, PV48-96 is on the south bank of the Lurín River, approximately 36 km upstream from the Pacific Ocean. The site is about 470 *masl*. The site is situated at the bottom of a large Quebrada; it extends for about 100 meters along the hills facing to the east and west of the Quebrada. There seems to be two spatial components to the site. However, overall the site is about 150-meter-long (E-W) and about 40 to 100 meters wide. On the Quebrada approximately 50 meters from the valley floor are a number of structures. These structures are made from irregular sources of granite stone, which is set by adobe mortar, and then covered with several centimeters of adobe plaster. Both the walls and the plaster have many small chunks of rocks in them. The site also includes a number of large terraces, some up to 8-meter-long and 4 meters wide. These are associated with the site and defined by the stone retaining walls made from large water-worn boulders up to 50 cm in width of which they are built from. The terraces are associated with an irrigation canal that passes in front of the structures. Some skeletal remains were scattered in the vicinity.

From the 185 sherds observed at this site, thirty (30) were rims; their shapes and colors brake down as follows: form “BF”: 1 (8J); form “BJ”: 1 (14G), 1 (15K), 1 (16G), 1 (7J); form “BO”: 1 (14D); form “BW”: 1 (8J); form “BZ”: 1 (8K); form “CE”: 1 (15J), 1 (6J); form “CJ”: 2 (7J); form “LCL”: 1 (15J), 1 (5A), 1 (6J); form “CM”: 1 (13D), 1 (14D), 2 (15J), 1 (5A); form “CO”: 1 (15J), 1 (7J); form “CW”: 1 (14K); form “CZ8”: 1 (16J); form “DF”: 1 (7J); form “J1”: 1 (14G); form “LX”: 1 (14D), 1 (14G); and form “LZ7”: 1 (14J), 1 (8L). A sample of this sites’ sherds are illustrated in Plate 41.

PV48-96a

From the eighty-five (85) sherds observed at this site, fourteen (14) were rims; their shapes and colors are as follows: form “CE”: 1 (15J); form “LCL”: 1 (14D), 1 (5A); form “CM”: 1 (16G); form “CO”: 1 (14G), 1 (15H), 1 (4G); form “CW”: 1 (16K); form “DD”: 1 (15J); DN”: 1 (7J); form “Kero-like”: 1 (5G); form “LY”: 1 (14D); form “LZ”: 1 (14G); and form “LY1”: 1 (8F). A sample of this sites’ sherds are illustrated in Plate 42.

PV48-96b

From the twenty-four (24) sherds observed at this site, fifteen (15) were rims; their shapes and colors are as follows: form “BJ”: 1 (14G); form “CC”: 1 (8J); form “CE”: 1 (6A); form “CM”: 1 (15G), 1 (6I); form “CNQ1”: 1 (15D); form “CW”: 1 (5A); form “DF”: 1 (5A); form “Kero-like”: 1 (13G); form “LJ1”: 1 (14D), 1 (14G), 1 (15J); form “LX”: 1 (8F); form “LZ”: 1 (5A); and form “OB”: 1 (4G). In sum then, site PV48-96 has sherds in the following colors: 4G, 5A, 5G, 6A, 6I, 6J, 7J, 8F, 8J, 8K, 8L, 13D, 13G, 14D, 14G, 14J, 14K, 15A, 15D, 15G, 15H, 15J, 15K, 16G, 16J, and 16K. A sample of this sites’ sherds are illustrated in Plate 43.

PV48-109

Site PV48-109 is on the south side of the Lurín River. It is approximately 38 km upstream from the ocean at an elevation of approximately 470 *masl*. The site is located directly across from San Martin. The site is in close proximity with site PV48 113. The site is large, divided into at least four sections; possibly differentiated temporally.

Section A is on the upper slopes of the site. It is composed of a series of terraces and a series of mortared and plastered walls. This plastered over structure extend into section B. The structure in section B, is composed of angular chunks of granite rock of assorted sizes. These walls are about 20 cm thick and reach a maximum height of 2 meter; they are also plastered. One wall had a door which was about 50 cm wide and at least 120 cm high. North to the walls were additional structures, made is a similar fashion as those in section A and section B. In section C, there was a wall structure, about 1-meter wide which stood 30 to 40 cm above the ground. Strangely, none of the structures appeared to be built below the ground, but there were square pits in the area. Site impressions, for some sections suggested a Late Horizon occupation, others possibly earlier occupations There is little deception of section D.

PV48-109a

From the seventy (70) sherds observed at PV48-109a, fourteen (14) were rims; their shapes and colors are broken down as follows: form “CE”: 1 (14G), 1 (8L); form “CI1”: 1 (14D), 1 (15J); form “CJ”: 1 (7J); form “CO”: 1 (13D), 1 (15G), 1 (15H); form “CU”: 1 (15K), 1 (5A); form “CZ8”: 1 (15D); form “LD”: 1 (7J), 1 (7K); and form “LZ4”: 1 (16J). In sum, PV48-109 has sherds in the following colors: 5A, 7J, 7K, 8L, 13D, 14D, 14G, 15D, 15G, 15H, 15J, 15K, and 16J. A sample of this sites’ sherds are illustrated in Plate 44.

PV48-110

Site PV48-110 is approximately 36 km upstream the Pacific Ocean. It is a small site, south of the river, and at about 470 *masl*. All in all, site PV48-110 has sherds in the following colors: 5A, 5G, 6J, 7H, 7J, 7K, 8A, 8J, 11D, 12A, 12D, 13D, 13G, 14D, 14G, 14H, 15G, 15H, 15J, 16D, and 16J. From the 102 sherds observed at this site, forty-five (45) were rims; their shapes and colors are as follows: form "BJ": 1 (15H); form "BO": 1 (14H), 1 (5A); form "CA1": 1 (13G); form "CE": 1 (13D), 1 (7K); form "CE-SMALL": 1 (13G); form "CJ": 1 (7J); form "CK1": 1 (7J); form "LCL": 1 (15J); form "CM": 1 (11D), 1 (13D); form "CN": 1 (16J), 1 (7H), 2 (7K), 1 (8J); form "CNQ1": 1 (14G); form "CO": 2 (14D), 1 (14G), 1 (5A), 1 (7K); form "CQ": 1 (15G); form "CU": 1 (7K); form "CW": 1 (15J), 1 (5A); form "CW": 1 (15G), 1 (15J), 1 (16D); form "CZ8": 1 (12D); form "DF": 1 (13D), 1 (15H); form "Kero-like": 1 (5A); form "LD": 1 (12A), 1 (12D); form "OA": 1 (13D), 1 (5G), 1 (8A); form "OB": 2 (13D); form "OH": 1 (14G), 1 (15J); form "W1": 1 (6J); and form "LY1": 1 (7J). A sample of this sites' sherds are illustrated in Plate 45.

PV48-113

Site PV48-113, is a medium to enormous sized site, south of the Lurín river, approximately 37 km upstream from the Pacific Ocean, at an elevation of about 470 *masl*. It is in close proximity to PV48 109 and PV48 113. Site PV48-113 is subdivided into four sections; possibly occupied during different times, but in the vicinity of each other. This site has a series of terraces and structures extending from the north side to west by an alluvial fan around the base of several slopes. The structures in the site are a

series of rooms, approximately 4 x 6 meters, with walls 30 to 40 cm thick. The walls are mortared with adobe and overall have little plastering on them. Field impressions suggested a long-term occupation extending possibly from Early Intermediate period, to Late Horizon, and possibly the Colonial Period. In the field the site seems to have both early and late pottery, as well as at least one colonial sherd. All told, site PV48-113 has sherds in the following colors: 4G, 5A, 6J, 7G, 7J, 8J, 8K, 11D, 12A, 12D, 13A, 13D, 14D, 14G, 15D, 15G, 15J, and 16J.

PV48-113a

From the fifty-nine (59) sherds observed at this site, twenty (20) were rims; their shapes and colors are broken down as follows: form “BG”: 1 (15J); form “BH”: 1 (8K); form “BJ”: 1 (14G); form “BO”: 1 (12D); form “CC”: 1 (15G); form “CE”: 1 (14G), 1 (8J); form “CM”: 1 (13A); form “CN”: 1 (15D), 1 (5A); form “CNQ1”: 1 (14D), 1 (7J); form “CQ”: 1 (14G); form “CT”: 1 (15J); form “CU”: 1 (13A); form “Kero-like”: 1 (8J); form “LC”: 1 (13A), 1 (16J), 1 (5A); form “and LJ1”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 46.

PV48-113b

From the seven sherds observed at this site, two were rims; their shapes and colors are as follows: form “BB”: 1 (4G); and form “CN”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 47.

PV48-113c

From the twelve (12) sherds observed at this site, two were rims; their shapes and colors are as follows: form “LY”: 1 (13D); and form “OB”: 1 (5A). A sample of this sites’ sherds are illustrated in Plate 48.

PV48-113d

From the seventeen (17) sherds observed at this site, eleven (11) were rims; their shapes and colors are as follows: form “BJ”: 1 (12D), 1 (5A); form “CE”: 1 (13D), 1 (7G), 1 (7J); form “CE-SMALL”: 1 (14G); form “CO”: 1 (15J); form “CW”: 1 (12A); form “J1”: 1 (14G); form “LC”: 1 (11D), 1 (6J); form “CE”: 1 (12A), 1 (13D), 1 (8G); form “CJ”: 1 (6L); form “OB”: 1 (14D); and form “OM”: 1 (15G). A sample of this sites’ sherds are illustrated in Plate 49.

PV48-121

Site PV48-121 is approximately 2 km south east of the Lurín River, approximately 5 km northeast of the Pacific Ocean. It lays north of Pachacamac, at about 20 *masl*. Site PV48 121 is approximately 800 meters north of site PV48-119. The site’s shape is roughly that of a squared off "C". The site is subdivided into at least seven components —PV48-121a-g. Scattered in and around the site are numerous elongate mounds, usually 2 to 3 meters high. There are “late” sherds on top of some of these mounds. Field impressions put the site as having a late occupation. Sherds from PV48-121a, PV48-121b, PV48-121c, and PV48-121d were largely not rims; their shape impossible to guess. All in all, thought, site PV48-121 has sherds in the following colors: 4G, 4J, 5J, 6H,

6L, 7L, 8G, 8J, 12A, 13D, 14D, 14G, 15G, 15J, and 16K. A sample of this sites' sherds are illustrated in Plate 50.

PV48-121d

From the eight sherds observed at this site, six were rims; their shapes and colors are as follows: form "CJ": 1 (6L); form "CE": 1 (8G), 1 (12A), 1 (13D); form "OM": 1 (15G); and form "OB": 1 (14D).

PV48-121e

From the forty-one (41) sherds observed at this site, five were rims; their shapes and colors are as follows: form "CE": 1 (5J); form "CE-SMALL": 1 (14D), 1 (14G); form "CM": 1 (8J); and form "OH": 1 (16K). A sample of this sites' sherds are illustrated in Plate 51.

PV48-121f

From the seventeen (17) sherds observed at this site, six were rims; their shapes and colors are as follows: form "BZ1": 1 (13D); form "CE": 1 (13D), 1 (4G); form "CF": 1 (15J); form "Kero-like": 1 (6H); and form "OK": 1 (5J). A sample of this sites' sherds are illustrated in Plate 52.

PV48-121g

From the thirty-two (32) sherds observed at this site, five were rims; their shapes and colors are as follows: form "CE": 1 (14G); form "DF": 1 (7L); form "LDL": 1 (14G);

form “OL”: 1 (4J); and U-W2-Unique”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 53.

PV48-122

Site PV48-122 is on the south-east of the Lurín River, near a Quebrada approximately 12 km upstream form the river, and at an approximately 140 *masl*. Site PV48-122 has two spatial and/or temporal components.

PV48-122a

Nine sherds were observed at this site. Unfortunately, there were no shape diagnostic rims between them.

PV48-122b

From the ten (10) sherds observed at this site, none of them were shape diagnostic rims.

PV48-126

The small site PV48-126 is north of the Lurín River, approximately 37 km upstream from the Pacific Ocean, at an elevation of 460 *masl*. In sum, PV48-126 has sherds in the following colors: 6B, 6J, 15D. From the twelve (12) sherds observed at this site, six were rims; their shapes and colors are as follows: form “CO”: 2 (6B); and form “CU”: 4 (15D). A sample of this sites’ sherds are illustrated in Plate 54.

PV48-137

Site PV48-137 is approximately 41 km upstream in the Lurín Valley. It is on the north side the river. Its elevation is about 830 *masl*. It is a small to medium-sized site located west of Sisicaya. The site is divided into five differentiated sectors, sectors A through E. Sector D stood out. It is characterized by a large number of walls, extending on the hillside. Construction type of these walls was identified as "highland style" in the field. The site was therefore associated with a late occupation. The site, however, had a modern occupation encroaching on top of it. This made identification of parts, difficult. All told however, site PV48-137 has sherds in the following colors: 4J, 5J, 6H, 7J, 7K, 11D, 12A, 12G, 13D, 13G, 14D, 14G, 14H, 15A, 15G, and 15J.

PV48-137a

From the 109 sherds observed at this site, twenty-seven (27) were rims; their shapes and colors are as follows: form "BH": 1 (4J); form "BJ": 1 (13D); form "CE": 1 (13G); form "CE-SMALL": 1 (5J); form "CJ": 1 (15G), 1 (7K); form "LCL": 1 (7K); form "CM": 1 (13G); form "CNQ1": 1 (7J); form "CO": 1 (14D); form "CQ": 1 (7K); form "CU": 1 (14H); form "DF": 1 (12A), 1 (13G), 1 (14D), 2 (14G), 1 (14H); form "DJ": 1 (15J); form "Kero-like": 1 (13D), 1 (7J); form "LR": 1 (15G); form "LY": 1 (13G), 1 (14G); form "LZ": 1 (14G); and form "LZ4": 1 (11D), 1 (13D). A sample of this sites' sherds are illustrated in Plate 55.

PV48-137b

From the forty-three (43) sherds observed at this site, seven (7) were rims; their shapes and colors are as follows: form “BJ”: 1 (7J); form “BZ”: 1 (13D); form “CN”: 1 (7J); form “CZ8”: 1 (14D); form “Kero-like”: 1 (7K); form “LD”: 1 (6H); and form “W1”: 1 (5J). A sample of this sites’ sherds are illustrated in Plate 56.

PV48-137d

From the thirty-seven (37) sherds observed at this site, twelve (12) were rims; their shapes and colors are as follows: form “BO”: 1 (7J); form “BW”: 1 (13D); form “CA1”: 1 (7J); form “CE”: 1 (13G); form “CJ”: 1 (14G); form “CM”: 1 (14D), 1 (15A); form “DF”: 1 (14G); form “OP”: 1 (12G); and form “LY1”: 1 (13G), 1 (14D), 1 (15G). A sample of this sites’ sherds are illustrated in Plate 57.

PV48-137e

Two non-diagnostic sherds were observed at PV48-137e.

PV48-148

Site PV48-148, a very small site approximately 11 km away from the Pacific Ocean and about 4 km southeast of the Lurín River. The site is in the middle of several sand ridges. The site is five stone-built structures which in the field were designated as houses. Field impression was that the site was of an early occupation. From the three sherds observed at this site, two were rims; their shapes and colors are as follows: form “BE”: 1 (8J); and form “OP”: 1 (13D). In sum, PV48-148 has sherds in the following colors: 8J, and 13D.

PV48-151

Site PV48-151 overlooks the Lurín river. It is about 15 km inland, at 170 *masl*. This is a small surface find with no visible walls to the complex, but with several decorated sherds on the surface. From the twenty-two (22) sherds observed at this site, one was a rim: "Kero-like": 1 (14G). In all, PV48-151 has sherds in the following colors: 14G. A sample of this sites' sherds are illustrated in Plate 58.

PV48-152

Site PV48-152 is on the northwest bank of the Lurín valley, approximately 14 km upstream, at an elevation of about 150 *masl*. Three non-diagnostic sherds were observed here. Nevertheless, overall the site has sherds in the following colors: 4G, 5J, 7J, 15J, and 15K. A sample of this sites' sherds are illustrated in Plate 59.

PV48-159

Site PV48-159 is located on the north side the Lurín; it is near Sisicaya, approximately 47 km upstream of the Pacific Ocean, at about 1000 *masl*. The site contains several visible rectangular walled platforms. The hill the site is on, slopes, eroding sherds fall onto the platforms. The site also contains terraces which are about 4 to 5 meters wide. The terraces have double walls, which are rubble filled, and are slanting but not stepped. The construction of the terrace "goes quite a way in either direction." Their ends could not be found. In sum, site PV48-159 has sherds in the following colors: 5A, 8J, 13D, and 14G. From the fifty-one (51) sherds observed at this

site, six were rims; their shapes and colors are as follows: form “BH”: 1 (8J); form “CE”: 1 (13D), 2 (5A); form “CM”: 1 (13D); and form “CQ”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 60.

PV48-164

Site PV48-164 is approximately 47 km upstream, adjacent to PV48-159. It is about 1000 *masl*. A large site, PV48-164 is divided into five sectors. Collectively, site PV48-164 has sherds in the following colors: 4G, 4H, 4J, 4L, 5A, 5G, 5H, 5J, 6A, 6G, 6H, 6J, 6K, 7C, 7F, 7H, 7J, 7K, 8F, 8H, 8J, 8K, 8L, 10D, 12D, 12G, 12J, 13A, 13D, 13G, 13H, 13J, 13K, 14D, 14G, 14H, 14J, 14K, 15A, 15D, 15G, 15H, 15J, 15K, 16A, 16B, 16D, 16J, and 16K.

PV48-164a

From the two-hundred and six (206) sherds observed at this part of the site, eighty-two (82) were rims; their shapes and colors are as follows: form “BE”: 1 (15J); form “BF”: 1 (10D); form “BJ”: 1 (15J); form “BR”: 1 (15D), 1 (6H); form “BZ”: 1 (13D), 1 (15K), 1 (5A), 1 (5G); form “BZ1”: 1 (5H); form “CE”: 1 (15J), 1 (7F), 1 (7J); form “CE-SMALL”: 2 (8F); form “CJ”: 1 (5A), 1 (5G); form “CM”: 1 (5A), 1 (6J), 1 (8K); form “CN”: 1 (16K), 1 (7J); form “CO”: 1 (13G), 2 (15G), 1 (16D), 1 (5H), 2 (6H), 6 (7J), 3 (8J), 1 (8K); form “CQ”: 1 (5J), 2 (7J), 1 (7K), 1 (8J); form “CU”: 1 (7H); form “CW”: 1 (15J), 1 (8J); form “CW”: 1 (14G); form “DC”: 1 (15K), 1 (8L); form “DF”: 1 (13G), 1 (16A), 1 (6J); form “Kero-like”: 1 (15J), 1 (5J), 1 (7K); form “LC”: 1 (15G); form “LD”: 1 (14J), 1 (7F); form “LJ1”: 1 (5A), 6 (7J); form “LN”: 1 (16A), 1 (5G); LT”: 1 (14G); form “LZ”: 1 (13G); form “LZ3”: 1

(12D), 1 (8H); form “LZ5 (Aryballo)”: 1 (6J); form “OB”: 1 (6A); form “OG”: 1 (16A); form “OI”: 1 (14D); form “OK”: 1 (14G), 1 (16B), 1 (7K); form “OL”: 1 (13G); form “W1”: 1 (6G); and form “LY1”: 1 (15K). A sample of this sites’ sherds are illustrated in Plate 61.

PV48-164b

From the 110 sherds observed at this site, forty-two (42) were rims; their shapes and colors are as follows: form “BD”: 1 (13J), 1 (14H), 1 (6J); form “BJ”: 1 (7K); form “BV”: 1 (14J); form “BW”: 1 (6J); form “CE”: 1 (6J); form “CE-SMALL”: 1 (13G), 1 (13J), 1 (5G); form “CG”: 1 (13G); form “CH1”: 1 (14G); form “CJ”: 1 (8J); form “CM”: 1 (13A); form “CN”: 2 (5A), 1 (5J), 1 (7J); form “CO”: 2 (5A), 1 (5J); form “CU”: 1 (12D), 3 (14G), 1 (14J), 1 (15D), 1 (15G), 1 (5J), 1 (7H), 1 (7K); form “CZ7”: 1 (13A), 1 (14K); form “LDL”: 1 (5A); DM”: 1 (7J); form “Kero-like”: 1 (13H); form “LD”: 1 (14G), 1 (8J); form “LJ1”: 1 (7J); form “LZ4”: 1 (5A); form “OB”: 1 (6J); and form “OM”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 62.

PV48-164c

From the fifty-two (52) sherds observed at this partition, twenty-four (24) were rims; their shapes and colors are as follows: form “BJ”: 1 (6J); form “BY”: 1 (4G), 1 (4H); form “CA1”: 1 (16A); form “CE”: 1 (8J), 1 (4L); form “CN”: 1 (16J), 1 (7C); form “CNQ1”: 1 (6H); form “CO”: 1 (16B), 1 (5A), 1 (6H), 1 (7J); form “CQ”: 1 (5G); form “CU”: 1 (7J); form “CZ1”: 1 (13G), 1 (6H); form “DC”: 1 (14D); form “DF”: 1 (16A); form “LDL”: 1 (14G); form

"LR": 1 (6H); form "LZ": 1 (7J); form "OB": 1 (12G); and LZ-Unique": 1 (13J). A sample of this sites' sherds are illustrated in Plate 63.

PV48-164d

From the twenty-nine (29) sherds observed at this part of the site, twenty-one (21) were rims; their shapes and colors are as follows: form "BH": 1 (7J); form "CE": 1 (6J); form "CJ": 1 (4J), 1 (5H); form "CN": 1 (15G), 2 (5A), 2 (6J), 1 (8J); form "CO": 1 (15J), 1 (6H), 3 (7J), 1 (7K), 1 (8K); form "CU": 1 (7J); form "CZ1": 1 (14G), 1 (6J); and form "LJ1": 1 (15H). A sample of this sites' sherds are illustrated in Plate 64.

PV48-164e

From the twenty-four (24) sherds observed at this portion of the site, five were rims; their shapes and colors are as follows: form "BW": 1 (6J); form "BZ1": 1 (12D), 1 (5J); form "CU": 1 (6J); and form "CZ7": 1 (14G). A sample of this sites' sherds are illustrated in Plate 65.

PV48-167

Site PV48-167 is on the north bank of the Lurín site. It is about 44 km upstream from the Pacific Ocean, at about 1,030 *masl*. Nineteen (19) sherds, non-shape-diagnostic, were observed at PV48-167 in the following colors: 4J, 6A, 7J, 8H, 13A, 13D, 13G, 14D, 14G, 15A, 15G, 15H, and 16J.

PV48-168

Site PV48-168 is south of the Lurín River. It is approximately 46 km upstream, at an elevation of 1,130 *masl*. Although same sherds were collected and observed at PV48-168, none were rims. A sample of this sites' sherds are illustrated in Plate 66.

PV48-169

Site PV48-169 is a very small site approximately 45 km upstream from the Pacific Ocean. It is on the north-side of the Lurín River. The site is in at the bottom of a watershed, across from site PV48-171, close to PV48-167. The site's boundaries were difficult to define. Differentiating it from site PV48-167 and PV48-171, the boundaries were chosen based on the difference in the construction of the terraces found in all sites, and on the higher frequency of sherds associated within them. The terracing walls associated with the site are approximately to 1.5 meter high. They are made of irregular faced stones. At some points, there are platforms adjacent to the wall which are up to 2 x 2 meters in size. These platforms are close to 1.5 meter high. They have open tops and there are steeped terraces as well. In addition, there are burials associated within the site.

In all, site PV48-169 has sherds in the following colors: 5A, 5H, 6J, 6K, 7J, 8J, 8K, 8L, 14D, 14H, 15D, 15G, 15J, 15K, 16A, 16B, 16H, and 16J. From the seventy (70) sherds observed at this site, thirty-six (36) were rims; their shapes and colors are as follows: form "BH": 1 (14D); form "CC": 1 (15K), 2 (7J); form "CE": 1 (15G), 1 (16H), 1 (6K), 2 (8J), 1 (8K); form "CE-SMALL": 1 (7J); form "CJ": 1 (16A); form "CM": 1 (15J); form "CN": 1

(15J), 1 (16J), 1 (6J), 1 (8L); form “CNQ1”: 1 (15D); form “CO”: 1 (7J), 1 (8J); form “CU”: 1 (14D), 1 (15D), 1 (5A), 1 (7J); form “CW”: 1 (7J), 1 (8J); form “CZ6”: 2 (16B); form “DF”: 1 (14H); form “J1”: 1 (15J); form “OB”: 1 (15G), 1 (15J), 1 (5H), 1 (7J), 1 (8J); and form “OC”: 1 (15G). A sample of this sites’ sherds are illustrated in Plate 67.

PV48-173

Site PV48-173 is on the north bank of the Lurín river. It is approximately 46 km upstream, at an elevation of 1,160 *masl*. Although thirty-eight (38) sherds were observed at this site, unfortunately, none were shape diagnostic rims.

PV48-175

Site PV48-175 is a small site, south of the Lurín river, approximately 47 km upstream from the Pacific Ocean. It is at 990 *masl*. Immediately across it on the other side of the river is the much larger site PV48-164. The preservation at site PV48-175 is very poor. However, the site has some features; mainly crudely cut stone wall without mortar. The wall was constructed of stones of varied sizes There was an apparent square room, but it is size was difficult to determine. Grinding stones and rocker mills suggested a domestic site. In addition, the site contains some lithographs, discovered on a boulder. From the sixty-eight (68) sherds observed at this site, ten (10) were rims; their shapes and colors are as follows: form “BW”: 1 (7K); form “CC”: 1 (5A); form “CJ”: 1 (8J); form “LCL”: 1 (15J); form “CN”: 1 (15J); form “CNQ1”: 1 (15J); form “DA”: 1 (15G); form “Kero-like”: 1 (8J); form “OB”: 1 (6H); and form “W1”: 1 (7J). In sum, PV48-175 has

sherds in the following colors: 5A, 6H, 7J, 7K, 8J, 15G, and 15J. A sample of this sites' sherds are illustrated in Plate 68.

PV48-177

Site PV48-177 is south-east of site PV48-175. It also is approximately 47 km upstream from the Pacific Ocean, south of the Lurín River, at an elevation of about 990 *masl*. The site is relatively small, but it contains both terraces and walled structures. At some points, the walls reach a height of about 1.5 meter and range from approximately 15 centimeters to 1 meter in width. The walls are made of field stones with no mortar. Field observations impressed a late occupation. The site had a plethora of lithic materials associated with it. All in all, site PV48-177 has sherds in the following colors: 4G, 4J, 5A, 5H, 5J, 6J, 13D, 13G, 14G, and 16A. From the fifty-five (55) sherds observed at this site, seventeen (17) were rims; their shapes and colors are as follows: form "BW": 1 (5A); form "BZ1": 1 (13D), 1 (13G), 1 (14G), 1 (4J), 2 (5A), 1 (5J); form "CE": 1 (16A), 1 (4G), 1 (6J); form "CJ": 1 (5A), 1 (5H); form "CU": 1 (13D), 1 (5A); form "CZ1": 1 (5A); and form "Kero-like": 1 (5J). A sample of this sites' sherds are illustrated in Plate 69.

PV48-179

Site PV48-179 has no field notes associated with it. From the thirty (30) sherds observed at this site, five were rims; their shapes and colors are as follows: form "BV": 1 (14G); form "CE": 1 (13G), 1 (14D); form "Kero-like": 1 (14G); and form "OB": 1 (14G). In

sum, PV48-179 has sherds in the following colors: 13G, 14D, and 14G. A sample of this sites' sherds are illustrated in Plate 70.

PV48-188

Site PV48-188 is approximately 55 *masl*. It is approximately 2 km northeast of the Pacific Ocean, and approximately 3 km northwest mouth of the Lurín River. It is adjacent to PV48-189. Although forty (40) sherds were observed, unfortunately none were of shape diagnostic rims.

PV48-189

Site PV48-189 is adjacent to PV48-189, about 70 meters south of PV48-186. It is located approximately 2 km northeast of the Pacific Ocean and approximately 3 km northwest of the mouth of the Lurín River. It is a very small site on the side of a hill overlooking the Tablada de Lurín and the Pacific Ocean. It largely consists of a patch of shell mounds about 15 meters x 8 meters in dimension. It yielded only two pot sherds. From the two sherds observed at this site, one was a rim; its shape and color: form "CJ": 1 (6H). In total then, site PV48-189 has sherds in the following colors: 6H. A sample of this sites' sherds are illustrated in Plate 71.

PV48-193

Site PV48-193 is close to the beach and south of the Lurín valley, approximately 3 km from the ocean and some 3 km south-east of the river; its elevation is approximately 40 *masl*. Although several sherds were observed, none were rims.

However, PV48-193 has sherds in the following colors: 4J, 5A, 5J, 6H, 6J, 8J, 11D, 11G, 13B, 13D, 14A, 14D, 14G, 15A, and 17C. A sample of this sites' sherds are illustrated in Plate 72.

PV48-197

Site PV48-197 is a medium-size site approximately 1.5 km northwest from the Pacific Ocean, about one km south-east of the Lurín. It is at an elevation of about 20 *masl*. From the thirteen (13) sherds observed at this site, three were rims; their shapes and colors are as follows: form "BJ": 1 (5A); form "CE": 1 (12A); and form "Kero-like": 1 (13D). All in all, site PV48-197 has sherds in the following colors: 5A, 12A, and 13D. A sample of this sites' sherds are illustrated in Plate 73.

PV48-199

Site PV48-199 is called Huaca Malach. It is approximately 1.5 km northeast from the Pacific Ocean, about three km south-east of the Lurín. Modern encroachment has disturbed the site, including a modern cemetery and "some cow pens." As a consequence, sherds were difficult to collect. Nevertheless, from the seventy (70) sherds observed at this site, eleven (11) were rims; their shapes and colors are as follows: form "CC": 1 (14J); form "CE": 1 (15G); form "CJ": 1 (15J); form "LD": 1 (14G); form "LX": 1 (16J); form "OB": 1 (13G), 1 (15G), 1 (15J); form "OH": 1 (7J), 1 (8J); and form "OK": 1 (7J). In sum, site PV48-199 has sherds in the following colors: 7J, 8J, 12D,

13D, 13G, 14G, 14J, 15G, 15J, and 16J. A sample of this sites' sherds are illustrated in Plate 74.

PV48-208

Site PV48-208 is about 4 km north-east of the Pacific Ocean, 5 km northwest of the Lurín river, at about 5 *masl*. The site is roughly a 50-meter diameter area. The site contained Mesodesma shells. Noted sherds had punctuated decoration. Field impressions suggested the site was of Late Horizon occupation. All in all, site PV48-208 has sherds in the following colors: 5J, 6A, 13D, 13G, 14G, and 15A. From the thirty-five (35) sherds observed at this site, six were rims; their shapes and colors are as follows: form "CE": 1 (13G); form "CJ": 1 (6A); form "LC": 1 (15A); form "OH": 1 (13D), 1 (5J); and form "OL": 1 (13D). A sample of this sites' sherds are illustrated in Plate 75.

PV48-222

PV48-222 is about 2.5 km from the Pacific Ocean, 5 km north-west of the Lurín. Its elevation is about 40 *masl*. Site PV48-222, is a "J" shaped area about 150-meter-long and 25 meters wide. The site runs roughly north to south. Impression of the site based on the sherds is that it is late Early Intermediate Period. All in all, site PV48-222 has sherds in the following colors: 3B, 4A, 4B, 5B, 7B, 7E, and 1F. From the twenty-eight (28) sherds observed at this site, nine were rims; their shapes and colors are as follows: form "BB": 1 (7E); form "BW": 1 (7B); form "LJ1": 1 (4A), 1 (4B), 1 (7B); form "OB": 1 (4A);

form “OH”: 1 (11F), 1 (3B); and form “OM”: 1 (5B). A sample of this sites’ sherds are illustrated in Plate 76.

PV48-224

Site PV48-224 is about 2 km away from the Pacific Ocean, about 5 km north west of the Lurín. It is approximately 5 *masl*. Site PV48-224 has sherds in the following colors: 4G, 5H, 5J, 5K, 6H, 8A, 12J, 113A, 13D, 14G, and 15J. From the thirty-eight (38) sherds observed at this site, sixteen (16) were rims; their shapes and colors are as follows: form “BW”: 1 (5J); form “BZ”: 1 (6H); form “BZ1”: 1 (15J); form “CE-SMALL”: 1 (5H); form “CJ”: 1 (13D), 1 (5K); form “CM”: 1DE”: 1 (13A); form “DF”: 1 (5J); form “LC”: 1form “LZ”: 1 (8A); form “LZ1”: 1 (12J); form “OB”: 1 (15J); form “OH”: 1 (5J); and form “OI”: 1 (14G), 1 (4G). A sample of this sites’ sherds are illustrated in Plate 77.

PV48-229

Site PV48-229 is situated in the Tablada de Lurín. It is on a gentle slope overlooking the Tablada; about 1 km away from the Pacific, and 2 km north-west of the Lurín river. Its elevation is about 10 *masl*. PV48-229 is a large site. It extends 800 meters (NW-SW) and is about 400 meters at its widest. Much of the site this is covered by aeolian deposition. Field impression, based on the sherds collected in the surface, suggests a Late Horizon occupation. Overall, PV48-229 has sherds in the following colors: 5A, 6G, 6J, 7J, 7K, 13G, 14D, 14G, 14J, 15K, 16H, and 16K. From the thirty-two (32) sherds observed at this site, twenty-one (21) were rims; their shapes and colors are

as follows: form “BB”: 1 (14J); form “CE”: 1 (6G); form “CI1”: 1 (16H); form “CM”: 1 (16H); form “CNQ1”: 1 (6J); form “CO”: 1 (5A); form “CU”: 1 (7J); form “LC”: 1 (14G); form “LJ1”: 1 (5A), 1 (7K); form “OH”: 2 (13G), 1 (14D), 3 (14G), 1 (14J), 1 (15K), 1 (16K), 1 (7J); and form “OI”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 78.

PV48-232

Site PV48-232 is approximately 1.5 km north east of the Pacific, approximately 5 km northwest of the mouth of the Lurín River. Its elevation is that of about 5-10 *masl*. The site is a 250-meter-long concentration of sherds and chipped stone artifacts, and Mesodesma shells. The site is oriented north to south. The initial impression of the site was that it had a late Early Intermediate period; perhaps Lima Phase nine. From the nineteen (19) sherds observed at this site, four were rims; their shapes and colors break down as follows: form “CE”: 1 (16A); form “CZ7”: 1 (15J); form “LZ1”: 1 (13G); and form “OG”: 1 (14J). In sum then, site PV48-232 has sherds in the following colors: 12G, 13G, 14J, 15J, and 16A. A sample of this sites’ sherds are illustrated in Plate 79.

PV48-234

PV48-234 is located in the Tablada de Lurín. IT is about 1.5 km from the Pacific and about 6.5 km north-west of the Lurín. It has a low elevation of about 20 *masl*. Site PV48-234 was a surface collection shells, "late sherds" (of the Early Intermediate period), and a few cobbles., concentrated in a 20 x 20-meter area. Site PV48-234 has sherds in the following colors: 5A, 8J, and 14G. From the seventeen (17) sherds

observed at this site, five were rims; their shapes and colors are as follows: form “CE”: 1 (5A); form “LCL”: 1 (8J); form “CO”: 1 (14G); form “DF”: 1 (5A); and form “LZ”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 80.

PV48-236

The site is located in the Tablada de Lurín. Site PV48-236, a large site approximately 1 km from the Pacific and approximately 5 km northeast of the mouth of the Lurín River, sits at about 5-10 *masl*. The site is long and narrow. It is paralleled by site PV48-238, which in turn is paralleled by site PV48-316. These three sites are the largest in an area with a high concentration of sites; all in close proximity to each other. Site PV48-236 has sherds in the following colors: 7J, 14D, 15G, and 16D. From the twenty-eight (28) sherds observed at this site, four were rims; their shapes and colors are as follows: form “CO”: 1 (14D), 1 (15G), 1 (7J); and form “DF”: 1 (16D). A sample of this sites’ sherds are illustrated in Plate 81.

PV48-238

The site is located in the Tablada de Lurín. Site PV48-238 is approximately 1 km northwest of the Pacific Ocean and approximately 5 km northeast of the mouth of the Lurín River. It is approximately 40 *masl*. The site is fairly long and narrow; it is found between two equally large sites, site PV48-236 which is immediately southwest of it and site PV48-316 which is northeast of it. The site is small, approximately some 50 x 50 meters, in a Loma vegetation zone with aeolian deposition which covered parts of it.

The site gave the impression of being a domestic habitation site, based on one cooking sherds discovered in it. Overall, site PV48-238 has sherds in the following colors: 5J, 6J, 13D, 13G, and 14G. From the eight sherds observed at this site, six were rims; their shapes and colors are as follows: form "BJ": 1 (13D), 2 (13G), 1 (14G), 1 (5J), and 1 (6J).

PV48-254

The site is located in the Tablada de Lurín. Site PV48-254 is a very small site approximately 2 km from the Pacific and approximately 5 km northwest of the Lurín. It is about 20 *masl*. The site is northwest of the much larger site PV48-255. This site is a 40 x 40-meter scatter of Mesodesma with some Loma snail shells. There are some sherds which, on the field, suggested Late Horizon fragments. PV48-254 has sherds in the following colors: 5J, 13G, and 13J. From the fifteen (15) sherds observed at this site, eleven (11) were rims; their shapes and colors are as follows: form "BZ1": 1 (13G); form "CE-SMALL": 2 (13G); form "OB": 1 (13G), 1 (13J), 1 (5J); and form "OH": 5 (13G). A sample of this sites' sherds are illustrated in Plate 82.

PV48-255

Site PV48-255 is a medium-size site approximately 2 km northwest of the pacific, approximately 5 km northeast of the mouth of the Lurín River. Its elevation is about 40 *masl*. It is surrounded by other small sites and forms a grouping of larger sites found in this geographic region. The site itself runs northwest to southeast and is approximately 400 meters x 100 meters of scattered shell, sherds, and worked stone. The site consists

of isolated concentrations of Mesodesma. From the twelve (12) sherds observed at this site, two were rims; their shapes and colors are as follows: form “CE”: 1 (13G); and form “CN”: 1 (13H). In sum, PV48-255 has sherds in the following colors: 13G, and 13H. A sample of this sites’ sherds are illustrated in Plate 83.

PV48-257

Site PV48-257 is approximately 2 km northeast of the Pacific, approximately 5 km northwest of the Lurín. It is about 40 *masl*. The site is small. It forms part of a larger grouping of sites common in the Tablada de Lurín. The site is an elongate patch of Lomas snail with Mesodesma shells approximately 50-meter x 15 meters running northwest to southeast. Field impressions suggested the site to be of Late Horizon occupation. From the fourteen (14) sherds observed at this site, five were rims; their shapes and colors are as follows: form “CE”: 1 (13G); form “CJ”: 1 (15B); form “LCL”: 1 (15J); form “OA”: 1 (14H); and form “OI”: 1 (13G). In sum then, PV48-257 has sherds in the following colors: 13G, 14H, 15B, and 15J. A sample of this sites’ sherds are illustrated in Plate 84.

PV48-274

Site PV48-274 is small to medium-sized site approximately 1.5 km northeast of the Pacific and approximately 4 km northwest of Lurín River. IT is the Tablada de Lurín, about 40 *masl*. The site also belongs along a larger cluster of sites which are also found there. The site is approximately 150 meters x 20 meters patch of Lomas snail's shells

with a few isolated pockets of Mesodesma shell. Along the shells, several pieces of ceramic sherds were found. From the twenty-nine (29) sherds observed at this site, thirteen (13) were rims; their shapes and colors are as follows: form "CA1": 3 (13D), 1 (13G), 1 (14D), 1 (14G), 1 (15J), 1 (4J); form "CN": 1 (6J); form "CU": 1 (8G); form "Kero-like": 1 (13G); form "LZ1": 1 (5J); and form "OA": 1 (4G). In sum then, PV48-274 has sherds in the following colors: 4G, 4J, 5J, 6J, 8G, 13D, 13G, 14D, 14G, and 15J. A sample of this sites' sherds are illustrated in Plate 85.

PV48-286

Site PV48-286 overlooks the north bank of the Lurín. It is approximately 60 km upstream from the Pacific at 1,500 *masl*. The site is located to the west of the Quebrada, near PV48-284. PV48-286 is a large site. It is terraced and with assorted styles of architectural structures visible. Field impressions suggested the site was probably fortified. The site includes several rectangular rooms, both small and large, with an average dimension of 2-meter x 1.5 meter. The site extends up to a hilltop and is littered by many types of sherds suggesting a long occupation. The team noted that "the decorated pottery has a fine sand temper and is a pale orange pace highly fine and that it has a metallic sheen" (Patterson 1966-68 field notes). Overall, PV48-286 has sherds in the following colors: 4J, 5H, 5J, 6H, 7B, 12D, 13B, 13G, 14B, 14G, 15J, and 16A. From the sixty (60) sherds observed at this site, seventeen (17) were rims; their shapes and colors are as follows: form "BE": 1 (14B), 1 (16A); form "CJ": 1 (5J); form "CM": 1

(5H), 1 (6H); form “CO”: 1 (13G), 1 (4J); form “CQ”: 1 (15J), 1 (7B); form “CT”: 1 (4J); form “CU”: 1 (5J); form “DC”: 1 (14G); form “Kero-like”: 1 (13B); form “LZ5 (Aryballoid)”: 1 (no color recorded); and form “OI”: 1 (12D), 1 (13G), 1 (5H). A sample of this sites’ sherds are illustrated in Plate 86.

PV48-289

Site PV48-289 is a small site, approximately 66 km upstream from the Pacific Ocean. It lies north of Lurín River at an elevation of 1,740 *masl*. Site PV48-289is a small site composed of two main structures. The first was about 8 meters x 5 meters. The other structure was a house type, with fieldstone walls without mortar, rectangular in shape, and with a doorway. From the nine sherds observed at this site, four were rims; their shapes and colors are as follows: form “BZ5”: 1 (7J); form “CU”: 1 (14G); and form “LC”: 2 (8J). In sum then, PV48-289 has sherds in the following colors: 7J, 8J, and 14G. A sample of this sites’ sherds are illustrated in Plate 87.

PV48-290

Site PV48-290 is approximately 65 km upstream from the Pacific Ocean at an elevation of 1,740 *masl*. It is north of the Lurín, located on Hill Cerro Mancay. PV48-290 is approximately 40 meters in diameter. There are several architectural features in the site. Most of these are walls made of stone. Some windows in the architectural features remain. These are trapezoidal and constructed from large thin rocks which framed the opening. One room at the site, was approximately 2.4 meter in length (no

mention of its width). Close by, on a hill, there is another large constructed wall about 3 meters high. On one side of the sites there is a large patio approximately 10 meters x 8 meters which held a retaining wall about 1.5meters high. Below the site, sloping on the hill, were two more terraces built with river cobbles, constructed without mortar. Field impression put the site as a Late Horizon occupation.

Overall, PV48-290 has sherds in the following colors: 5A, 6J, 7J, 8J, 8K, 8L, 13D, 13G, 14D, 14G, 15G, 15H, 15J, and 15K. From the one197 sherds observed at this site, thirty-eight (38) were rims; their shapes and colors are as follows: form "BO": 1 (8J); form "CM": 1 (8J); form "CN": 1 (8K), 2 (15H), 2 (7J), 1 (15G), 2 (5A); form "CO": 2 (14G), 1 (8L), 1 (6J), 2 (13D), 2 (15G), 1 (14D), 1 (6J), 1 (8J), 1 (15K), 1 (7J), 1 (15J); form "C-short neck": 1 (7J); form "CY": 2 (8L), 1 (8K), 1 (7J), 1 (14G); form "DO": 1 (13G); form "LD": 1 (15K); form "LJ1": 1 (15G), 1 (15J), 1 (6J); form "KERO": 1 (7J); form "LO": 1 (13G); and form "LZ2": 1 (8J). A sample of this sites' sherds are illustrated in Plate 88.

PV48-292

Site PV48-292 is approximately 72 km upstream from the Pacific. It is southeast of the Lurín river, approximately 2,300 *masl*. Site PV48-292is a large hilltop site that ascends the peak; there is still a plaza in it. The walls found at the site are made of gray and white granite stone, mortared, and at times double layered; that is, at places there is a double stone wall. The width of the walls is approximately 40 cm. There are a number of houses or rooms. Most are 2 x 3 meters in dimension, rectangular shape.

There are also a number of structures that have niches; these niches are approximately 35 to 45 cm approximately 50 cm deep. In addition, the site also has a number of crypts about 1.5 meters in height —these contain piles of bones. There was also evidence of looting.

Overall, PV48-292 has sherds in the following colors: 13D, 14G, and 14J. From the six sherds observed at this site, five were rims; their shapes and colors are as follows: form “CE”: 1 (13D); form “CE-SMALL”: 1 (14G); form “CM”: 1 (14G); form “Kero-like”: 1 (14J); and form “OH”: 1 (13D).

PV48-295

Site PV48-295 is approximately 69 km upstream from the Pacific Ocean, south of the Lurín, at an elevation of 2,300 *masl*. It is found at the bottom of watershed. Site PV48-295is a very small site with several features including stone terraces made of grainy black stones along the path, close to Rio Seco. The terrace walls are under 1 meter high. There are a number of platforms as well. They are about 1 x 1.5 meters in dimension. There are some walls that rest against the slope of the hill. They are constructed of fieldstone with about 3 cm of mortar in vertical planes at times, but no mortar at other times. Modern sherds were found in the collection, as were earlier occupations. From the thirty-four (34) sherds observed at this site, two were rims; their shapes and colors are as follows: form “BZ5”: 1 (15A), form “BZ5”: 1 (16A). A sample of this sites’ sherds are illustrated in Plate 89.

PV48-299

Site PV48-299 is approximately 68 km upstream from the Pacific, north of the Lurín. It is at an elevation of 1,800 *masl*. This site extends through the slopes onto a Quebrada. This small site consists of several architectural features including terraces, semicircular structures, and rectangular structures. The walls are piled fieldstone without mortar. In the semicircular structures there are protruding rocks for roof support. The rectangular structures are 2 x 3 meters in dimension. Field impressions of the site assemblage suggest a Late Horizon occupation. From the twenty (20) sherds observed at this site, seven were rims; their shapes and colors are as follows: form "CE-SMALL": 1 (4G); form "CM": 1 (13D); form "CN": 1 (6J); form "CO": 1 (15D), 1 (16J); form "CZ1": 1 (13G); and form "DF": 1 (13G). In all, PV48-299 has sherds in the following colors: 4G, 6J, 13D, 13G, 15D, and 16J. A sample of this sites' sherds are illustrated in Plate 90.

PV48-302

Site PV48-302 is north to the Lurín river, approximately 63 km upstream from the Pacific Ocean, at an elevation of 1,800 *masl*. Site PV48-302 is a large site which extends up on a hill and into its bend. The site contains several architectural features These include many walls, which are about 1 meter high, are scattered throughout the site. Some of the wall seem to have mortar between the stoves while others do not. Some of the wall's circumference rooms, that are usually 2.5 x 3 meters in dimension.

These rooms have curved corners, are angular, large, and whose walls have some mortar between them. One room was roughly 5 x 3 meters in dimension. The site is likely a multifamily domicile, based on cooking pots and a large number of grinding stones which are loaf shaped and which found on many of the rooms.

Overall, PV48-302 has sherds in the following colors: 5A, 7J, 8J, 13D, 13G, 15G, and 15J. From the twenty-nine (29) sherds observed at this site, twelve (12) were rims; their shapes and colors are as follows: form "CE": 1 (13G), 1 (15G), 1 (15J), 1 (7J); form "CJ": 1 (5A); form "LJ1": 1 (13D); form "LY1": 1 (13G); form "LZ1": 1 (7J), 1 (8J); form "OB": 1 (7J); form "OH": 1 (5A); and form "W1": 1 (5A). A sample of this sites' sherds are illustrated in Plate 91.

PV48-303

Site PV48-303 is a small site, north of the Lurín River, approximately 64 km upstream of the Pacific at an elevation of about 1,800 *masl*. This site is likely a continuation of site PV48-290 –which lies adjacent to it— but which is separated from it geographically. This part of the site is located on a hilltop, and possibly forms a defensive hilltop site. There are two architectural components to the site which allow it to be subdivided into two components. Field-impressions, therefore, were that the site had at least two temporal components to it. An early occupation perhaps, followed by a second brief occupation during the Late Horizon. Whatever the case may be, in all, site PV48-303 has sherds in the following colors: 5J, and 6J.

PV48-303a

Site PV48-303a had a peculiar feature; It is an almost circular room, unattached to other features of the site. The walls of this site are constructed of angular blue green and gray stones roughly 7 to 35 cm is size, mortared with adobe. From the nine sherds observed at this site, two were rims; their shapes and colors are as follows: form "OH": 1 (5J), 1 (6J). A sample of this sites' sherds are illustrated in Plate 92.

PV48-303b

Sub-site PV48-303b has strong defensive features. There is one double constructed wall, at least 2.5 meters tall, 40 cm wide, and pebble-filled. Other rooms in this component have rectangular corners. From the nineteen (19) sherds observed at this site, one was a rim; its shape and color: form "CO": 1 (5J). A sample of this sites' sherds are illustrated in Plate 93.

PV48-315

Site PV48-315 is approximately 1 km from the Pacific, approximately 4 km northwest of the Lurín, and at an elevation of 20 *masl*. Site PV48-315 is located in a small saddle between sites PV48-314 and the higher part of the Cerro, in La Tablada de Lurín. The site is roughly oval in shape, 150 meters (east-to-west) x 75-100 meter (north-to-south). The site has an impoverished assemblage with only a few sherds available for collection. From the seven sherds observed at this site, one was a rim; its

shape and color: form “LF”: 1 (5J). A sample of this sites’ sherds are illustrated in Plate 94.

PV48-332

Site PV48-332 is located approximately 59 km upstream Pacific Ocean, on a ridge on the north side of the Lurín, at an elevation of about 1,500 *masl*. The site is not directly adjacent to the river, but it is situated below Antioquia. Site PV48-332 has stone walls along the side of the hill. The walls are made of irregular stones, and largely stacked with no mortar. Some of the walls are doubled walled with pebble-filled. There were at least two levels of terraces at the site. Overall, PV48-332 has sherds in the following colors: 6J, 7K, 8J, 8K, 14D, 15D, and 15G. From the eighty-seven (87) sherds observed at this site, nine were rims; their shapes and colors are as follows: form “CH1”: 1 (14D); form “CN”: 1 (8K); form “CO”: 1 (8K); form “CU”: 1 (15G); form “LJ1”: 1 (15G), 1 (7K); form “LZ”: 1 (8J); form “LZ4”: 1 (15D); and form “OK”: 1 (6J). A sample of this sites’ sherds are illustrated in Plate 95.

PV48-333

Site PV48-333 is approximately 62 km upstream of the Pacific Ocean, just north of the Lurín River, below Antioquia, at an elevation of about 1,500 *masl*. It is a small site at a bottom of a watershed. The main part of the site is a cluster of structures near a large flat rectangular area. At the time the field notes were taken, there was modern construction encroaching the site. The walls that remain visible were made of several

layers. The first made of stones, and the second layer of irregular sized stones mortared with adobe, much of which had been weathered out. The shapes of the standing structures were that of small squares and rectangles close to 2 x 3 meters in diameter. These had nonparallel walls. The walls of the site are generally double rows of stones, but not always. The assemblage includes domicile artifacts including "rocker stones" and milling stones.

From the twenty-five (25) sherds observed at this site, twenty (20) were rims; their shapes and colors are as follows: form "BD": 1 (6J); form "CC": 1 (7J); form "CE": 5 (13D), 3 (14G), 1 (15H), 1 (7J); form "CO": 1 (13G); form "CP": 1 (5J); form "CU": 1 (14G), 1 (5A); form "DE": 1 (5A); and form "OB": 1 (13D), 2 (14G). In sum then, site PV48-333 has sherds in the following colors: 5A, 5J, 6J, 7J, 13D, 13G, 14G, and 15H. A sample of this sites' sherds are illustrated in Plate 96.

PV48-335

Site PV48-335 is approximately 58 km upstream from the Pacific Ocean. It is a medium-size site just north of the Lurín River. The site is at the bottom of a watershed at an elevation of about 1,300 *masl*. Overall, PV48-335 has sherds in the following colors: 5A, 6J, 7J, 8J, 13D, 14G, 15G, 15J, 16H, and 16K. From the sixty-seven (67) sherds observed at this site, twenty-five (25) were rims; their shapes and color rages are as follows: form "BK2": 1 (15J); form "CE": 1 (14G), 1 (15G), 3 (15J), 1 (16K), 1 (7J), 2 (8J); form "CI": 1 (7J); form "CI1": 1 (7J); form "CJ": 1 (5A); form "CN": 1 (15J), 1 (6J), 2 (8J);

form “CO”: 1 (15J), 1 (7J); form “LJ1”: 1 (14G), 1 (15J), 1 (16H), 1 (7J); and form “LZ2”: 1 (13D), 1 (7J). A sample of this sites’ sherds are illustrated in Plate 97.

PV48-337

Site PV48-337 is approximately 56 km upstream from the Pacific, north of the Lurín river, about 1,350 *masl*. The site possesses a retaining wall and a circular structure constructed of regular river cobbles in courses and in some doorways. The diameter of a second circular structure is approximately 2.5 meter. Above these features, on the hills, are terraces. PV48-337 was observed late in the day; Patterson’s teams laments that few details are provided due to the time of day recorded. Nevertheless, the site has two clusters of artifacts and was therefore divided into two parts. In total though, site PV48-337 has sherds in the following colors: 8L, 14G, and 16J.

PV48-337a

From the thirty-six (36) sherds observed at this site, one was a rim; its shape and color: form “CO”: 1 (14G).

PV48-337b

From the four sherds observed at this site, two were rims; their shapes and colors are as follows: form “OB”: 1 (16J), 1 (8L). A sample of this sites’ sherds are illustrated in Plate 98.

PV48-341

Site PV48-341, 53 km upstream from the Pacific and at about 1,150 *masl*, is just north of the Lurín river. It is a small site on the valley floor. PV48-341 has a number of mounds similar to those found around Sisicaya. Most mounds have parts of walls visible. The walls were crudely made with stones of variable sizes. From the fourteen (14) sherds observed at this site, four were rims; their shapes and colors are as follows: form "BE": 1 (15G), 2 (15J), 1 (8J). A sample of this sites' sherds are illustrated in Plate 99.

PV48-342

Site PV48-342 is approximately 55 km upstream from the Pacific Ocean, about 1,300 *masl*. It is on the north bank of the river, in a watershed not directly facing the Lurín. The site is composed of terrace features of small and tightly packed field stones; chinks in the crack are filled with a medium amount of mortar. The site consists of approximately 15 platforms, one of which was 4 x 4 meters in dimension. Others were smaller, and yet others larger. Rocker mills and milling stones were found at the site. Other than these platforms, no distinguishable visible architectural features were observed. Site PV48-342's artifacts cluster into two spatial loci. With both loci combined, site PV48-342 has sherds in the following colors: 4J, 5J, 13D, 14D, 14G, 15G, and 15J.

PV48-342a

From the twenty-two (22) sherds observed at this site, eight were rims; their shapes and colors are as follows: form “BB”: 1 (14D); form “CE”: 1 (4J), 1 (5J); form “CU”: 1 (14G); DN”: 1 (15G); form “DO”: 1 (15J); form “LC”: 1 (14D); and form “LZ1”: 1 (13D). A sample of this sites’ sherds are illustrated in Plate 100.

PV48-342b

Although eleven (11) sherds were observed here, none were of diagnostic rim shapes.

PV48-343

Site PV48-343 lies south of the Lurín in a watershed, not directly overlooking the river. It is approximately 48 km upstream of the Pacific at an elevation of about 1,400 *masl*. Artifacts at the site cluster into two loci. In all, site PV48-343 has sherds in the following colors: 5A, 5J, 6I, 6J, 7A, 7G, 7J, 7K, 8J, 12A, 12D, 13A, 13D, 13G, 14D, 14G, 14H, 15D, 15G, 15J, 15K, and 16K.

PV48-343a

From the seventy-seven (77) sherds observed at PV48-343a, forty-three (43) were rims; their shapes and colors are as follows: form “BH”: 1 (7J); form “BJ”: 1 (15G), 1 (6J); form “BO”: 1 (13G); form “CE”: 1 (13D), 1 (14G), 1 (14H), 2 (15G), 1 (15J), 1 (6J), 1 (7J), 1 (8J); form “CJ”: 1 (15J), 1 (5J); form “CM”: 1 (5A), 1 (5J), 1 (7J); form “CN”: 1 (13A); form “CO”: 1 (6J), 1 (7J); form “CU”: 1 (13G); form “CZ”: 1 (15G); form “CZ8”: 1 (14G); form “DF”: 2 (13D), 3 (14G), 1 (16K), 1 (7G); form “Kero-like”: 1 (13G), 1 (14G), 1 (15G), 1

(15K), 1 (16K), 1 (5A), 1 (5J); form “LY”: 1 (13D); form “LZ1”: 1 (12A); form “LZ2”: 1 (8J); form “OB”: 1 (7J); and form “OG”: 1 (14G). A sample of this sites’ sherds are illustrated in Plate 101.

PV48-343b

From the thirty-two (32) sherds observed at PV48-343b, eight-teen (18) were rims; their shapes and colors are as follows: form “BJ”: 1 (7J); form “CM”: 1 (13D); form “CN”: 2 (14D), 1 (5A); form “CO”: 1 (15G), 1 (6I), 1 (7A), 2 (7J), 1 (7K); form “CQ”: 1 (14G); form “DF”: 1 (15G), 1 (7G); form “LJ1”: 1 (12D), 1 (13G), 1 (15D); and form “OB”: 1 (7K). A sample of this sites’ sherds are illustrated in Plate 102.

PV48-345

Site PV48-345 is approximately 53 km upstream of the Pacific Ocean. The site is found south of Lurín River, at the foot of a watershed, in close proximity to the river itself, at an elevation of 1,150 *masl*. The site has a large series of terraces, a cemetery, and several rooms which are rectangular. There is also a large Plaza there. There is a good amount of pottery scattered about the site. Field impressions from ceramics suggest a Late Horizon occupation of the site. The site is subdivided into two parts, the higher elevation part designated PV48-345b, while the lower elevation portion, to the north and closer to the water, PV48-345a.

PV48-345a

From the eighteen (18) sherds observed at this site, twelve (12) were rims; their shapes and colors are as follows: form “CJ”: 1 (14H); form “CN”: 2 (14G), 2 (5A), 1 (7H); form “CO”: 1 (7J); form “DF”: 2 (6J); DN”: 1 (7H); form “OB”: 1 (7J); and form “OL”: 1 (5A).

PV48-345b

From the thirty (30) sherds observed at this site, fourteen (14) were rims; their shapes and colors are as follows: form “LCL”: 1 (5A; form); form “LCL”: 1 (5H); form “CN”: 1 (14D), 1 (5A), 1 (5J); form “CO”: 1 (13D), 1 (5A), 1 (5J), 1 (6J), 1 (7K); form “CU”: 1 (14D); form “Kero-like”: 1 (6J); and form “LZ”: 1 (14G), 1 (5A). A sample of this sites’ sherds are illustrated in Plate 103.

PV48-347

Site PV48-347 is approximately 53 km upstream from the Pacific Ocean. It is on a southern bank of the Lurín River, adjacent to site PV48-345, at an elevation of about 1,150 *masl*. It is a medium-size site in close proximity to the Lurín. In all, site PV48-347 has sherds in the following colors: 5J, 6J, 6K, 7J, 7K, 8J, 12H, 13D, 14D, and 14G. From the ninety-five (95) sherds observed at this site, twenty (20) were rims; their shapes and colors are as follows: form “BO”: 1 (5J); form “CC”: 1 (13D); form “CN”: 1 (13D), 1 (5J), 2 (6J), 1 (7J); form “CNQ1”: 1 (14G); form “CO”: 1 (14G), 1 (7J); form “CQ”: 1 (8J); form “CU”: 1 (14G), 1 (7K); form “DF”: 1 (13D); form “Kero-like”: 1 (12H), 1 (14D), 1 (6K), 1

(7J); form “LD”: 1 (5J); and “B1-Unique.” A sample of this sites’ sherds are illustrated in Plate 104.

PV48-349

Site PV48-349 is approximately 55 km upstream of the Pacific Ocean, at about 1,150 *masl.* It is on a south bank of the Lurín river, overlooking it. The site contains several pits, some of which are larger and 3 x 3 meters in dimension. The pits are roughly squared shaped but maybe have a semi-square shape. There must be over 40 similar pits in the area. Fieldnotes note that the site has modern trash scattered about it. In sum, site PV48-349 has sherds in the following colors: 7J, 13D, 14A, 14G, 15G, and 15J. From the forty-seven (47) sherds observed at this site, seven were rims; their shapes and colors are as follows: form “CE”: 1 (15J), 1 (7J); form “DF”: 1 (14G); form “LJ1”: 1 (14A); and form “OA”: 2 (13D), 1 (15G). A sample of this sites’ sherds are illustrated in Plate 105.

PV48-351

Site PV48-351 is approximately 51 km upstream of the Pacific Ocean at about 1,150 *masl*. It is located to the south of the river. It is a medium-sized site which faces site PV48-349 which lies across the watershed, southwest to it. It is curious to note that both these sites, face a larger site directly across the Lurín River —site PV48-350. They almost seem complementarily paired. Site PV48-351 is approximately 200 meters long x 70 meters wide. This does not include the hill terraces surrounding the clustered of

structures of the site. The site has several architectural features made of stones walls without mortar. The walls are built with boulder-size foundations, medium-size stones on the next level, and even smaller stones on the top levels. The walls are uneven, with no flattening attempt visible. The rooms are small, roughly 2 x 2.5 meters in dimension. There are also round rooms at the site; these have narrow space between them. The 1-meter high terraces are constructed of fieldstones about 7 to 15 inches in dimension. Overall, PV48-351 has sherds in the following colors: 6J, 7J, 13D, and 15J. From the twelve (12) sherds observed at this site, four were rims; their shapes and colors are as follows: form “CE”: 1 (7J); form “CU”: 1 (15J); and form “LJ1”: 1 (13D), 1 (6J). A sample of this sites’ sherds are illustrated in Plate 106.

Appendix E – Color categories

The book *A Dictionary of Color* provided 18 color Plates that were used to classify the color of each ceramic analyzed; Plates 1-18 (Maerz and Paul 1950, 24–59, Plt.1-18). In the dictionary each color Plate forms a color-coded table. Each table has a maximum of 12 columns categories (alphabetized A, B, C... L) and a maximum of 12 rows (enumerated 1, 2, 3... 12). The color differentiation between the resulting 144 cells in each plate is nuanced and not readily differentiated. Therefore, color bundles were formed by clumping similar colors into larger categories. These categories were systematically chosen based on colors cells proximity to each other based on original alphabetical column and enumerated row. Effectively, each color plate was reduced to 12 color categorical groups. For example color "11A" encompasses all the colors in color Plate 11 columns A, B, C, and D, and in row 1, 2, and 3. Color "11B" are colors in color Plate 11 columns E, F, G, and H, and in row 1, 2, and 3. Color "11C" are those colors in color Plate 11 columns I, J, K, and L, and in row 1, 2, and 3. Color "11D" are those in color Plate 11 columns A, B, C, and D, and row 4, 5, and 6, and so on (see Figure Appendix E.1). Although the "resolution" of the plates was reduced, the 18 color plates utilized afforded 216 color categories to be differentiated.

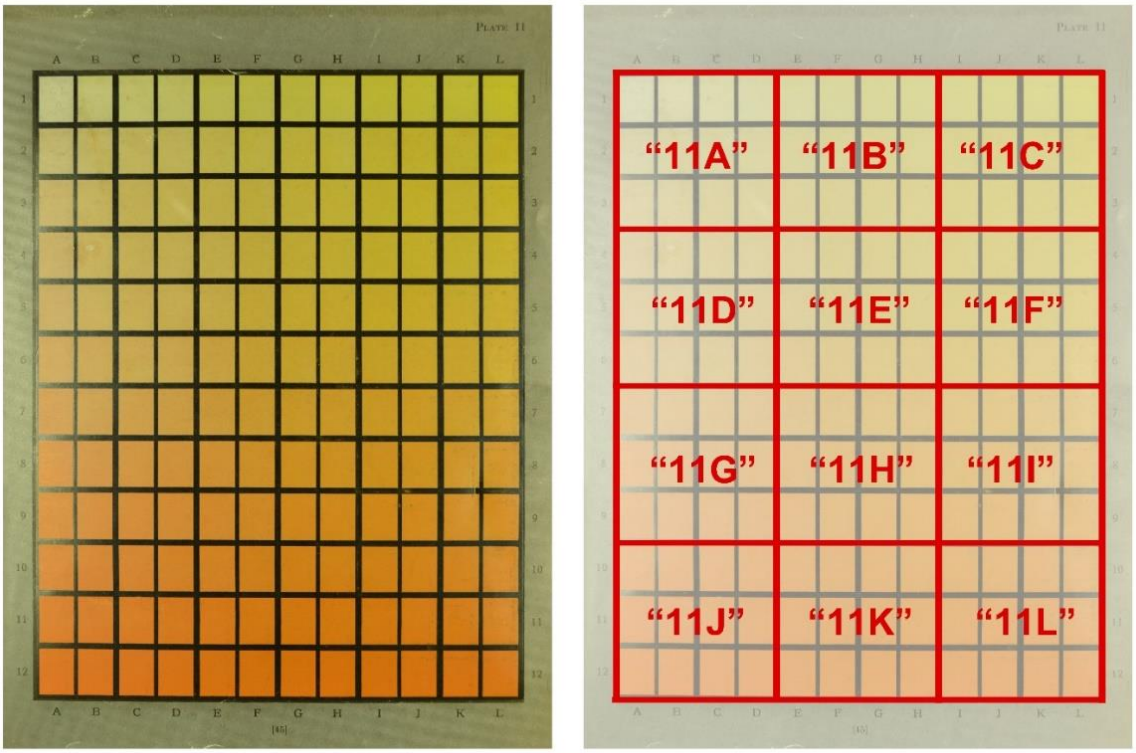


Figure Appendix E. 1. Modified from Maerz and Paul’s (1950, Plt.11) book. The reduction schema demonstrates the one-hundred and forty-four (144) colors categories from plate 11 reduced to a more manageable twelve (12) color categories.

Appendix F – Paste and clay fabric attributes

I examined the thousands of sherds visually with a 20-x magnification loupe and defined 15 paste types labeled Paste A-O. They differ in matrix color, inclusions, porosity, texture, fracture of paste, temperatures fired, and plasticity. These are presented below, in no particular order, and are illustrated in Figure Appendix F.1 and summarized in Table Appendix F.1. The color descriptions are modified from Maerz and Paul's (1950)book as described in Appendix E.

PASTE A: Is a bright orange colored paste, with colors ranging from 9G, 9H, 9J, 10G, 10J, 11G, 11J, and 12J. The matrix may be very-fine to fine-sized with little porosity. Inclusions are small, white-colored, semi-granular quartz which compose less than 10% of the overall paste.

PASTE B: Is a dull red colored matrix with hues around 7C, 7H, and 8H. The paste may have very-fine to fine sized sand which makes up less than 15% of the overall paste. There are visible inclusions in the paste; small and medium sized white quartz, as well as smaller darker semi-rounded minerals. The matrix is semi-compact.

PASTE C: Is a light gray colored matrix which changes color when fired as seen by uneven temperatures in several of the clay profiles. The color of Paste C ranges from 5A, 6A, 7A, and 7G. The paste is largely inclusion-free, however

when inclusions do occur, they are usually a small, granular, white quartz which makes up 5-10% of the paste. The matrix is semi-porous.

PASTE D: Is a light brown matrix with hues in the range of 15G, 15J, 14G, 14J, and 16J. The paste has small rounded inclusions made of white quartz which are visible to the naked eye and make up less than 10% of the overall matrix. The matrix is semi-compact.

PASTE E: Is a dull gray matrix with hues in the 8A, 8G, 16A, and 15A range. This paste has a very-fine to fine clay matrix with few or no visible inclusions. The matrix tends to be uniformly colored throughout. The matrix is compact, with almost no porosity whatsoever.

PASTE F: Is a bright red matrix with hues in the 5F, 6A, 6E, GF, GI, 7C, 7F, and 7I range. The paste has visibly small white angular and rectangular quartz inclusions. Less visible, but present, are small rounded dark particle inclusions as well. The matrix is porous. Overall, the inclusions make up about 30% of the paste, making it quite porous. The paste is susceptible to color change when heated; it turns into a dark gray in the 8A or 8G range; likely a by-product of being fired in a reduced atmosphere.

PASTE G: Is a light brown colored paste ranging in hues 14J, 14K, and 14L. The paste has coarse, angular, white quartz inclusions which make up a high percentage of the matrix (~30%). These inclusions can be large, the matrix is semi-porous.

PASTE H: Is a light rose-cream colored paste in the color range 4A, 3A, 2A, and 1A. It is unique in that is has very coarse, dark, angular, and abundant inclusions that make up to 40% of the paste.

PASTE I: Is a very light rose-cream colored paste in the color range 4A, 3A, 2A, and 1A, similarly, to Paste H. It differs from Paste H in that its inclusions are small to fine sized, of both dark colored angular quartz and rounded dark inclusions which are represented in about equal amounts. The inclusions make up less than 15% of the paste. The matrix is semi-compact.

PASTE J: Is a light rose colored paste in the 1A, 1B, and 2A color range. It is very-fine clay matrix with little or no inclusions which are visible to the naked eye; It is compact with almost no porosity.

PASTE K: Is a light cream-colored matrix ranging in hues from 9A, 9B, 9D, and 10A. It is a very-fine clay with little to no inclusions or sand visible to the naked eye. The paste seems highly processed and refined; it is quite compact.

PASTE L: Is a light gray colored matrix ranging in hues from 14A, 15A, 15B, and 15D. The paste may have very-fine sand and few, if any, inclusions at all. The matrix is compact.

PASTE M: Is a bright orange matrix with colors in the 9G and 12J range. It differs from Paste A, in that its inclusions are both small white granular quartz, and some small rounded dark minerals in approximately equal amounts in the paste. The

inclusions make up approximately 20% of the matrix's composition, yet the matrix remains semi-compact.

PASTE N: Is a bright red orange matrix in the color range of 2H, 2I, 3H, 4H, and 3I. The matrix is a fine clay; its texture is almost plastic-like, semi-compact. There are almost no visible inclusions in the paste itself, but they are very-fine or fine sized rounded white quartz when they do occur.

PASTE O: Is a medium gray colored matrix with color ranges from 5A, 6A, and 7G. The paste is largely inclusion-free, fine grained, and seems plastic, dense, with little or no porosity –it is very compact. What stands out about this clay is the inclusion of very-fine feldspar —giving the matrix, on close examination, the appearance of having "gold flakes" in it. I was unable to photograph these minute and small felspar inclusions (not illustrated in Figure Appendix F.1). Nevertheless, they are easily apparent to any observer of it.

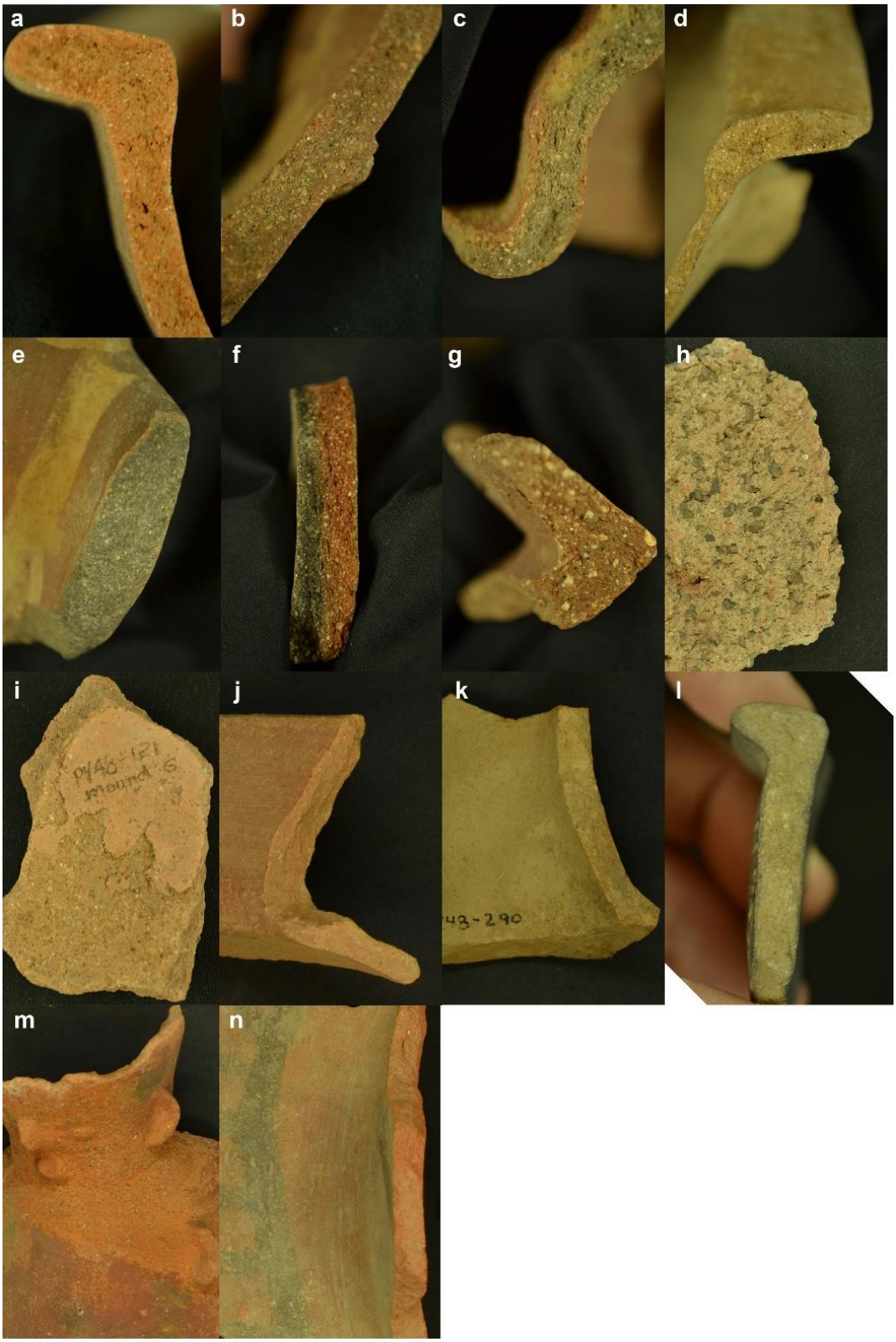


Figure Appendix F. 1. Paste of sherds form the Lurín Valley; Paste O not illustrated.

Table Appendix F. 1. Description of Pastes.

Paste Name	Porosity/ Compactness	Sorting	Color	Inclusions	Size	Frequency	Figure
A	semi-porous	Homogenous	9G, 9H, 9J, 10G, 10J, 11G, 11J, 12J	white-colored, semi-granular quartz	small	10%	Figure Appendix F.1.a
B	semi-compact	Irregular	7C, 7H, 8H	white quarts, dark semi-rounded minerals	small, medium	15%	Figure Appendix F.1.b
C	semi-porous	Homogenous	5A, 6A, 7A, 7G	angular quartz	small	5-10%	Figure Appendix F.1.c
D	semi-compact	Homogenous	15G, 15J, 14G, 14J, 16J	angular white quartz	small	10%	Figure Appendix F.1.d
E	compact	Homogenous	8A, 8G, 16A, 15A	angular quartz	very-fine	0-5%	Figure Appendix F.1.e
F	porous	Irregular	5F, 6A, 6E, GF, GI, 7C, 7F, 7I	rectangular quartz, round dark minerals	fine	30%	Figure Appendix F.1.f
G	semi-porous	Irregular	14J, 14K, 14L	angular white quartz	coarse	30%	Figure Appendix F.1.g
H	porous	Irregular	4A, 3A, 2A, 1A	dark angular mineral inclusions	coarse	40%	Figure Appendix F.1.h
I	semi-compact	Irregular	4A, 3A, 2A, 1A	colored and white angular quartz	fine	5-15%	Figure Appendix F.1.i
J	compact	Homogenous	1A, 1B, 2A	none	very-fine	0-5%	Figure Appendix F.1.j
K	compact	Homogenous	9A, 9B, 9D, 10A	none	very-fine	0-5%	Figure Appendix F.1.k
L	compact	Homogenous	14A, 15A, 15B, 15D	none	very-fine	0-5%	Figure Appendix F.1.l
M	semi-compact	Homogenous	9G 12J	granular quarts, dark minerals	fine/small	20%	Figure Appendix F.1.m
N	semi-compact	Homogenous	2H, 2I, 3H, 4H, 3I	none	very-fine/fine	0-5%	Figure Appendix F.1.n
O	semi-compact	Homogenous	5A, 6A, 7G	flaked felspar	fine/small	0-5%	not illustrated

Appendix G – Plates

Plate 1 shows a range of ceramics found at site PV48-1; Plate 2 shows sherds from site PV48-2b; Plate 3 sherds from PV48-2c; Plate 4, PV48-3; Plate 5, PV48-9; Plate 6, PV48-10; Plate 7, PV48-12; Plate 8, PV48-13; Plate 9, PV48-14; Plate 10, PV48-16; Plate 11, PV48-19; Plate 12, PV48-19f; Plate 13, PV48-19g; Plate 14, PV48-19h; Plate 15, PV48-20; Plate 16, PV48-20b; Plate 17, PV48-20c; Plate 18, PV48-20d; Plate 19, PV48-20e; Plate 20, PV48-22; Plate 21, PV48-27; Plate 22, PV48-28; Plate 23, PV48-29; Plate 24, PV48-31; Plate 25, PV48-32; Plate 26, PV48-33; Plate 27, PV48-34; Plate 28, PV48-35; Plate 29, PV48-45a; Plate 30, PV48-45b; Plate 31, PV48-45c; Plate 32, PV48-57b; Plate 33, PV48-57c; Plate 34, PV48-57d; Plate 35, PV48-80; Plate 36, PV48-86; Plate 37, PV48-87; Plate 38, PV48-88; Plate 39, PV48-91; Plate 40, PV48-93; Plate 41, PV48-96; Plate 42, PV48-96a; Plate 43, PV48-96b; Plate 44, PV48-109a; Plate 45, PV48-110; Plate 46, PV48-113a; Plate 47, PV48-113b; Plate 48, PV48-113c; Plate 49, PV48-113d; Plate 50, PV48-121; Plate 51, PV48-121e; Plate 52, PV48-121f; Plate 53, PV48-121g; Plate 54, PV48-126; Plate 55, PV48-137a; Plate 56, PV48-137b; Plate 57, PV48-137d; Plate 58, PV48-151; Plate 59, PV48-152; Plate 60, PV48-159; Plate 61, PV48-164a; Plate 62, PV48-164b; Plate 63, PV48-164c; Plate 64, PV48-164d; Plate 65, PV48-164e; Plate 66, PV48-168; Plate 67, PV48-169; Plate 68, PV48-175; Plate 69, PV48-177; Plate 70, PV48-179; Plate 71, PV48-189; Plate 72, PV48-193; Plate 73, PV48-197; Plate 74, PV48-199; Plate 75, PV48-208; Plate 76, PV48-222; Plate 77, PV48-224; Plate 78, PV48-229; Plate 79, PV48-232; Plate 80, PV48-234; Plate 81, PV48-236; Plate 82, PV48-254; Plate 83, PV48-255; Plate 84, PV48-257; Plate 85, PV48-274; Plate 86, PV48-286; Plate 87, PV48-289; Plate 88, PV48-290; Plate 89, PV48-295; Plate 90, PV48-299; Plate 91, PV48-302; Plate 92, PV48-303a; Plate 93, PV48-303b; Plate 94, PV48-315; Plate 95, PV48-332; Plate 96, PV48-333; Plate 97, PV48-335; Plate 98, PV48-337b; Plate 99, PV48-341; Plate 100, PV48-342a; Plate 101, PV48-343a; Plate 102, PV48-343b; Plate 103, PV48-345b; Plate 104, PV48-347; Plate 105, PV48-349; and Plate 106, PV48-351.

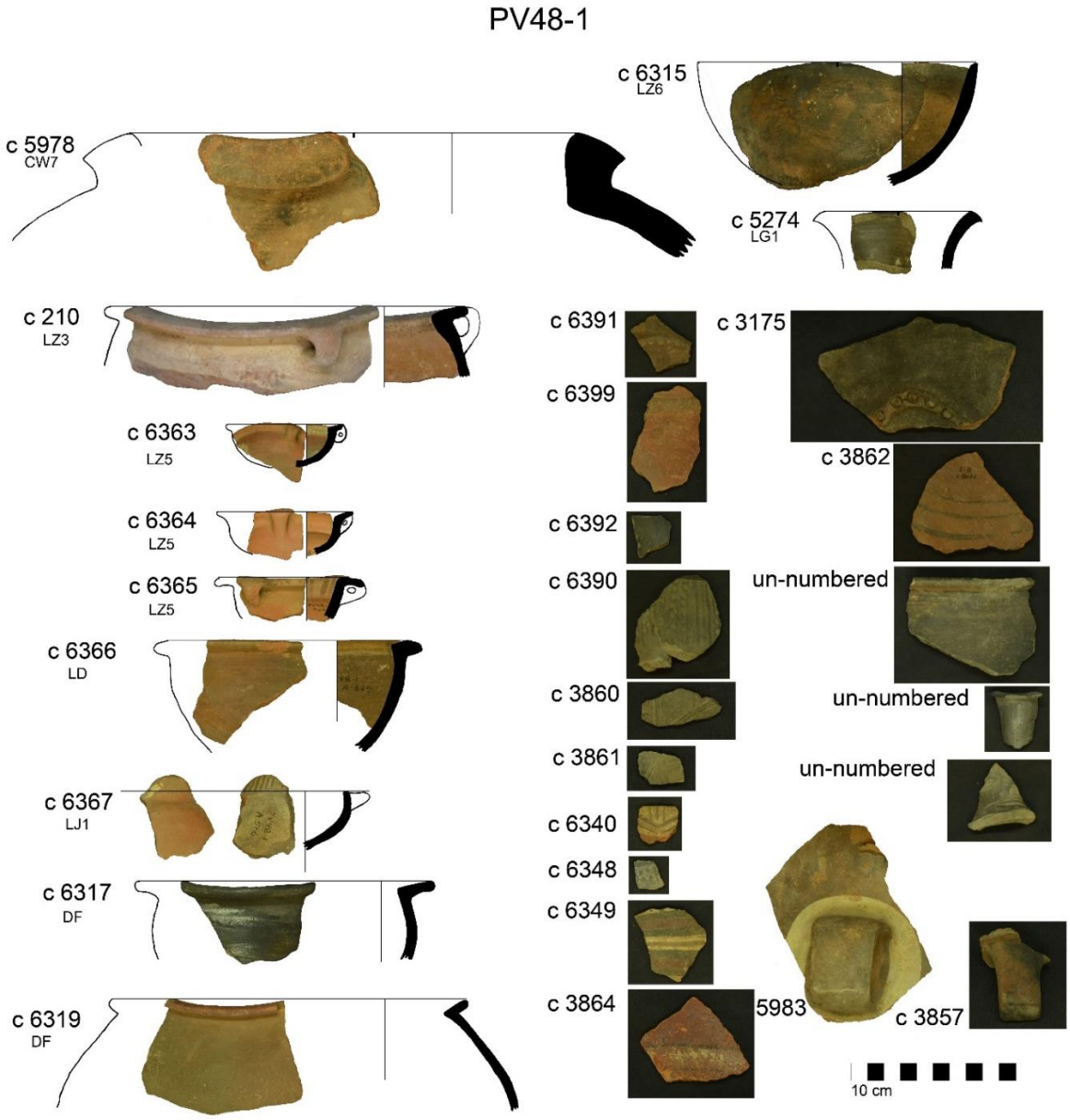


Plate 1. A sample of sherds recovered from PV48-1.

Plate 2. A sample of sherds recovered from PV48-2b.

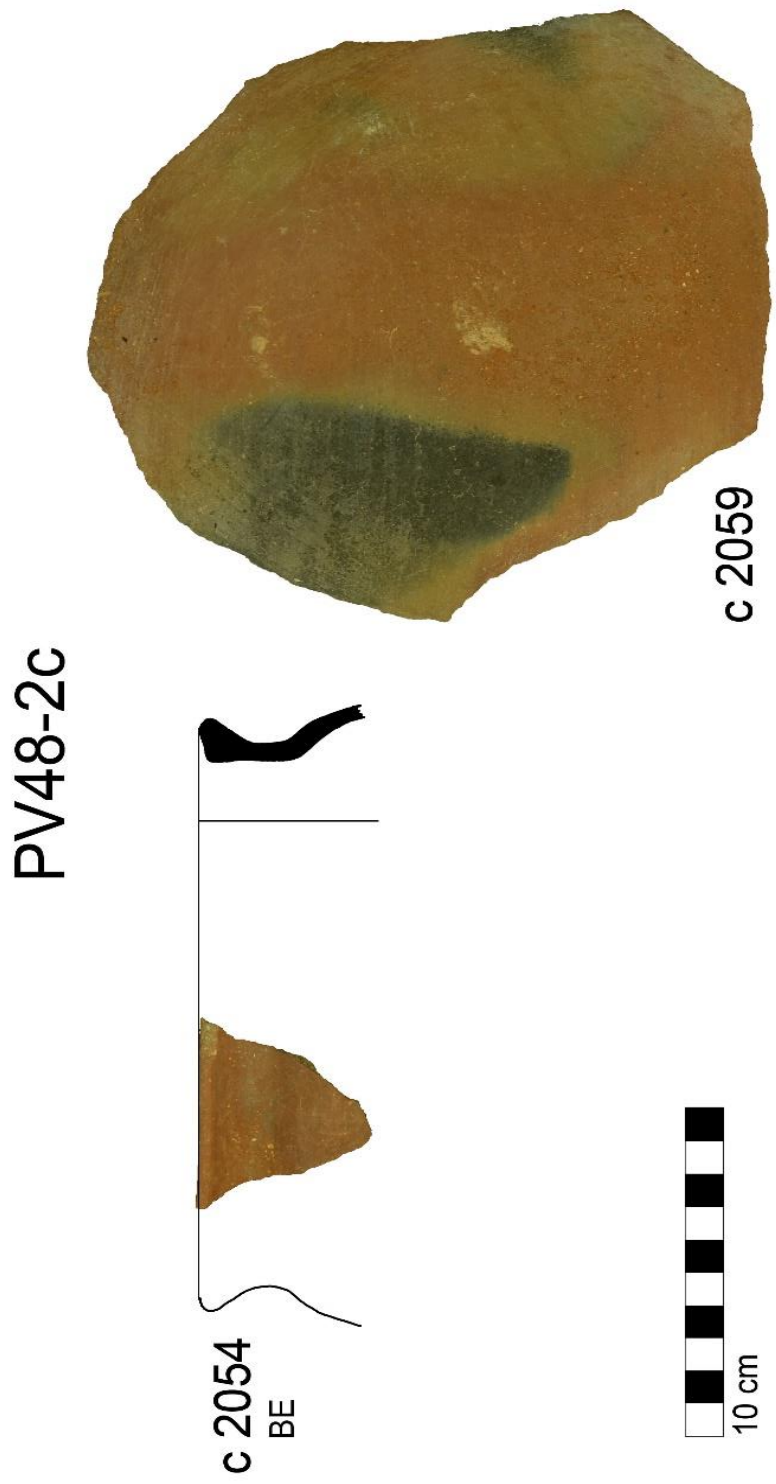


Plate 3. A sample of sherds recovered from PV48-2c.

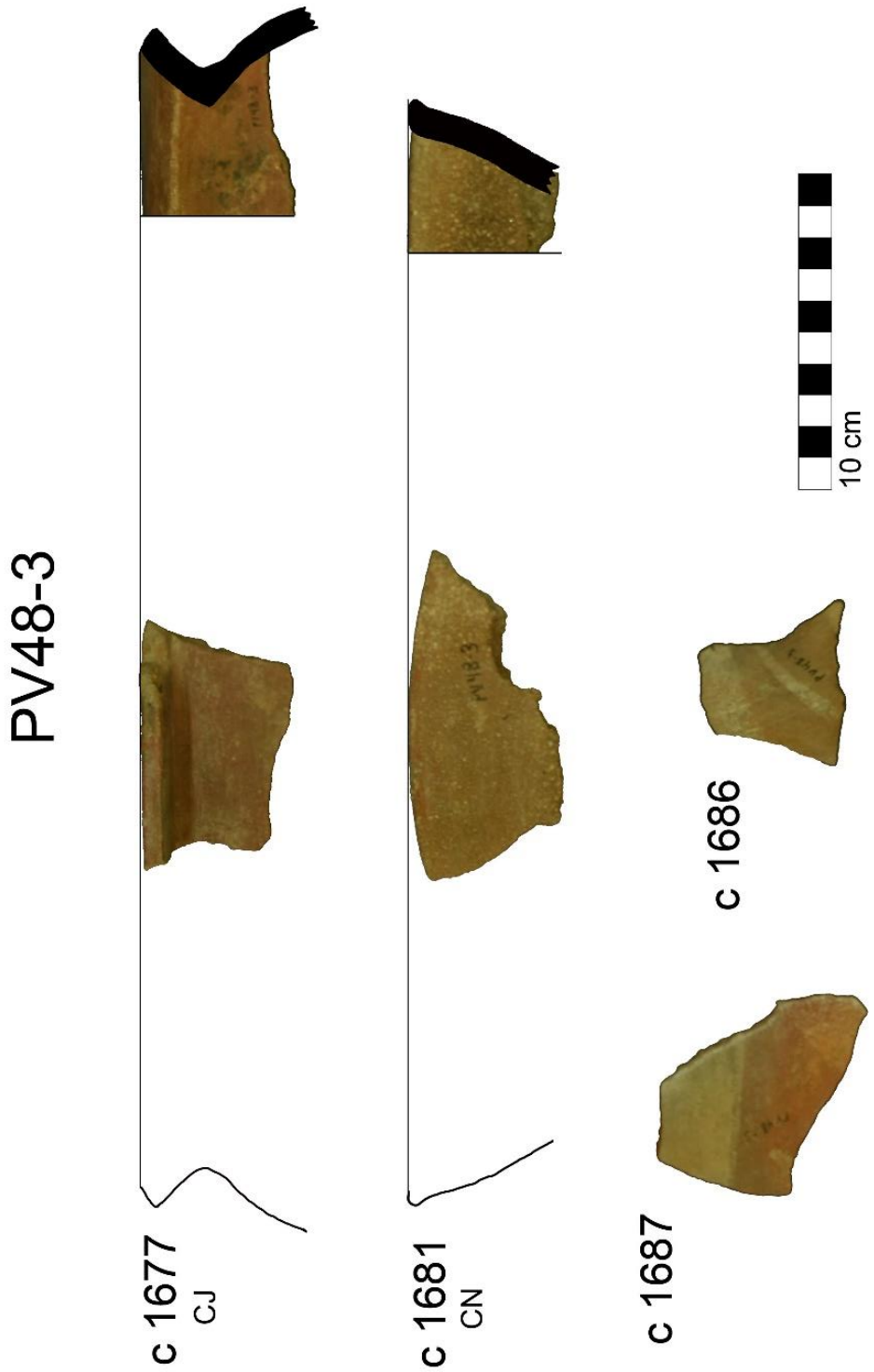


Plate 4. A sample of sherds recovered from PV48-3.

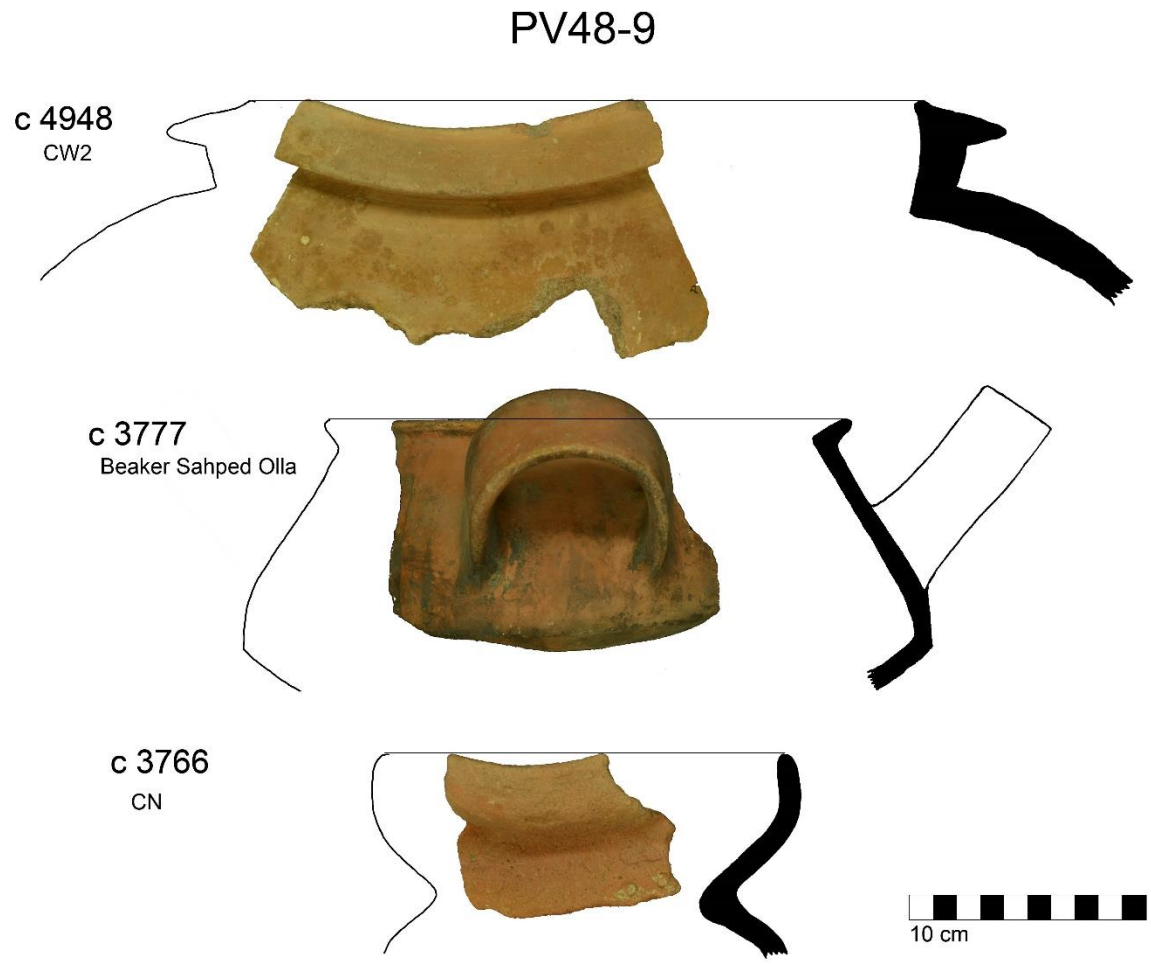


Plate 5. A sample of sherds recovered from PV48-9.

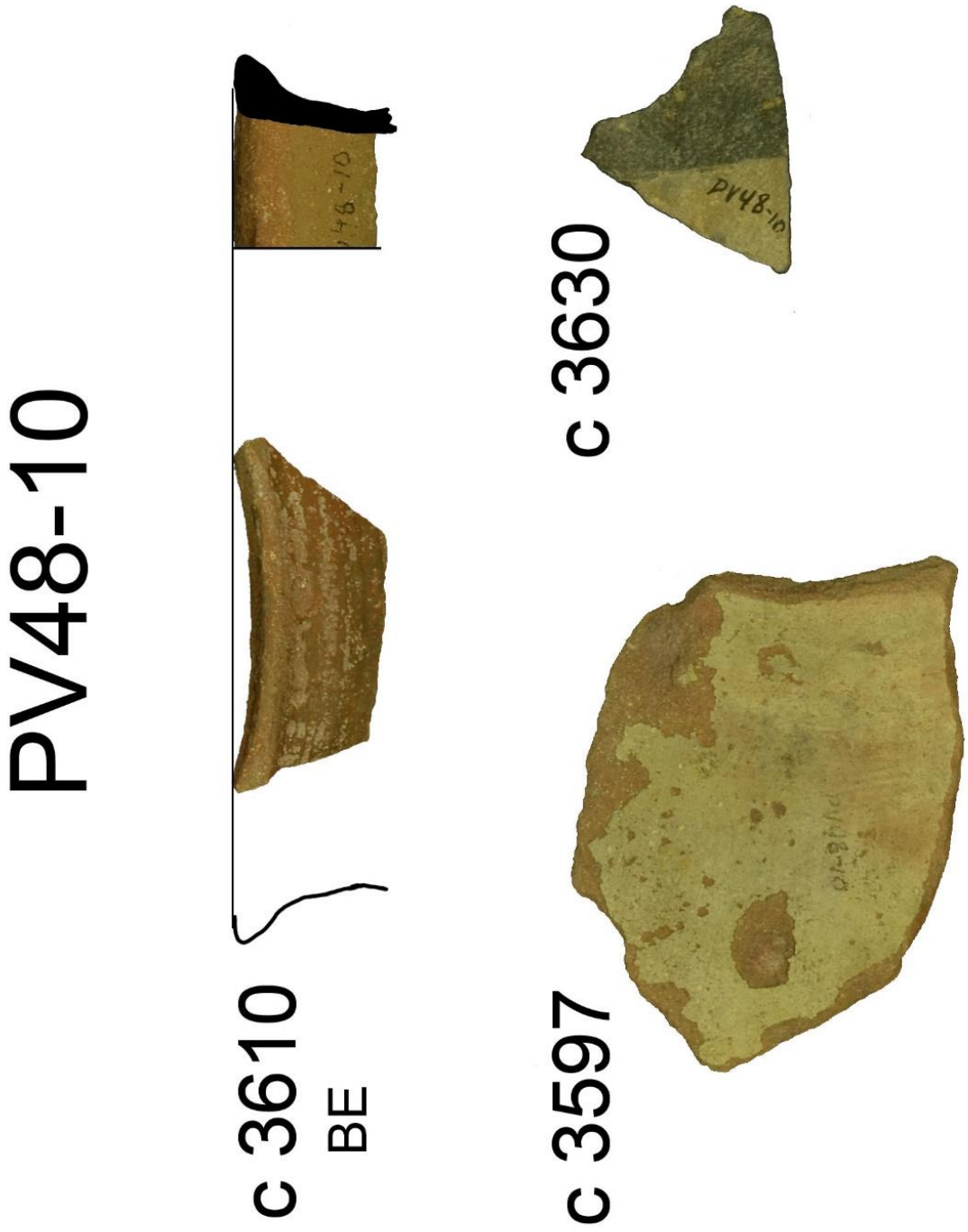


Plate 6. A sample of sherds recovered from PV48-10.

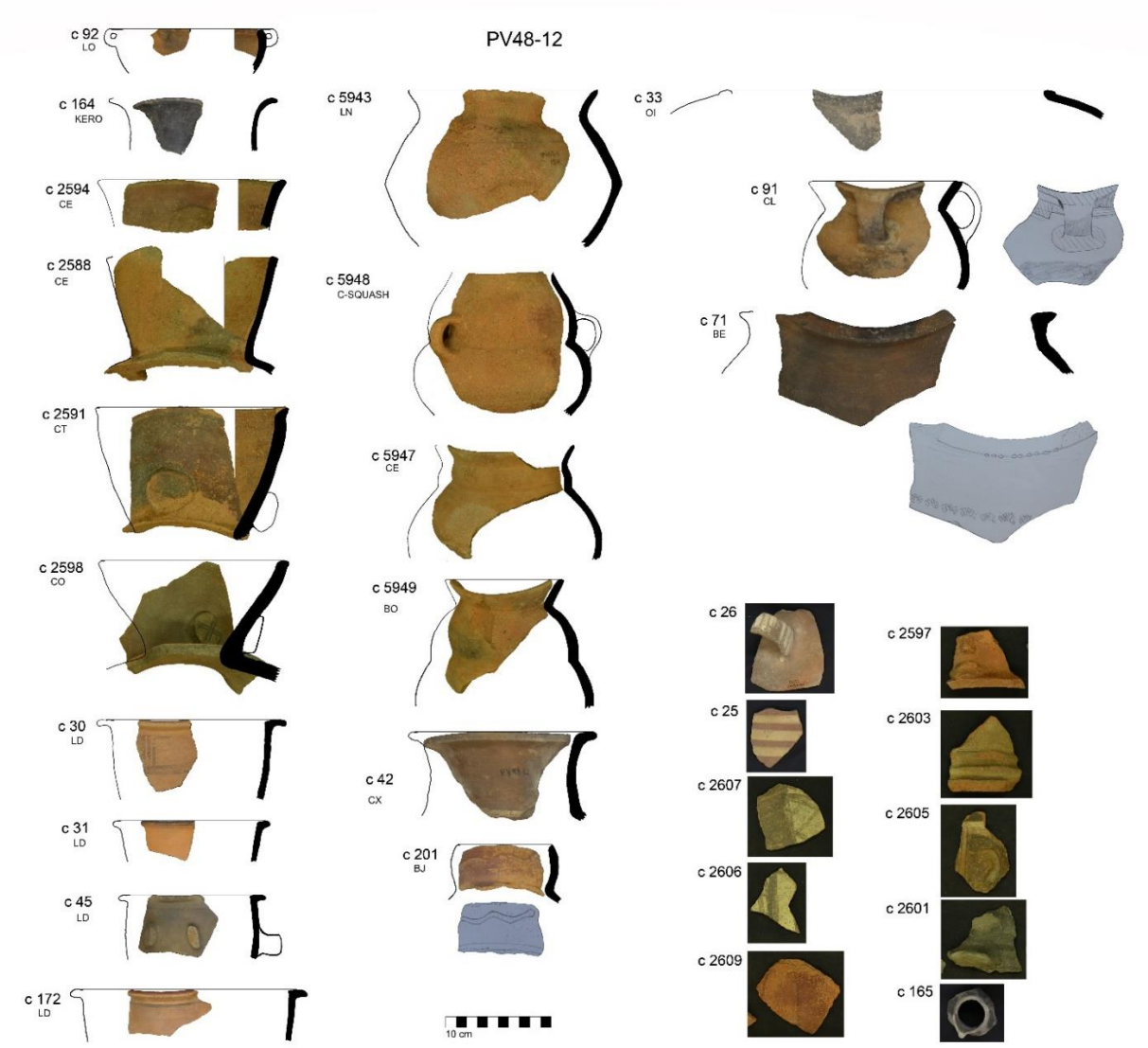


Plate 7. A sample of sherds recovered from PV48-12.

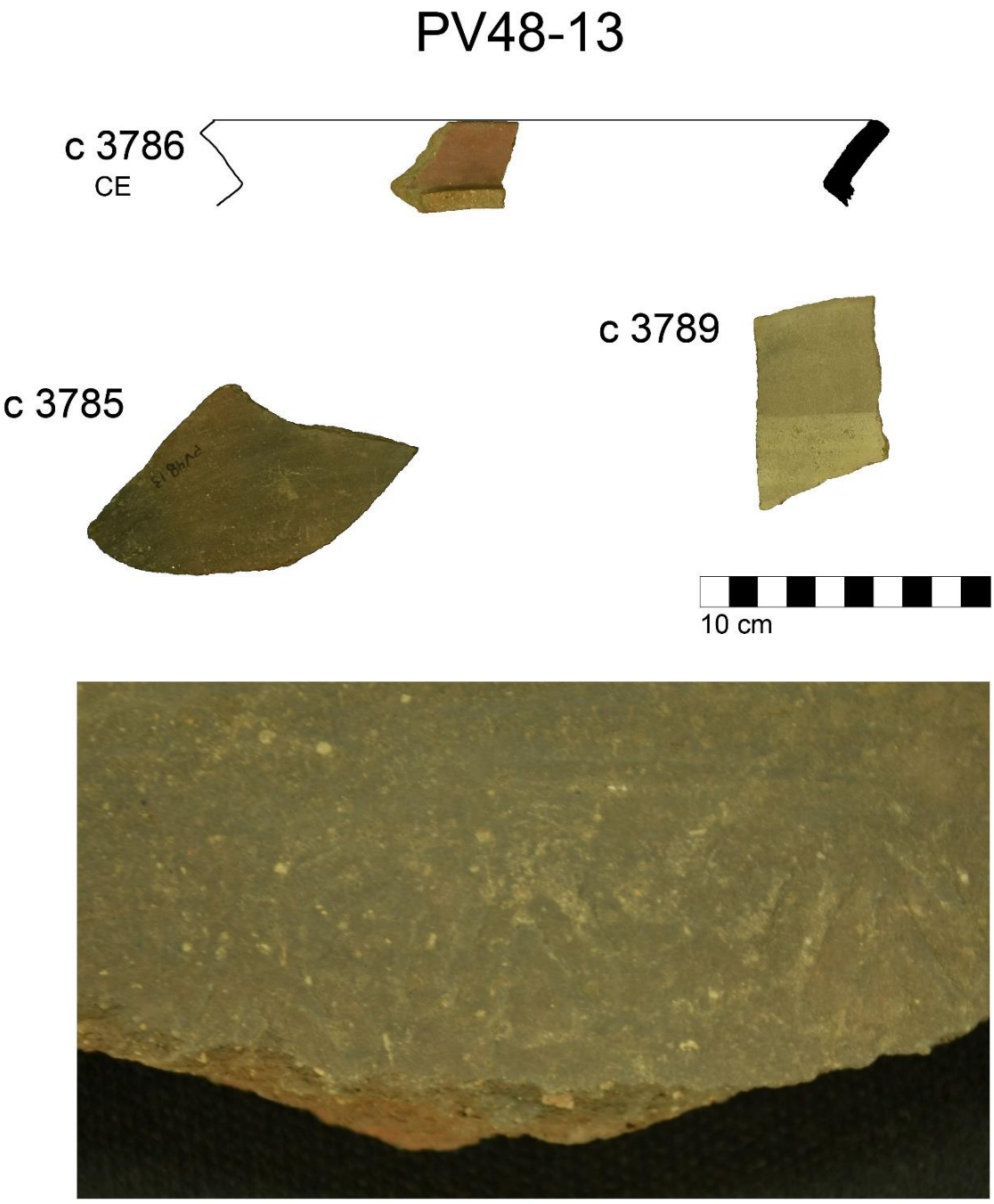


Plate 8. A sample of sherds recovered from PV48-13.

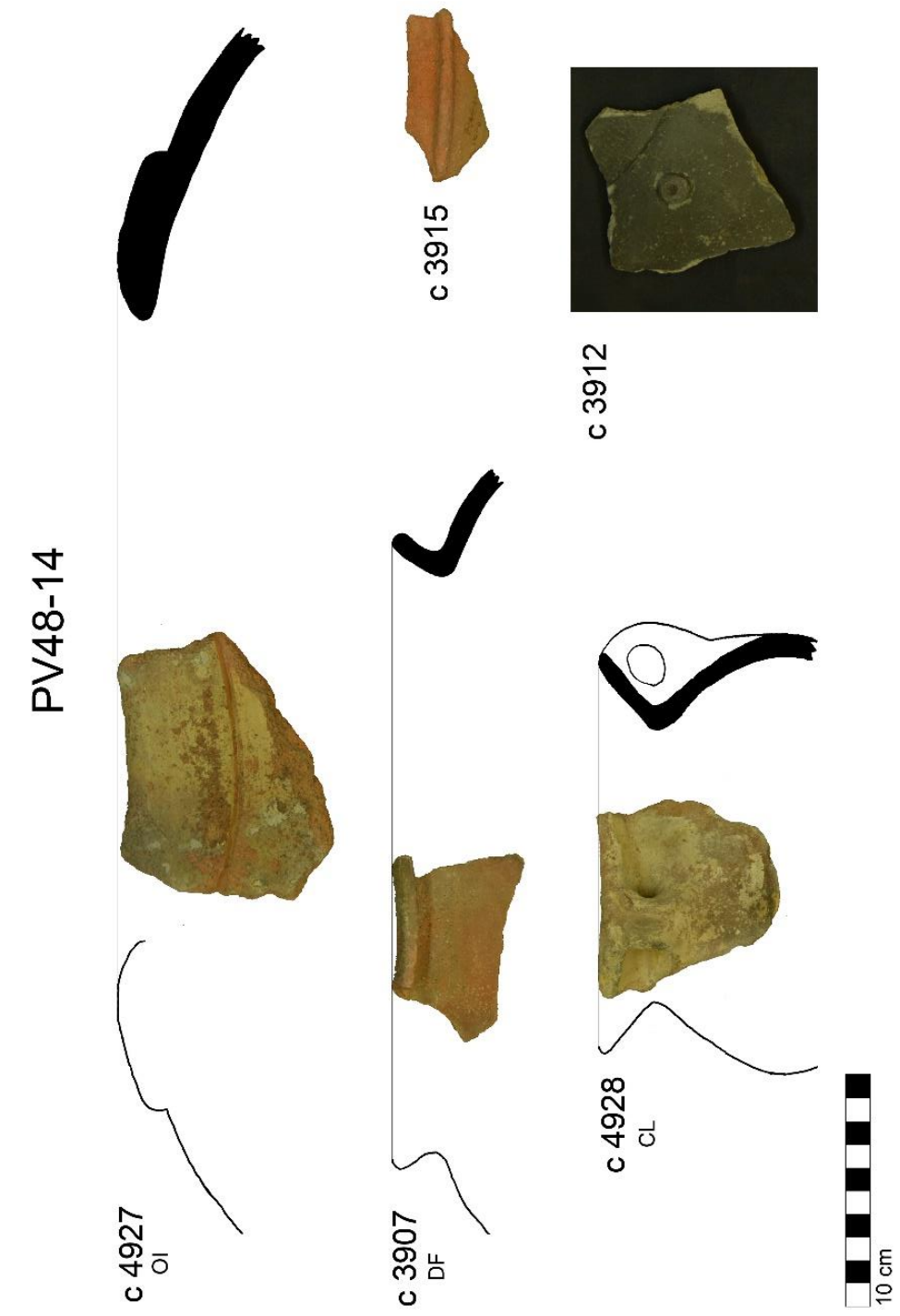


Plate 9. A sample of sherds recovered from PV48-14.

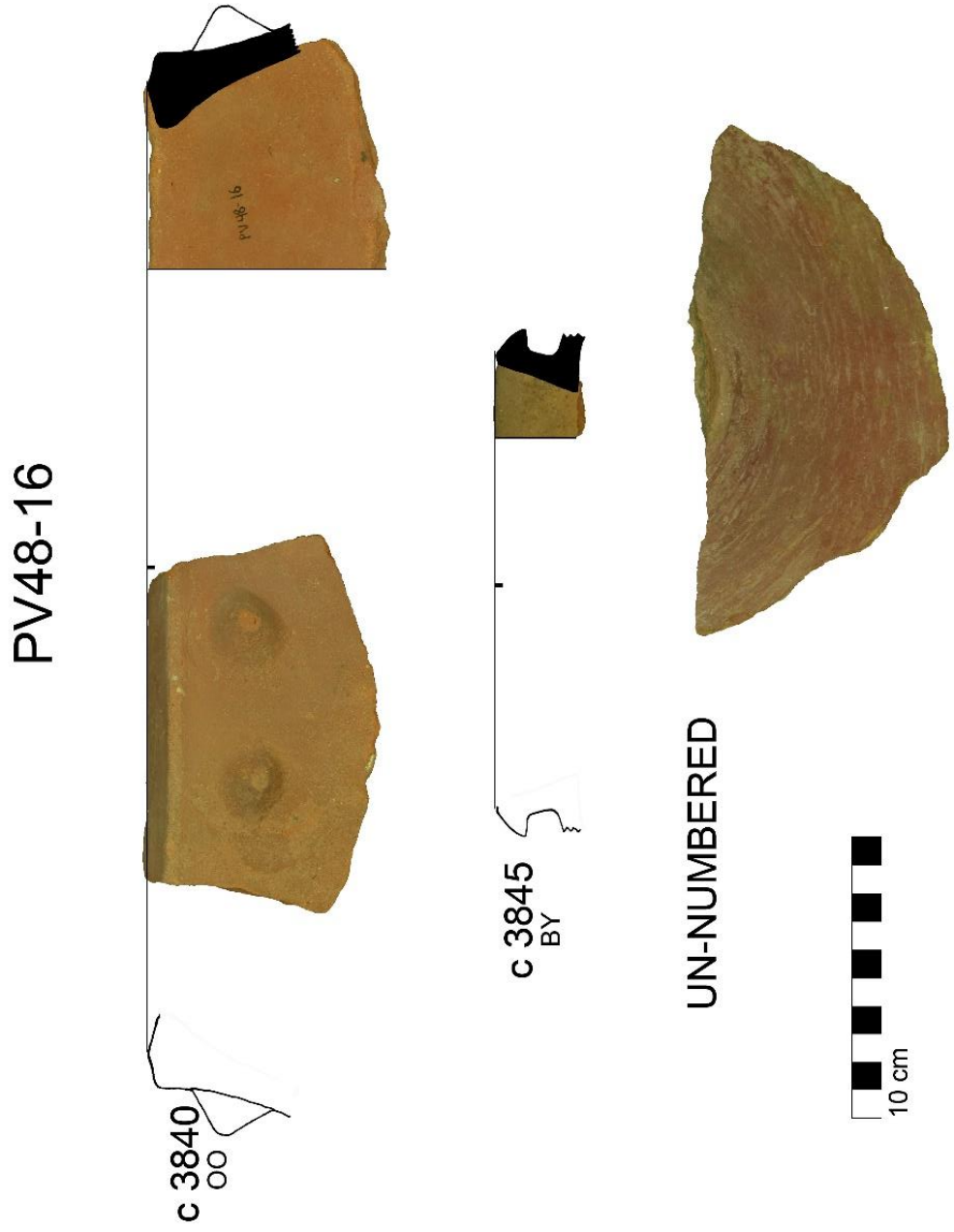


Plate 10. A sample of sherds recovered from PV48-16..

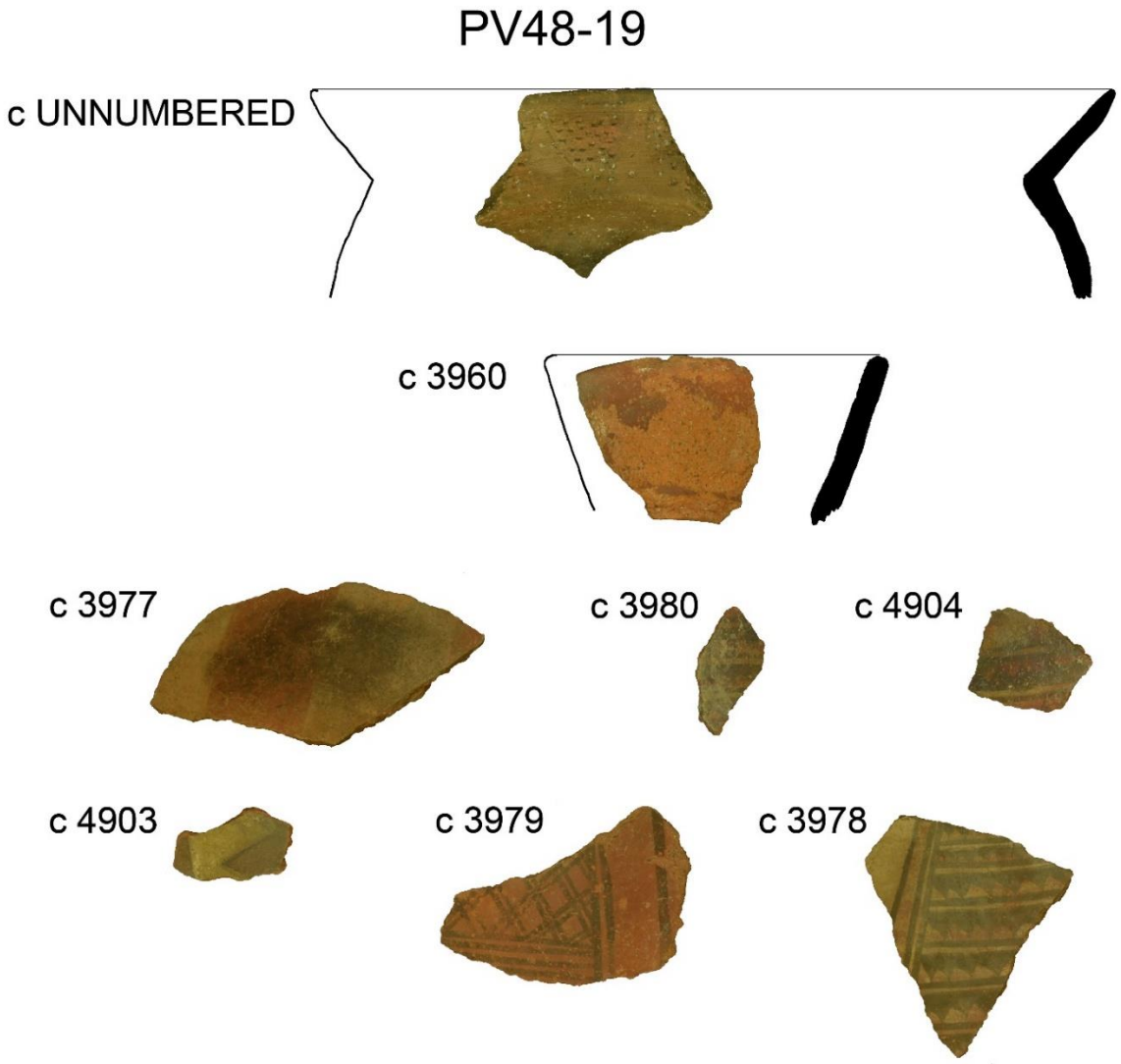


Plate 11. A sample of sherds recovered from PV48-19.

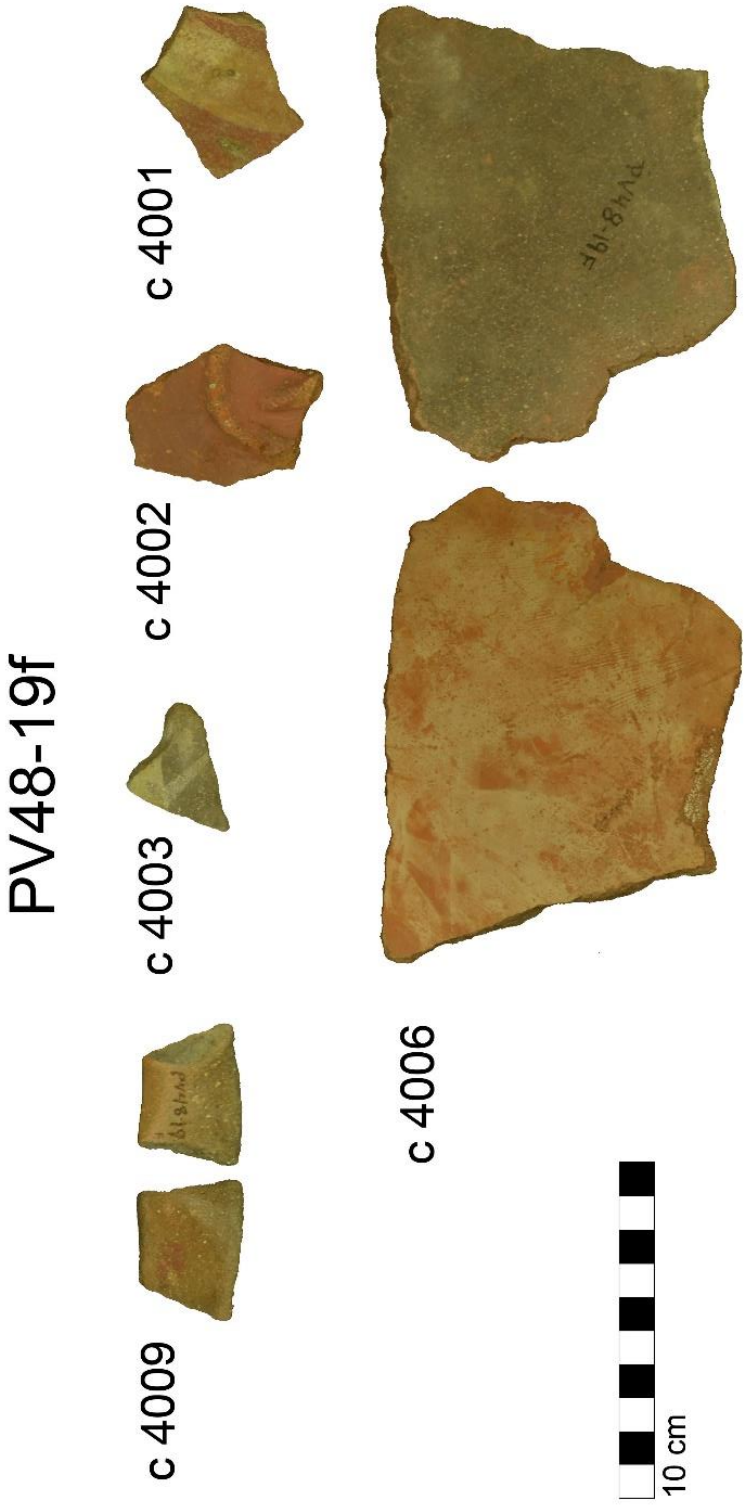


Plate 12. A sample of sherds recovered from PV48-19f.

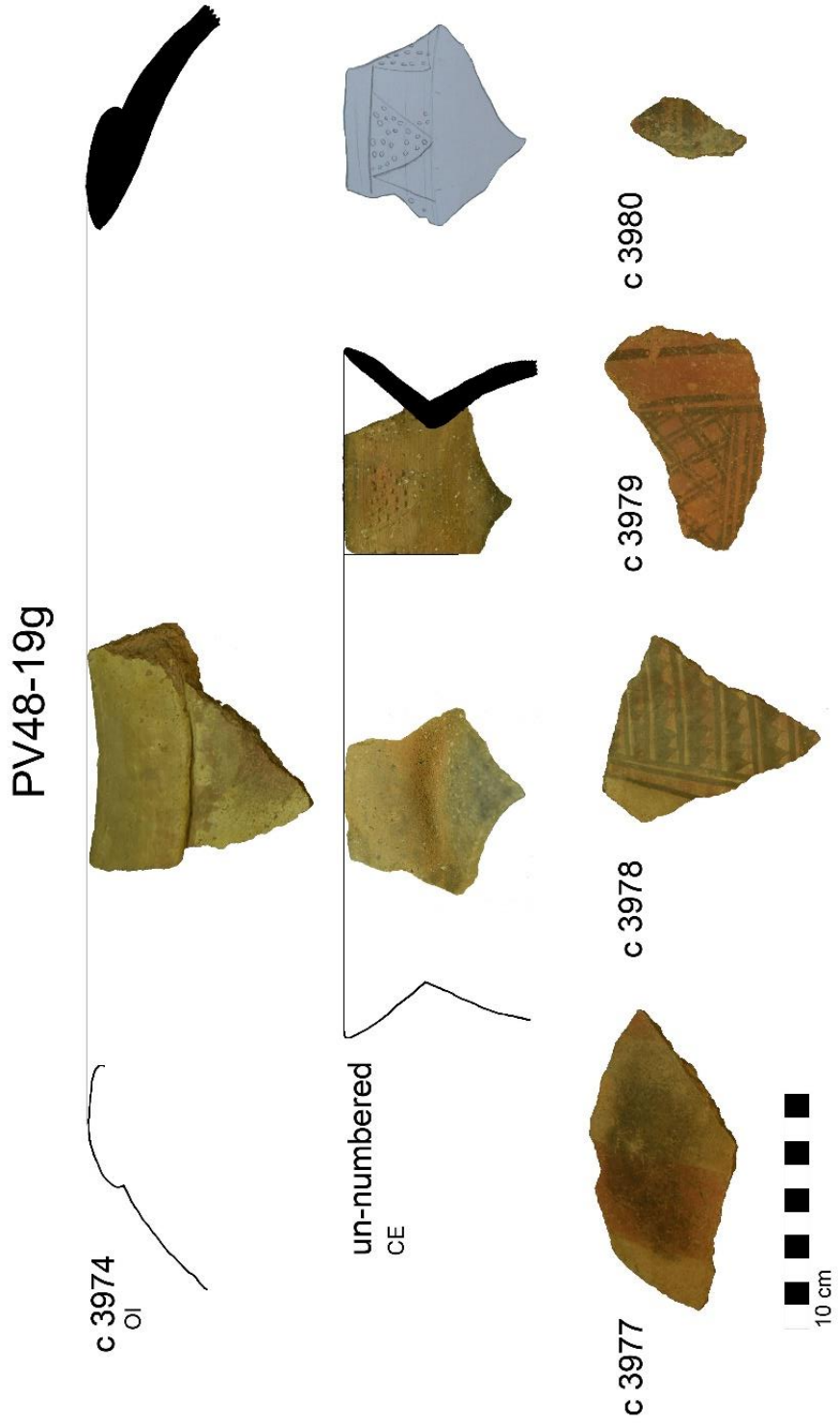


Plate 13. A sample of sherds recovered from PV48-19g.

Plate 14. A sample of sherds recovered from PV48-19h.

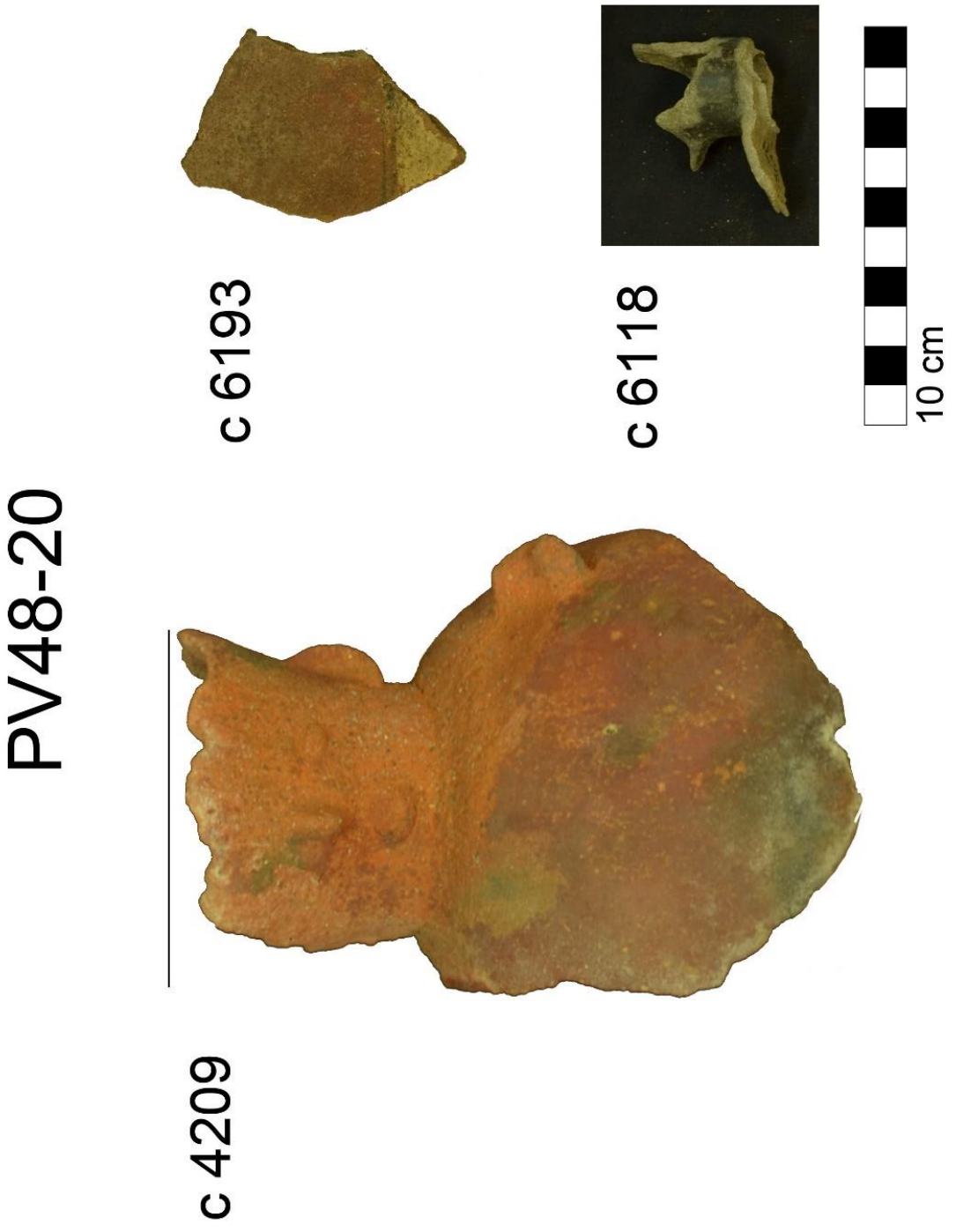


Plate 15. A sample of sherds recovered from PV48-20.

Plate 16. A sample of a sherd recovered from PV48-20b.

Plate 17. A sample of sherds recovered from PV48-20c.

Plate 18. A sample of a sherd recovered from PV48-20d.

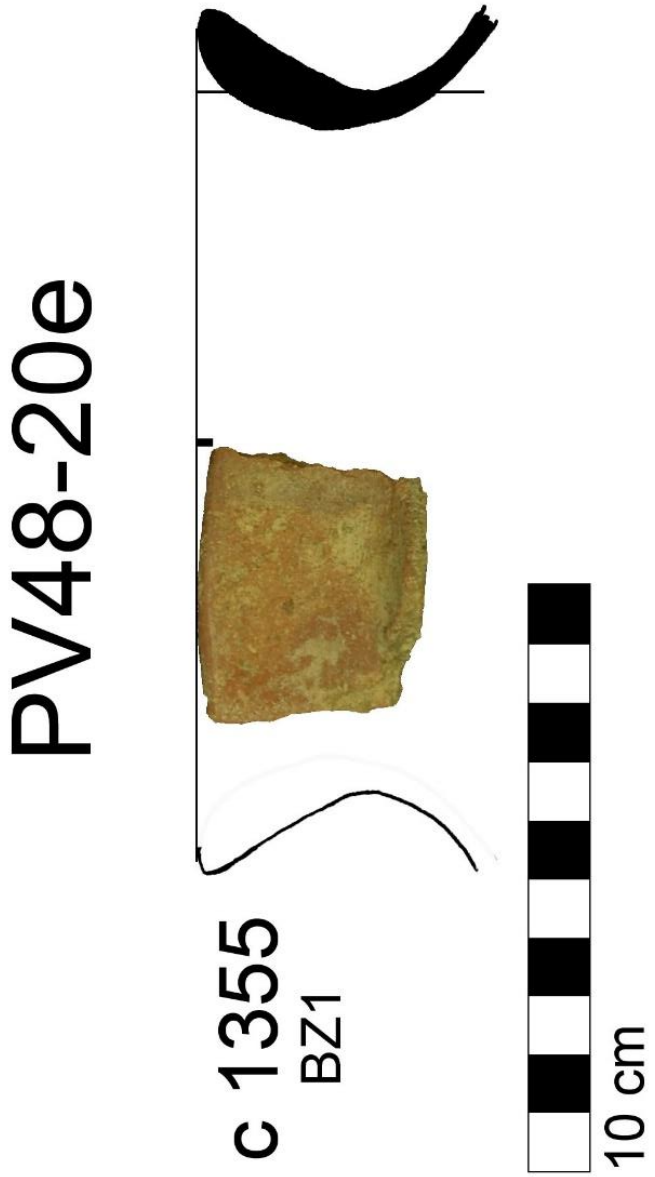


Plate 19. A sample of a sherd recovered from PV48-20e.

Plate 20. A sample of sherds recovered from PV48-22.

Plate 21. A sample of sherds recovered from PV48-27.

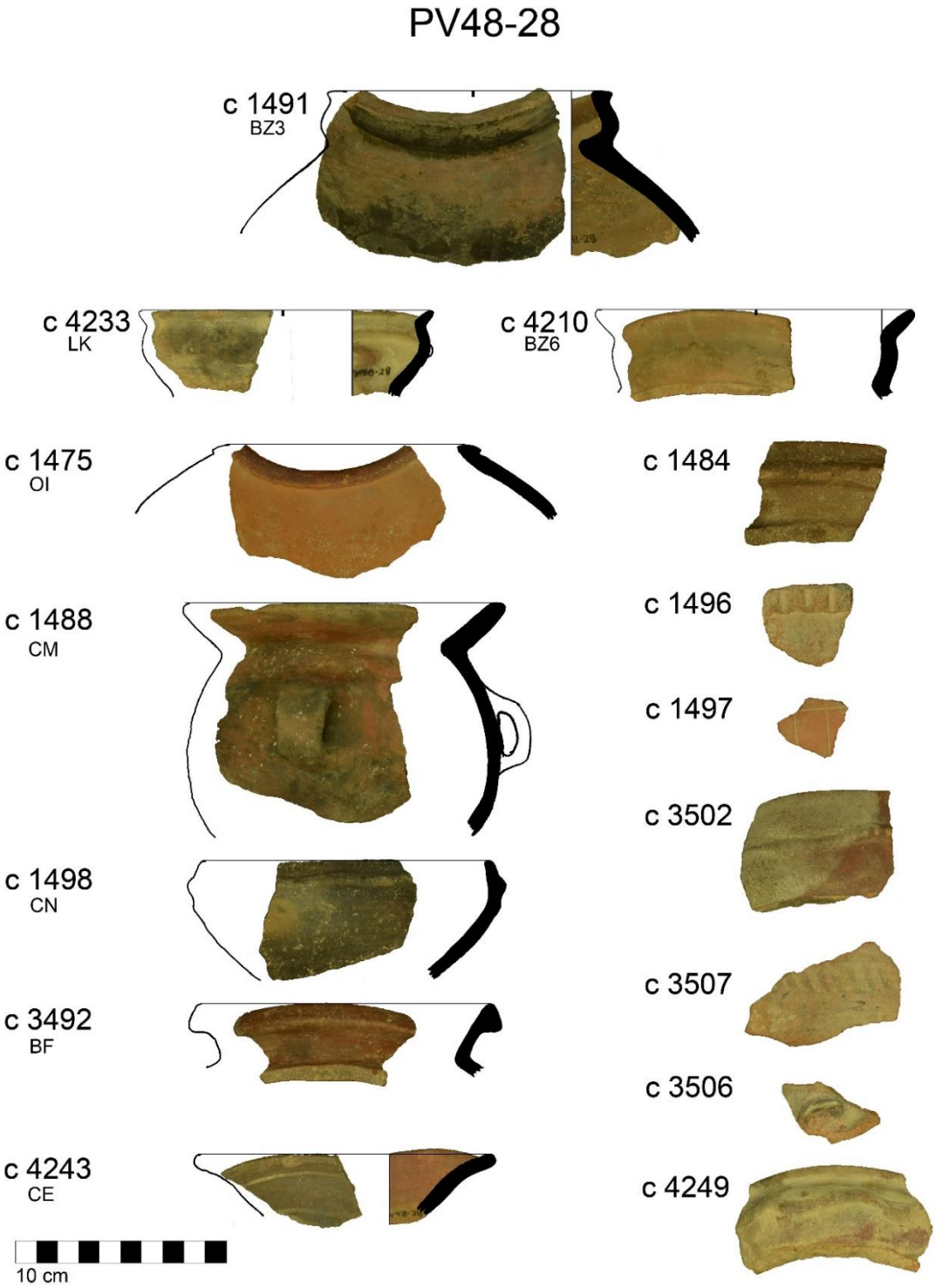


Plate 22. A sample of sherds recovered from PV48-28.

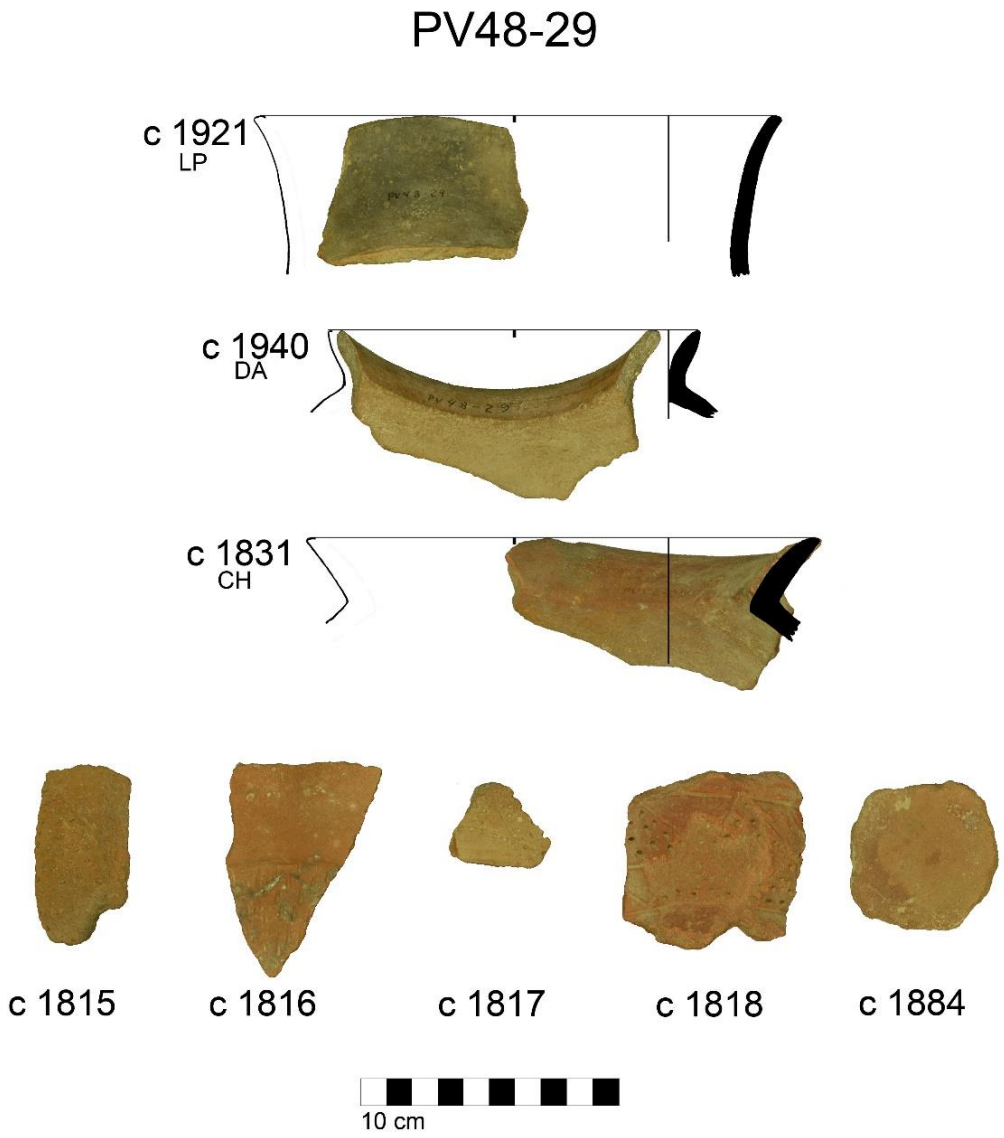


Plate 23. A sample of sherds recovered from PV48-29.

Plate 24. A sample of sherds recovered from PV48-31.

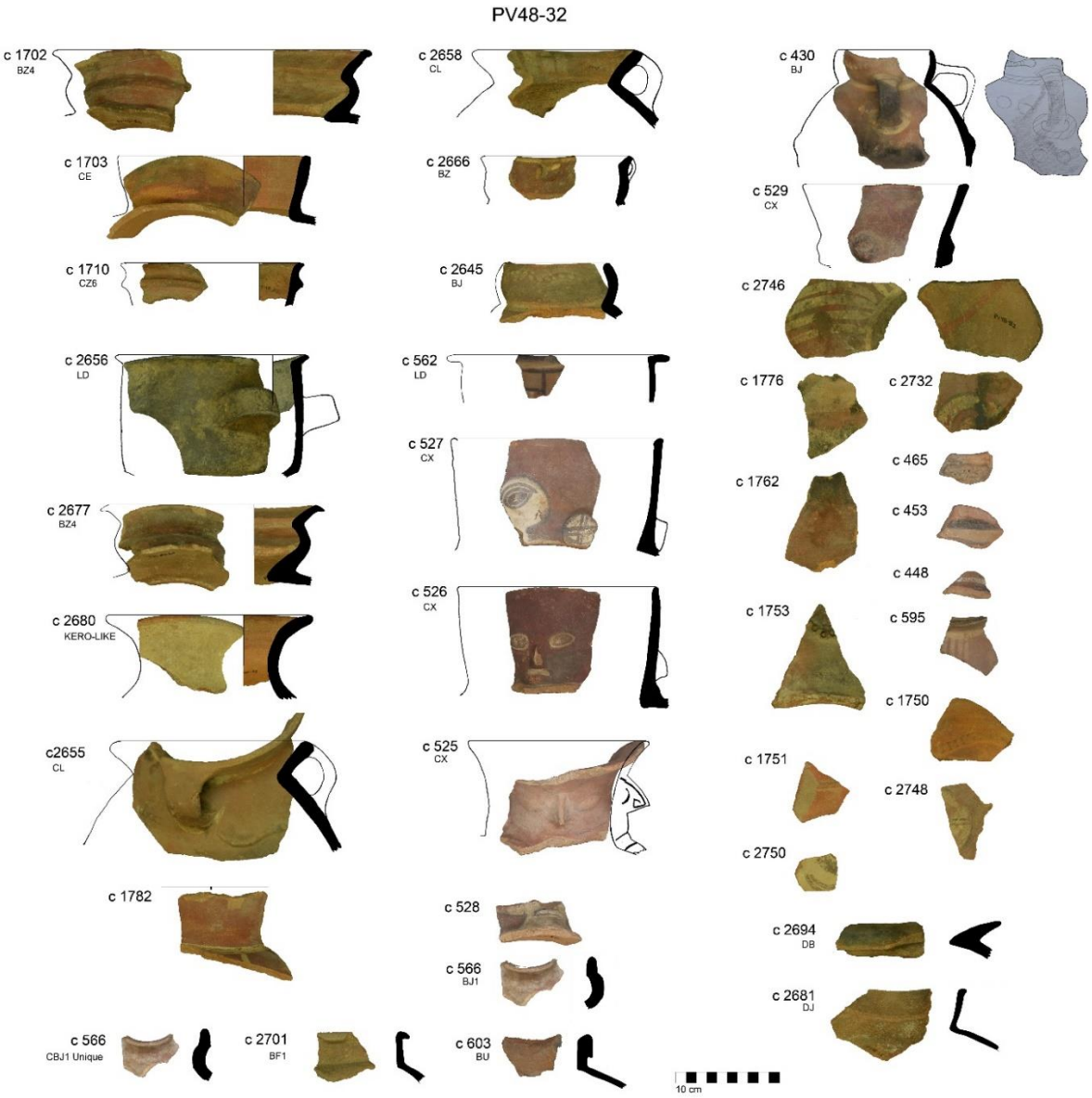


Plate 25. A sample of sherds recovered from PV48-32.

Plate 26. A sample of sherds recovered from PV48-33.

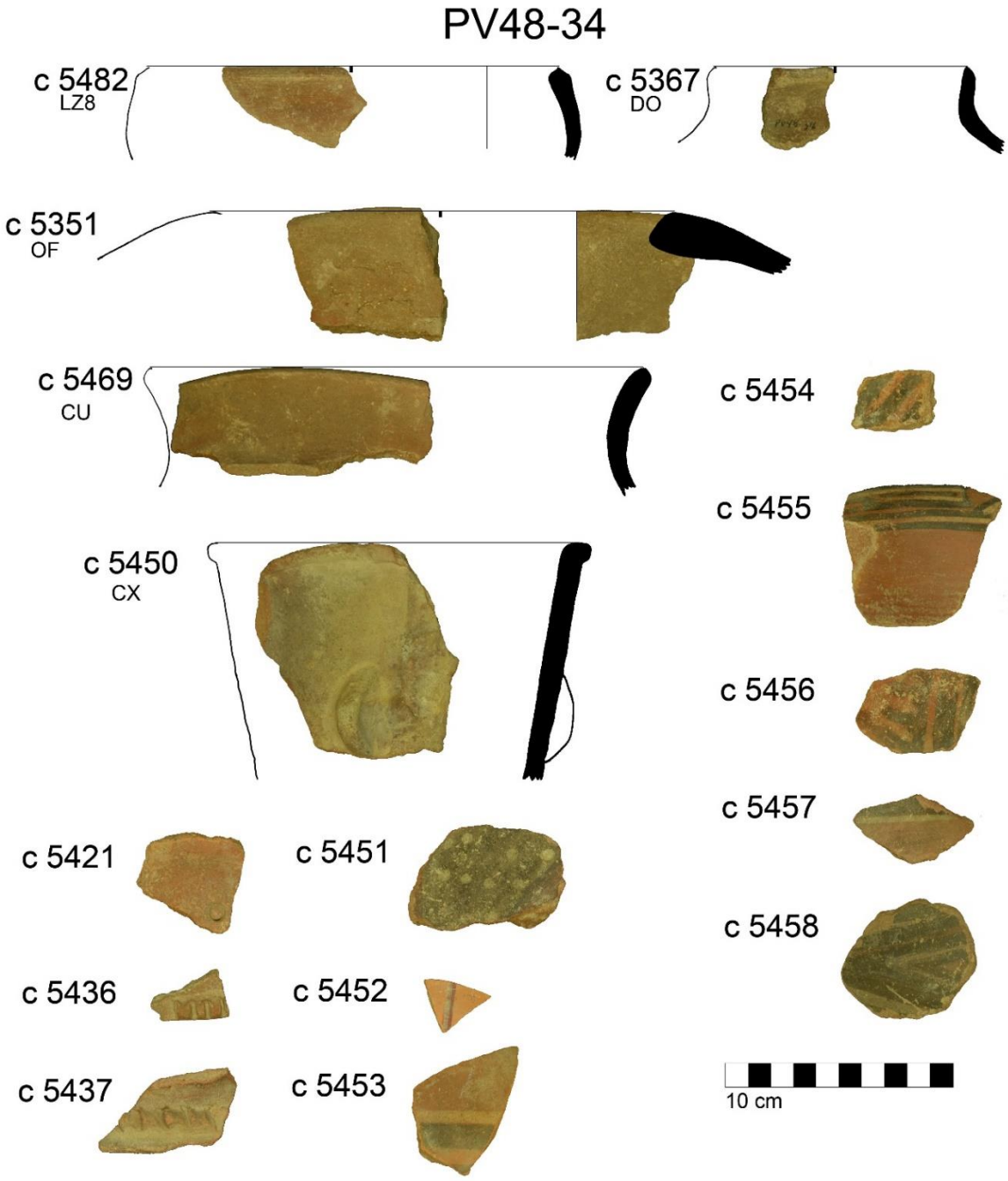


Plate 27. A sample of sherds recovered from PV48-34.

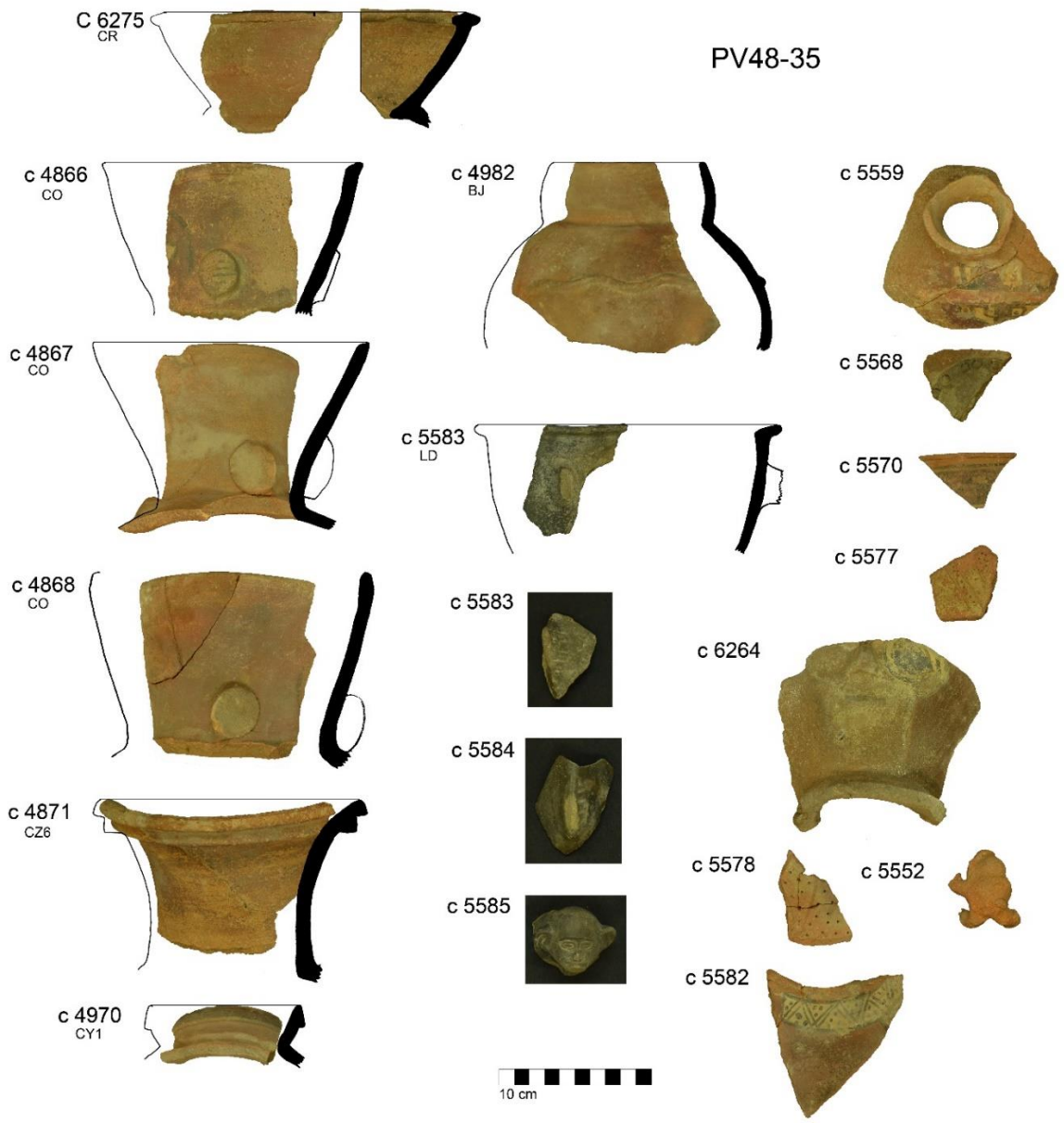


Plate 28. A sample of sherds recovered from PV48-35.

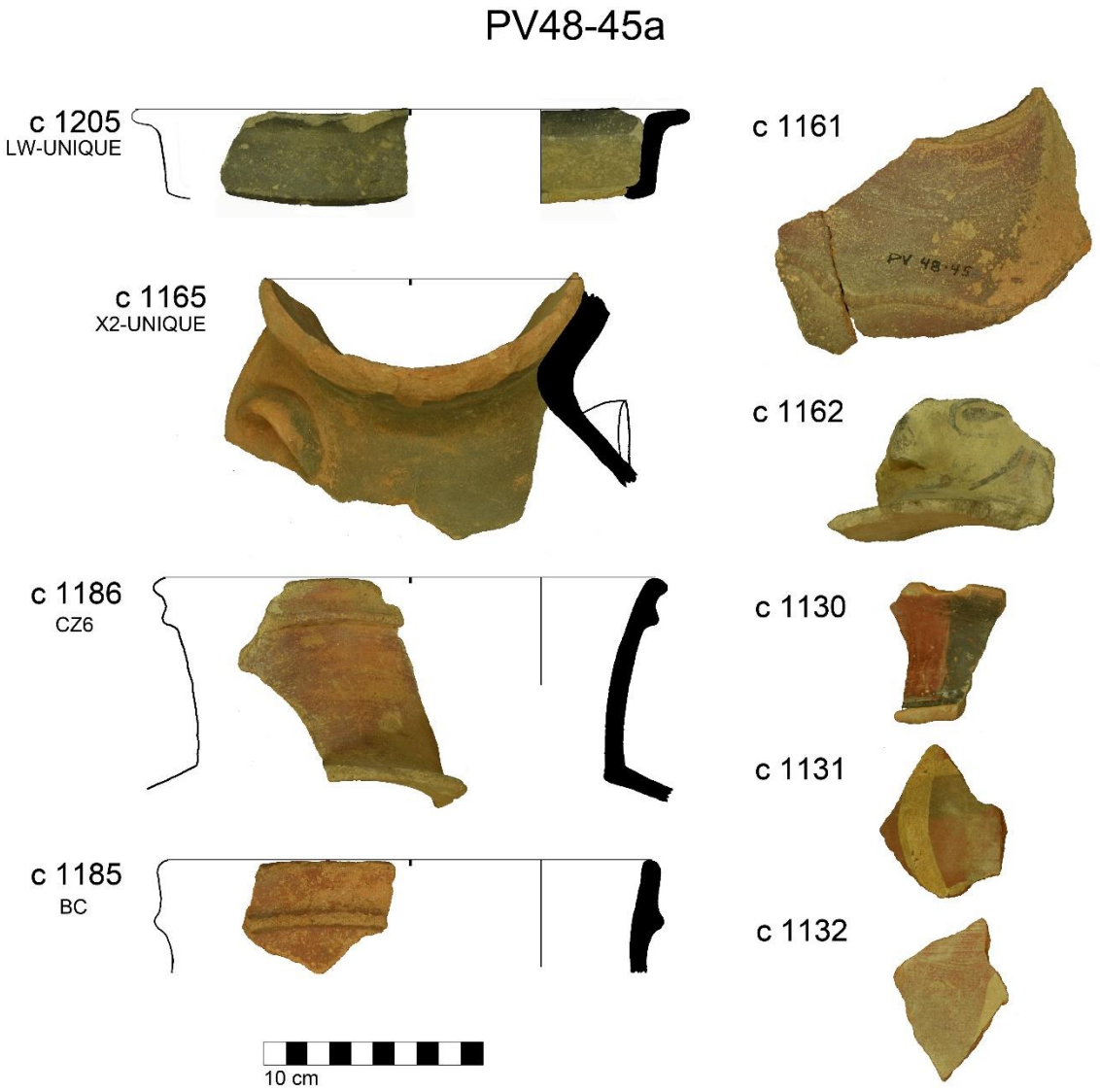


Plate 29. A sample of sherds recovered from PV48-45a.

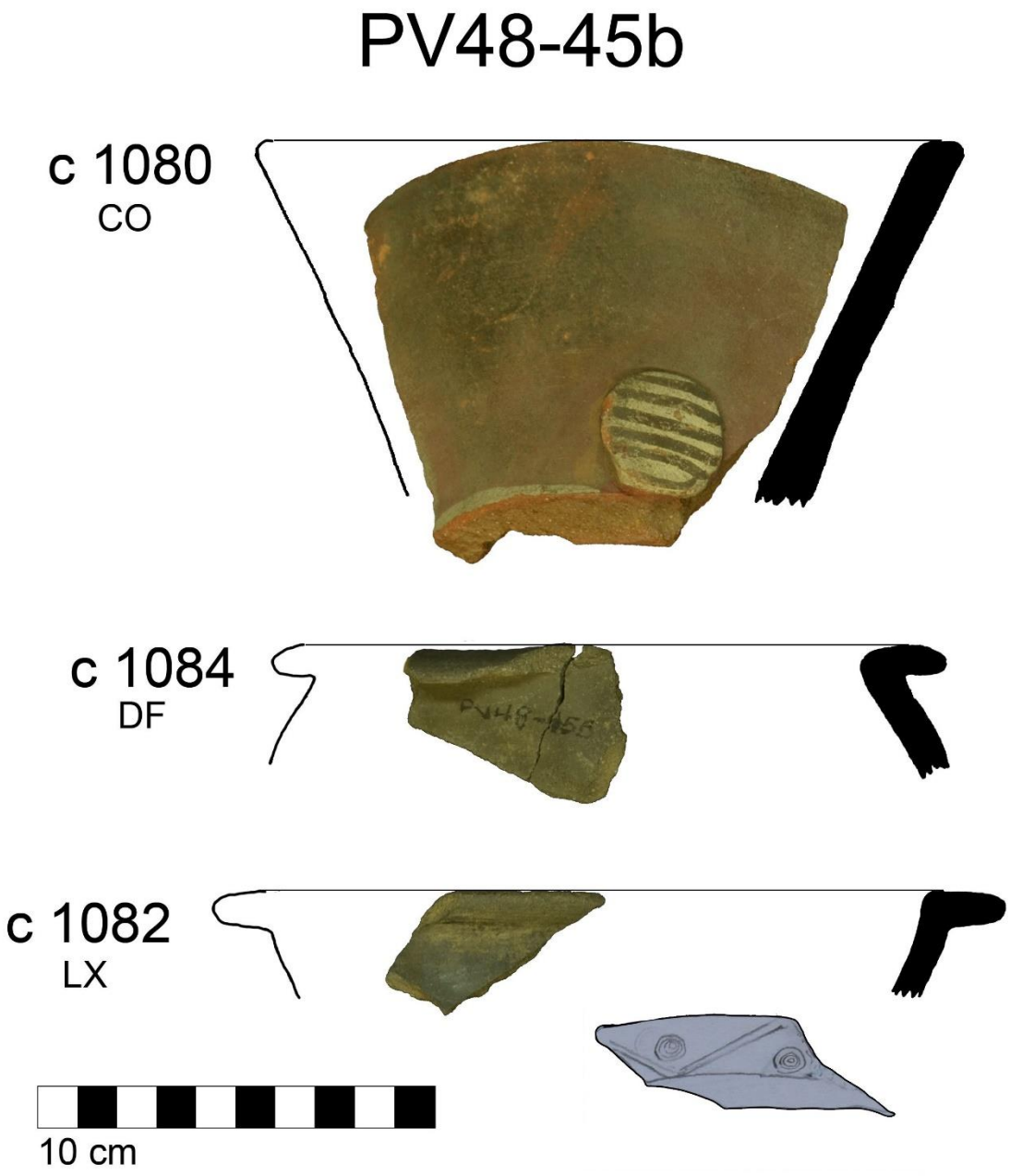


Plate 30. A sample of sherds recovered from PV48-45b.

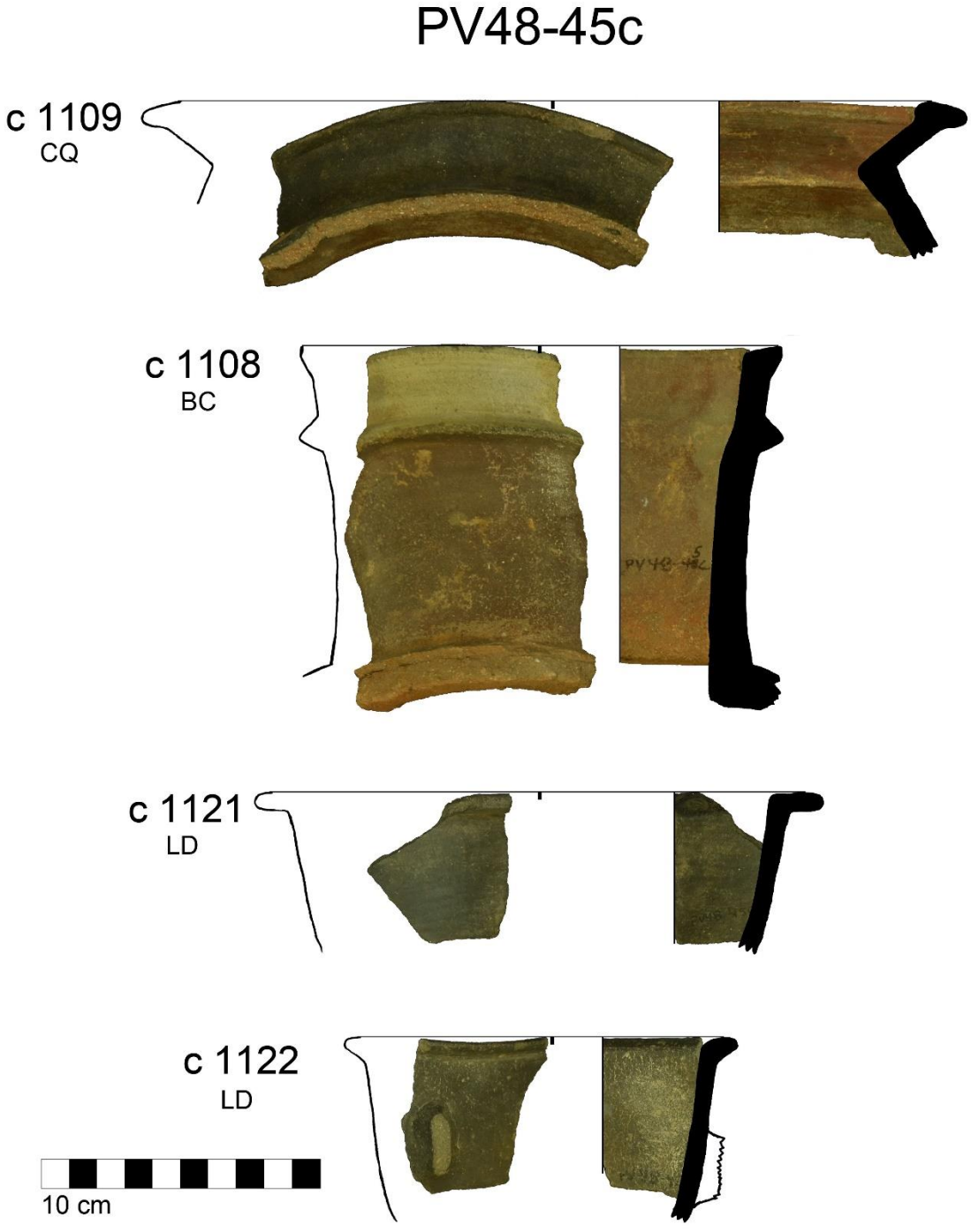


Plate 31. A sample of sherds recovered from PV48-45c.

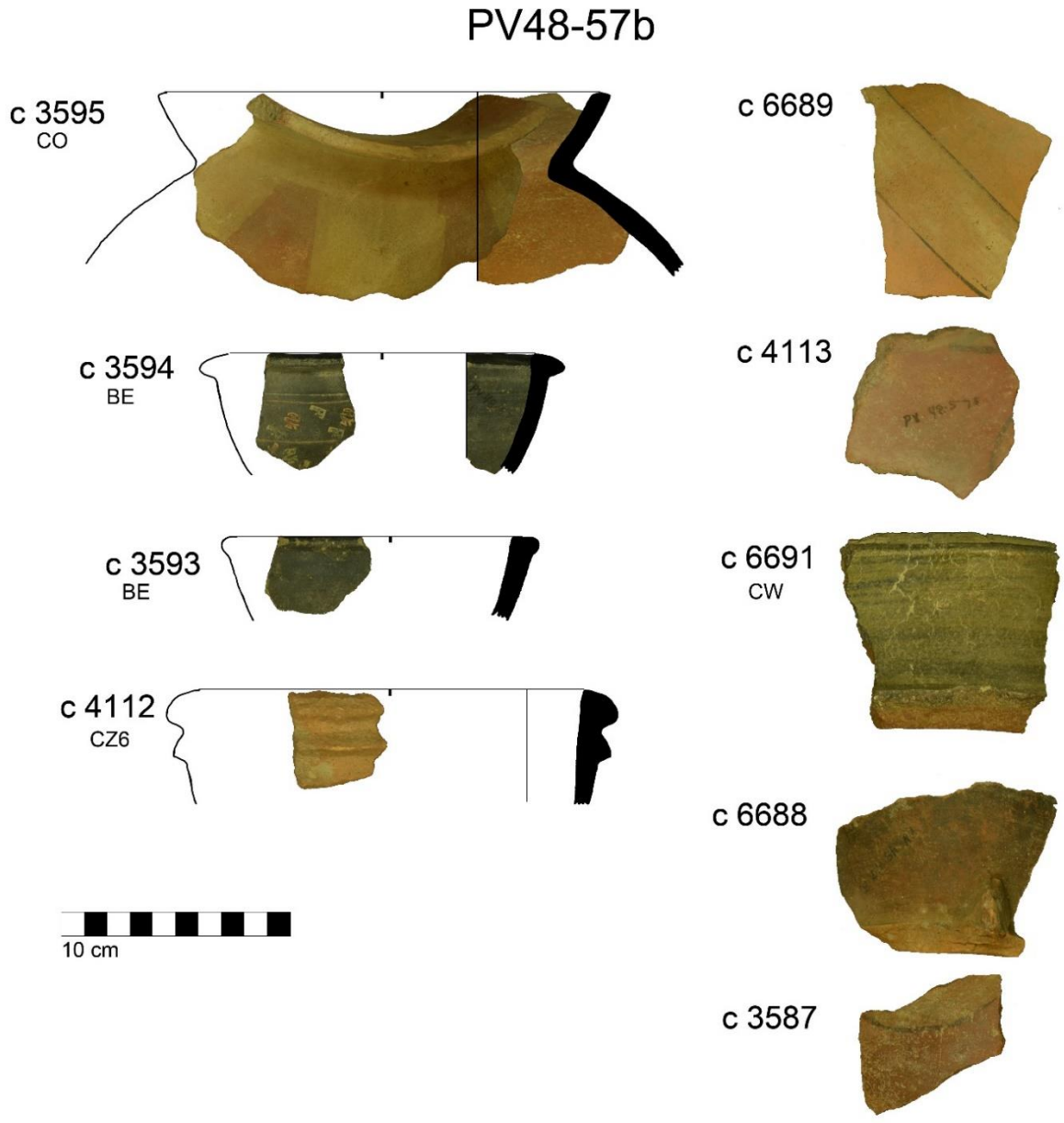


Plate 32. A sample of sherds recovered from PV48-57b.

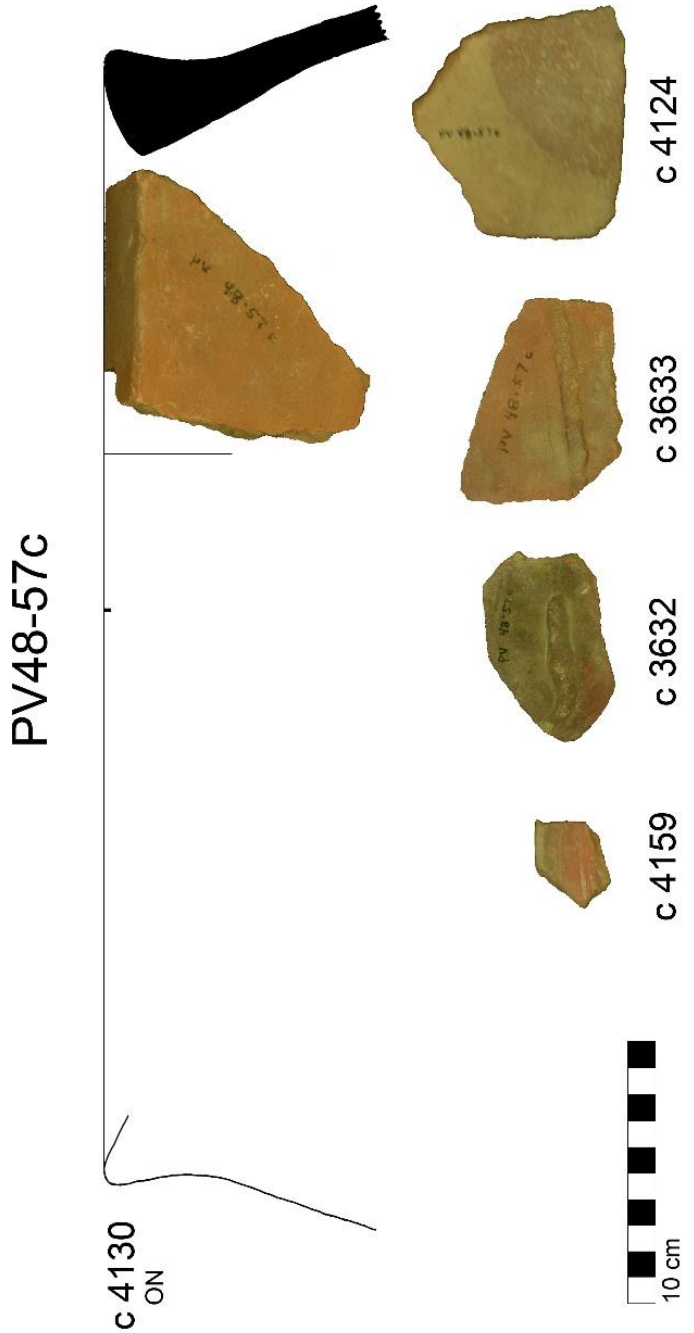


Plate 33. A sample of sherds recovered from PV48-57c.

Plate 34. A sample of a sherd recovered from PV48-57d.

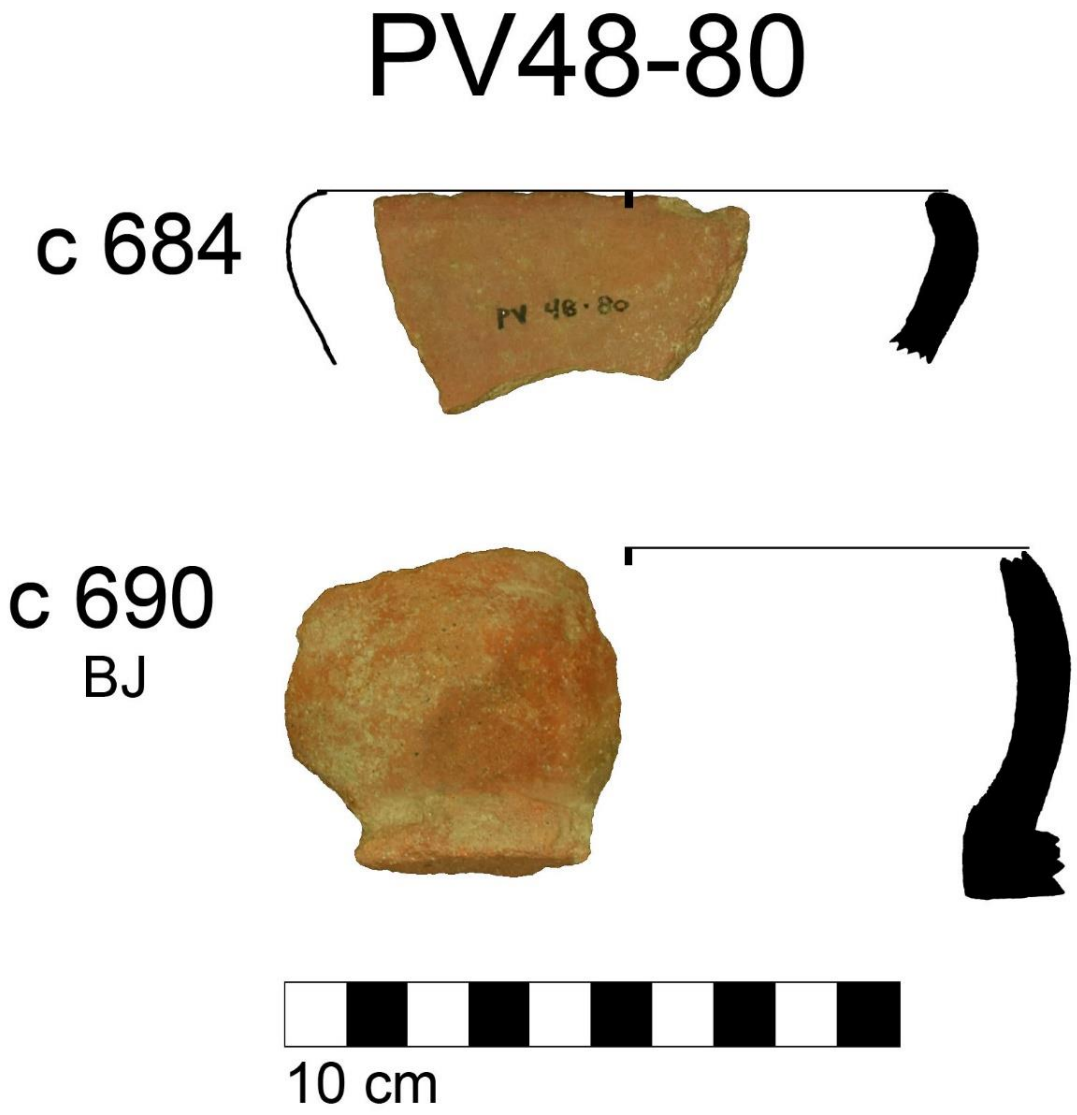


Plate 35. A sample of sherds recovered from PV48-80.

Plate 36. A sample of sherds recovered from PV48-86.

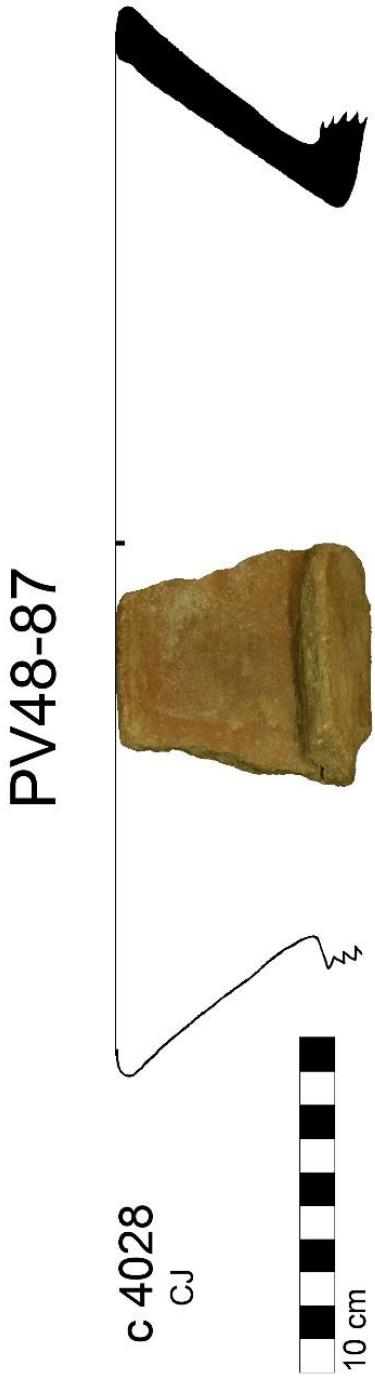


Plate 37. A sample of a sherd recovered from PV48-87.

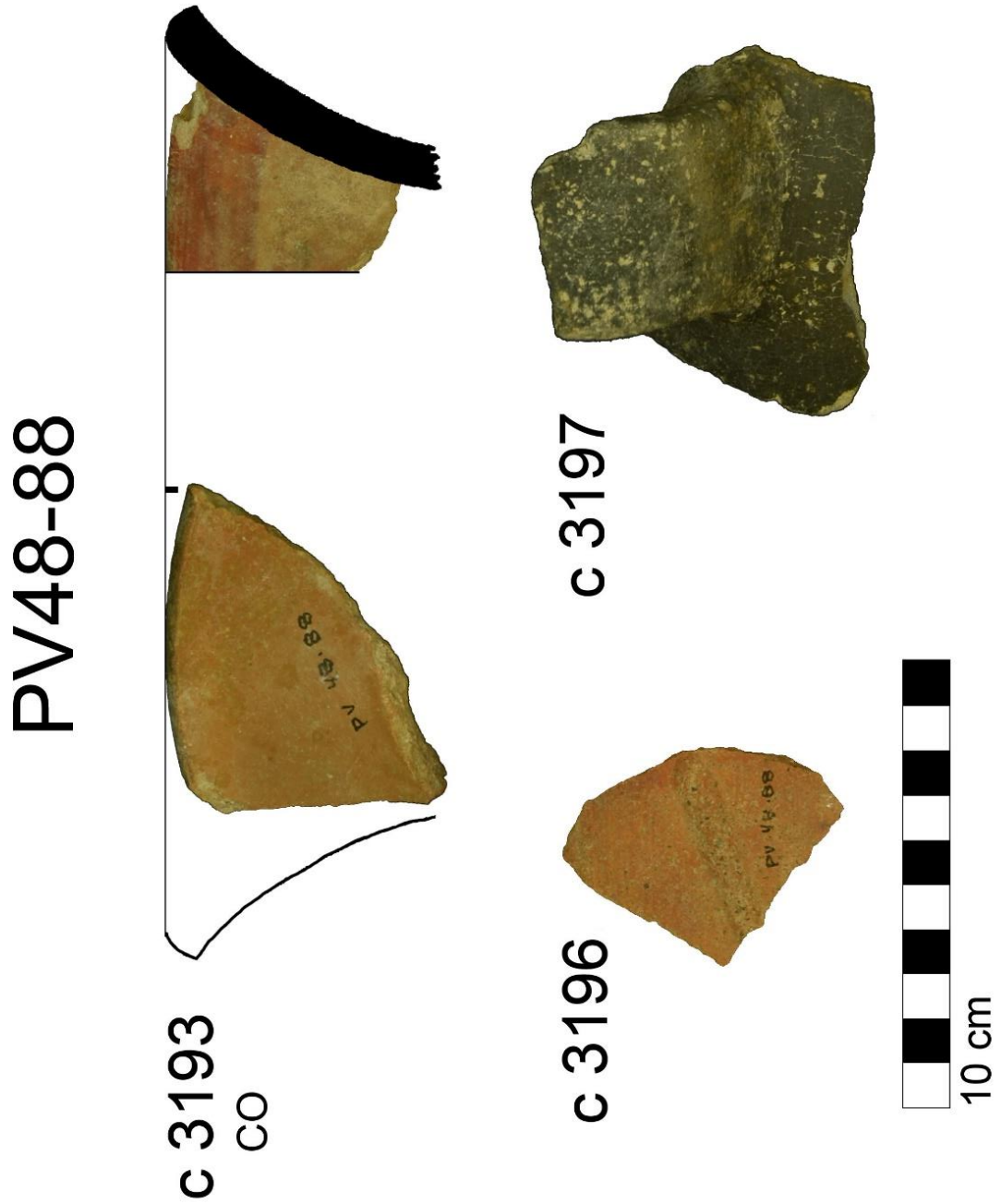


Plate 38. A sample of sherds recovered from PV48-88.

Plate 39. A sample of sherds recovered from PV48-91.

Plate 40. A sample of sherds recovered from PV48-93.

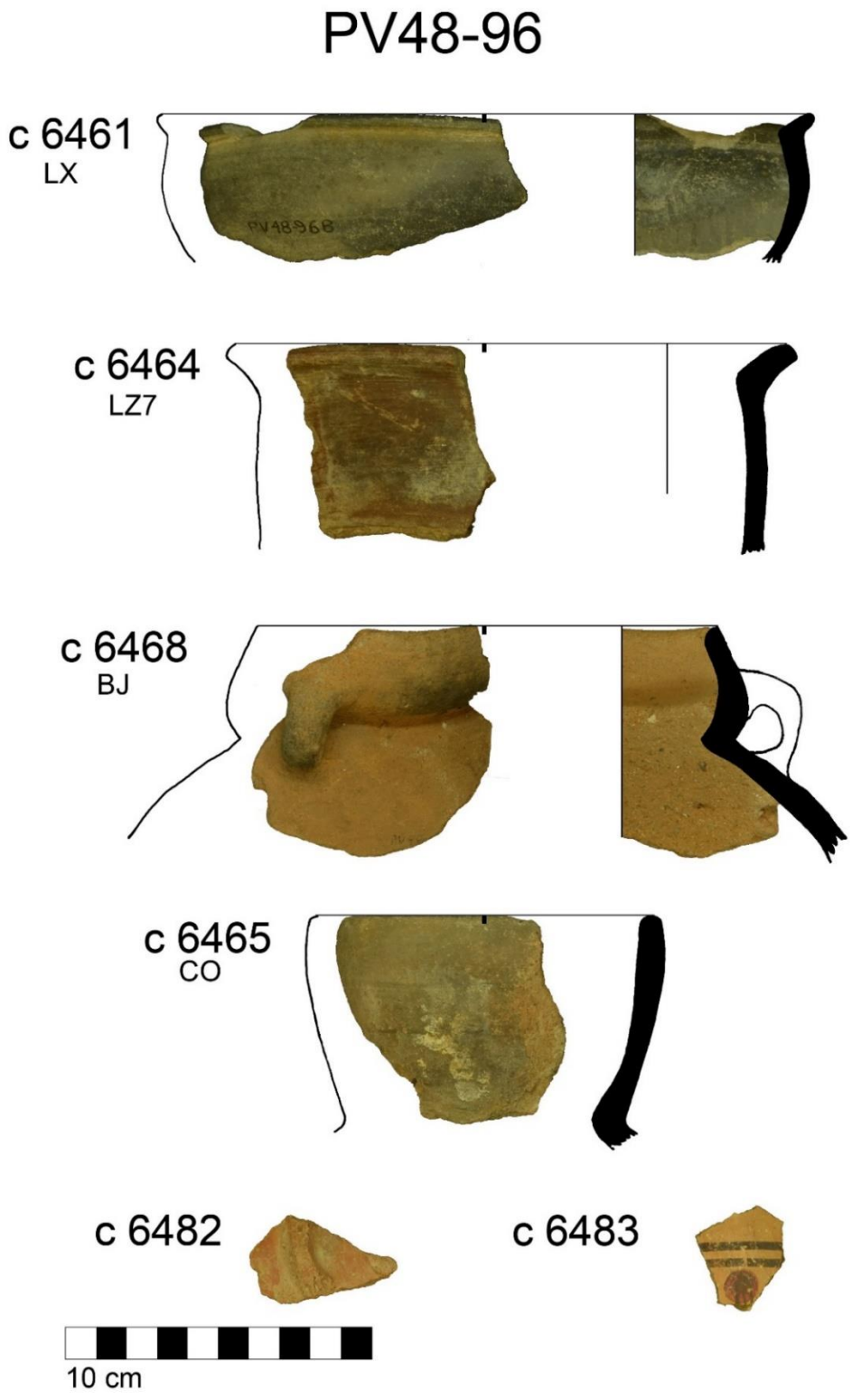


Plate 41. A sample of sherds recovered from PV48-96.

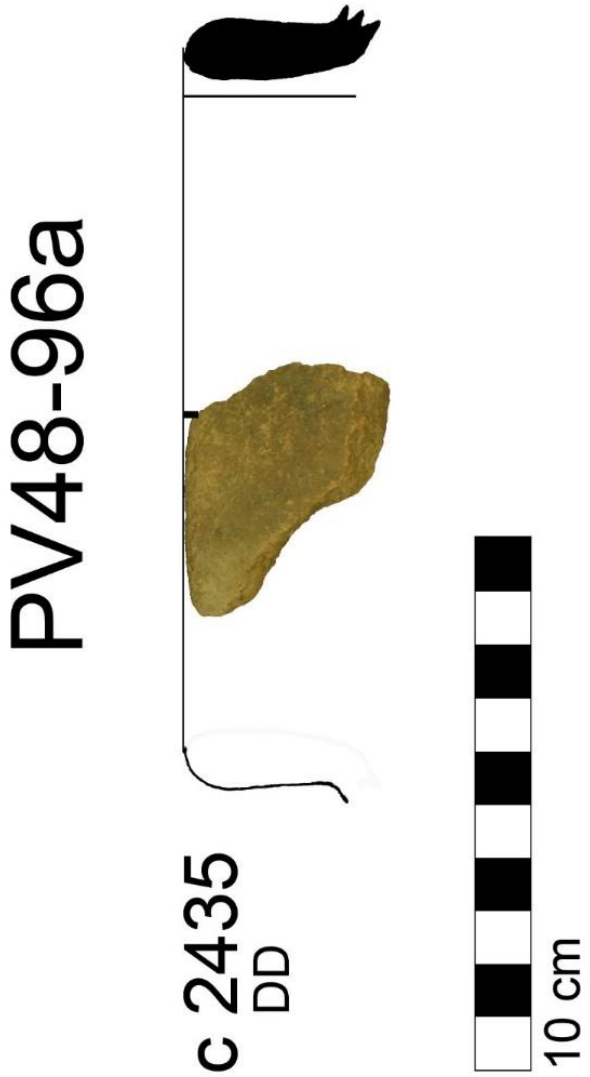


Plate 42. A sample of a sherd recovered from PV48-96a.

Plate 43. A sample of a sherd recovered from PV48-96b.

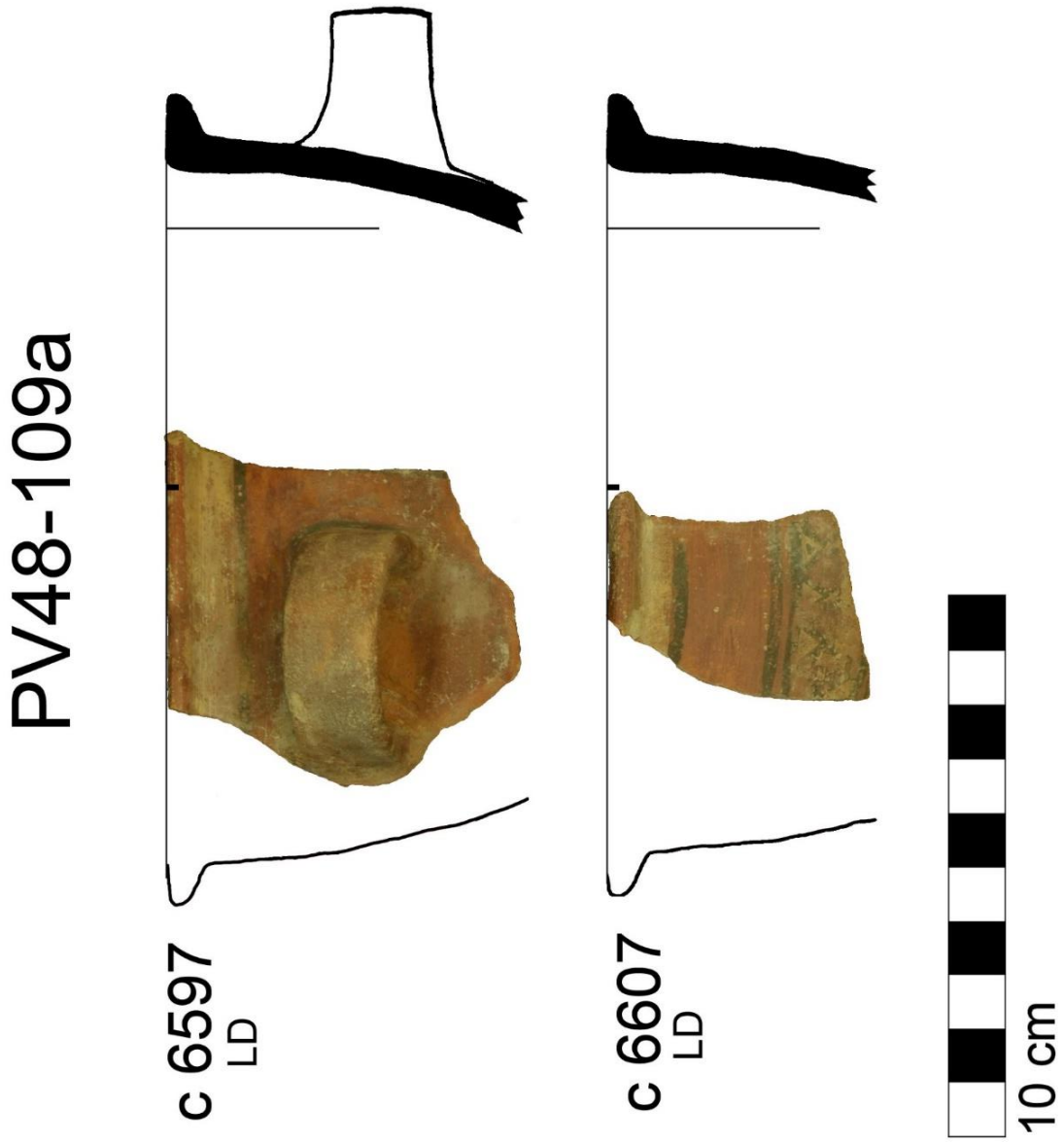


Plate 44. A sample of sherds recovered from PV48-109a.

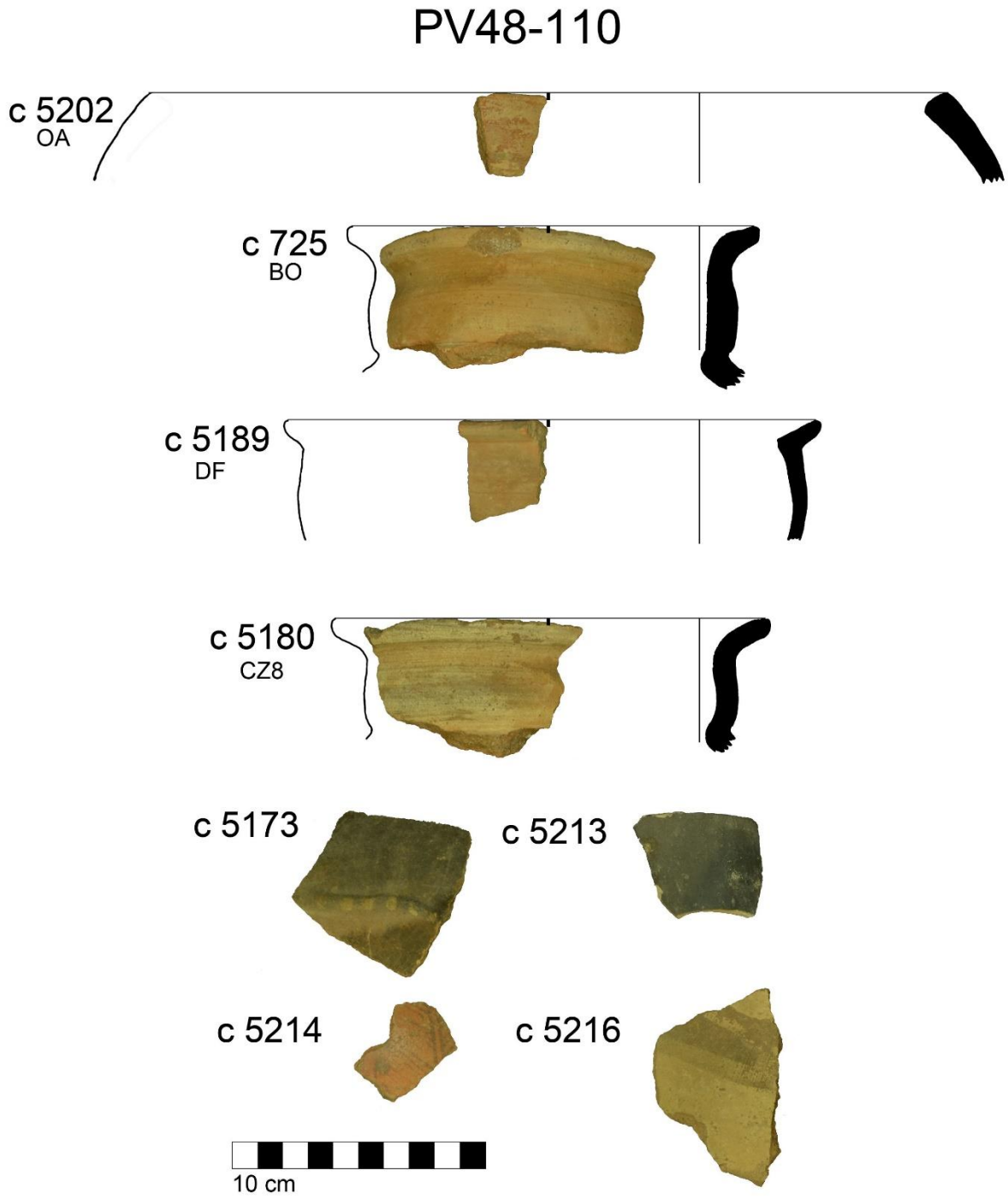


Plate 45. A sample of sherds recovered from PV48-110.

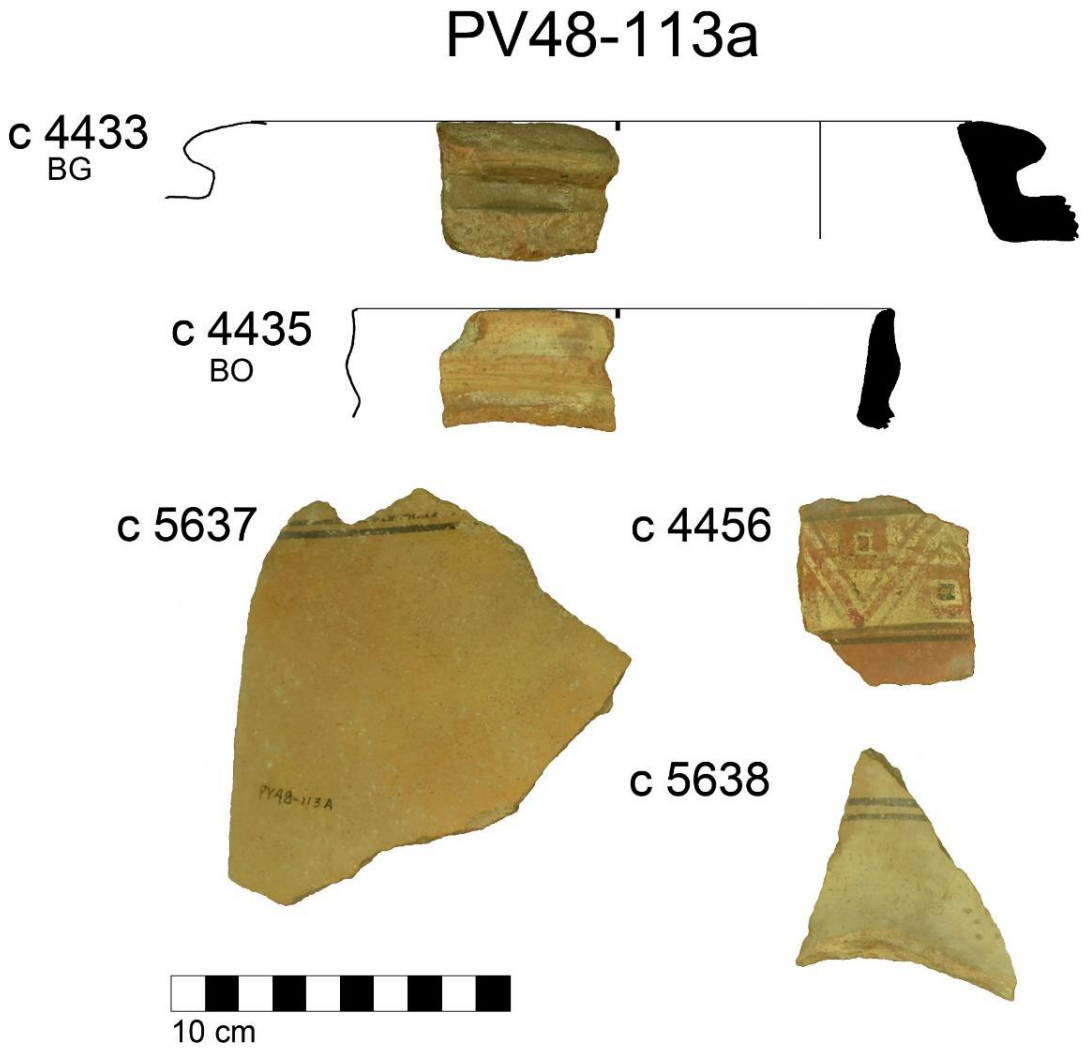


Plate 46. A sample of sherds recovered from PV48-113a.

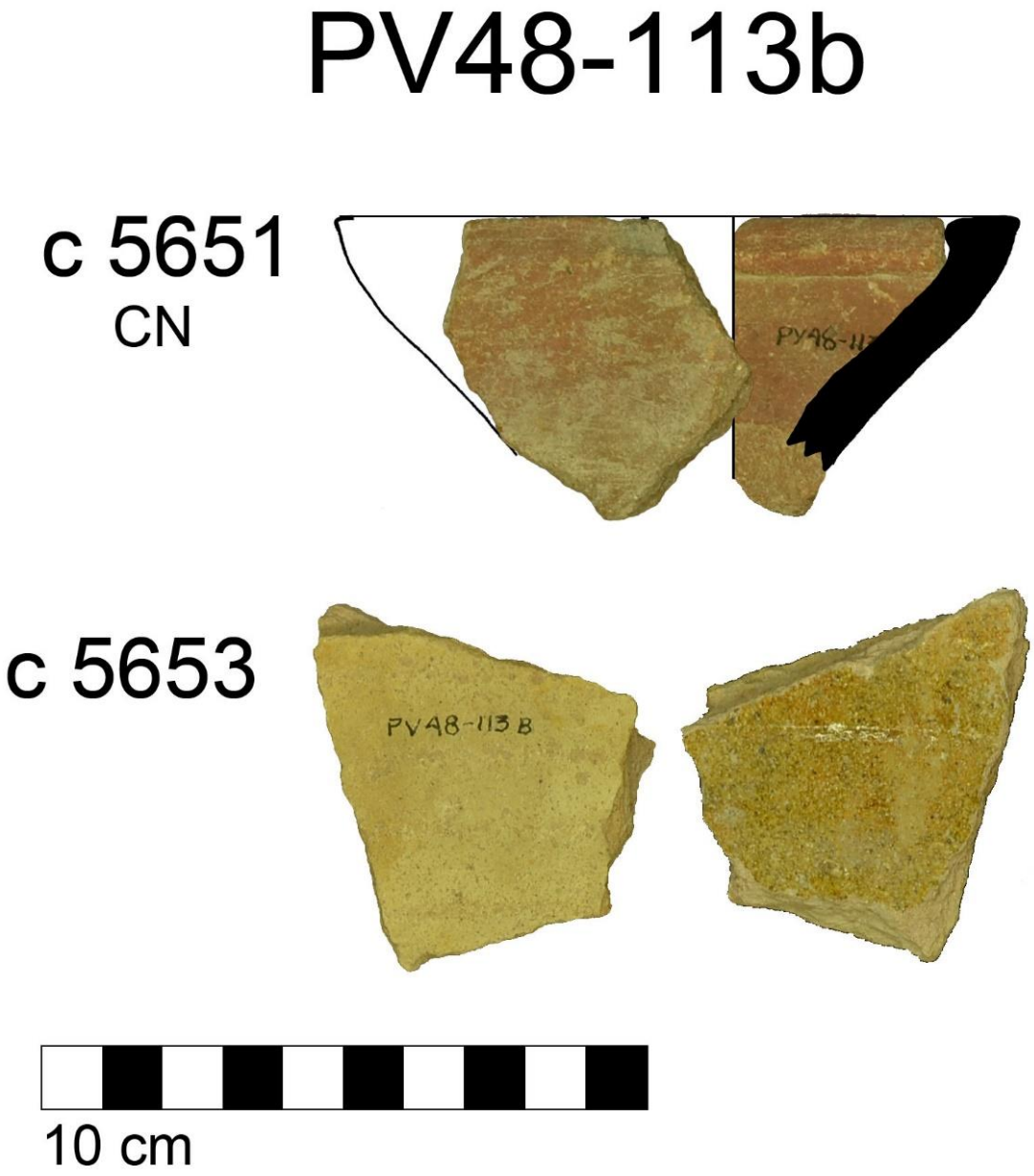


Plate 47. A sample of sherds recovered from PV48-113b.

Plate 48. A sample of a sherd recovered from PV48-113c.

Plate 49. A sample of a sherd recovered from PV48-113d.

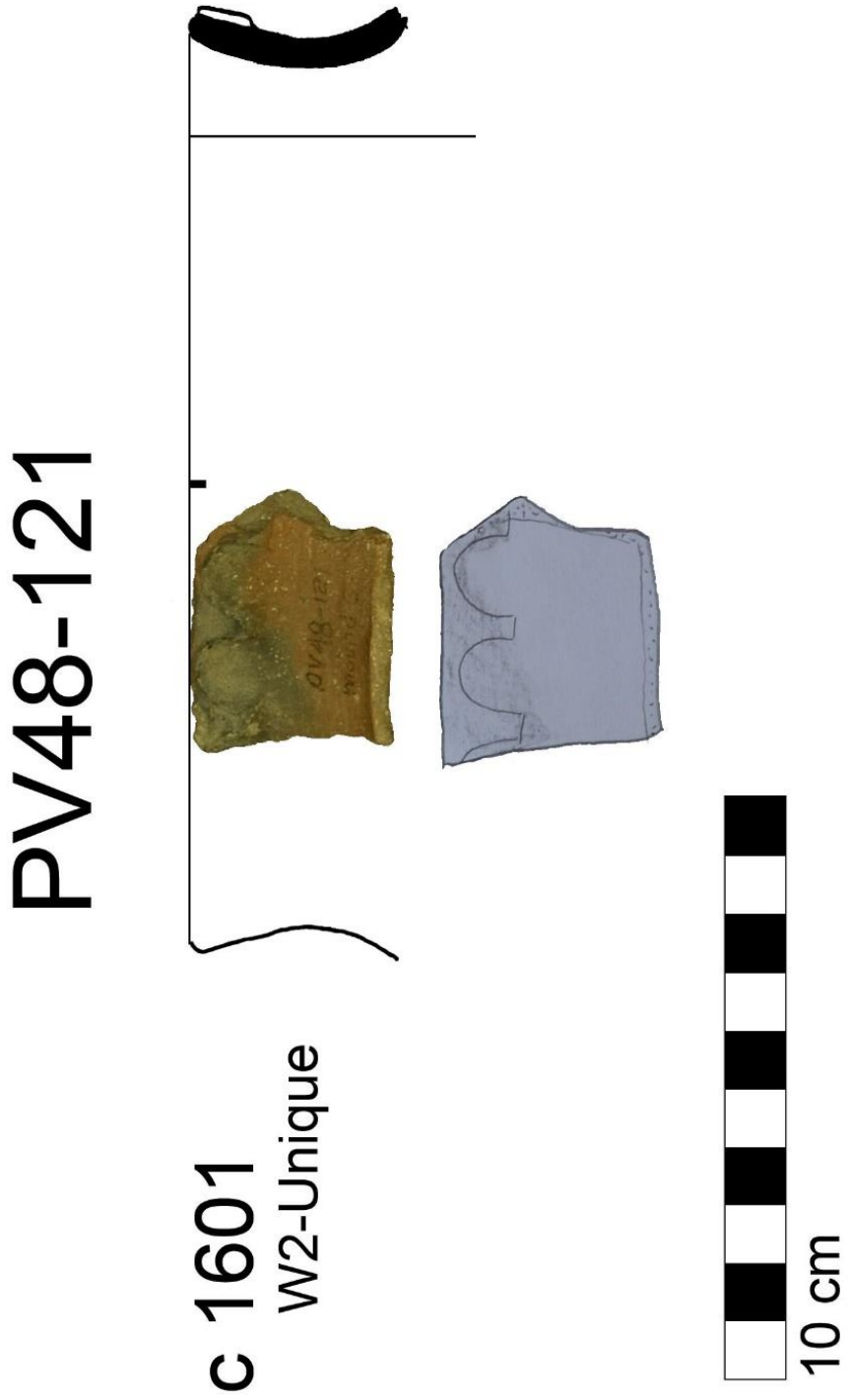


Plate 50. A sample of a sherd recovered from PV48-121.

Plate 51. A sample of sherds recovered from PV48-121e.

Plate 52. A sample of a sherd recovered from PV48-121f.

Plate 53. A sample of a sherd recovered from PV48-121g.

Plate 54. A sample of sherds recovered from PV48-126.

Plate 55. A sample of sherds recovered from PV48-137a.

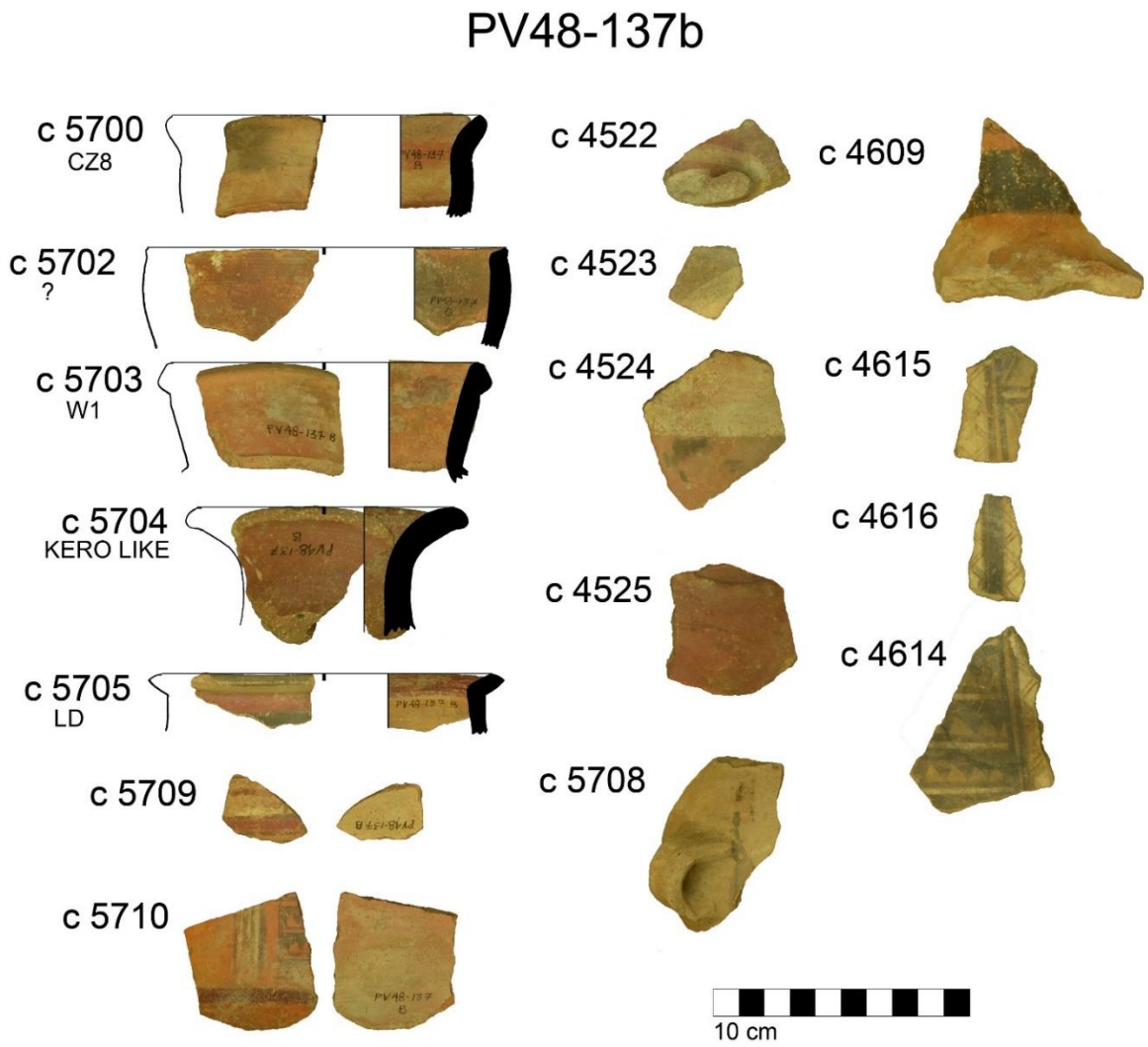


Plate 56. A sample of sherds recovered from PV48-137b.

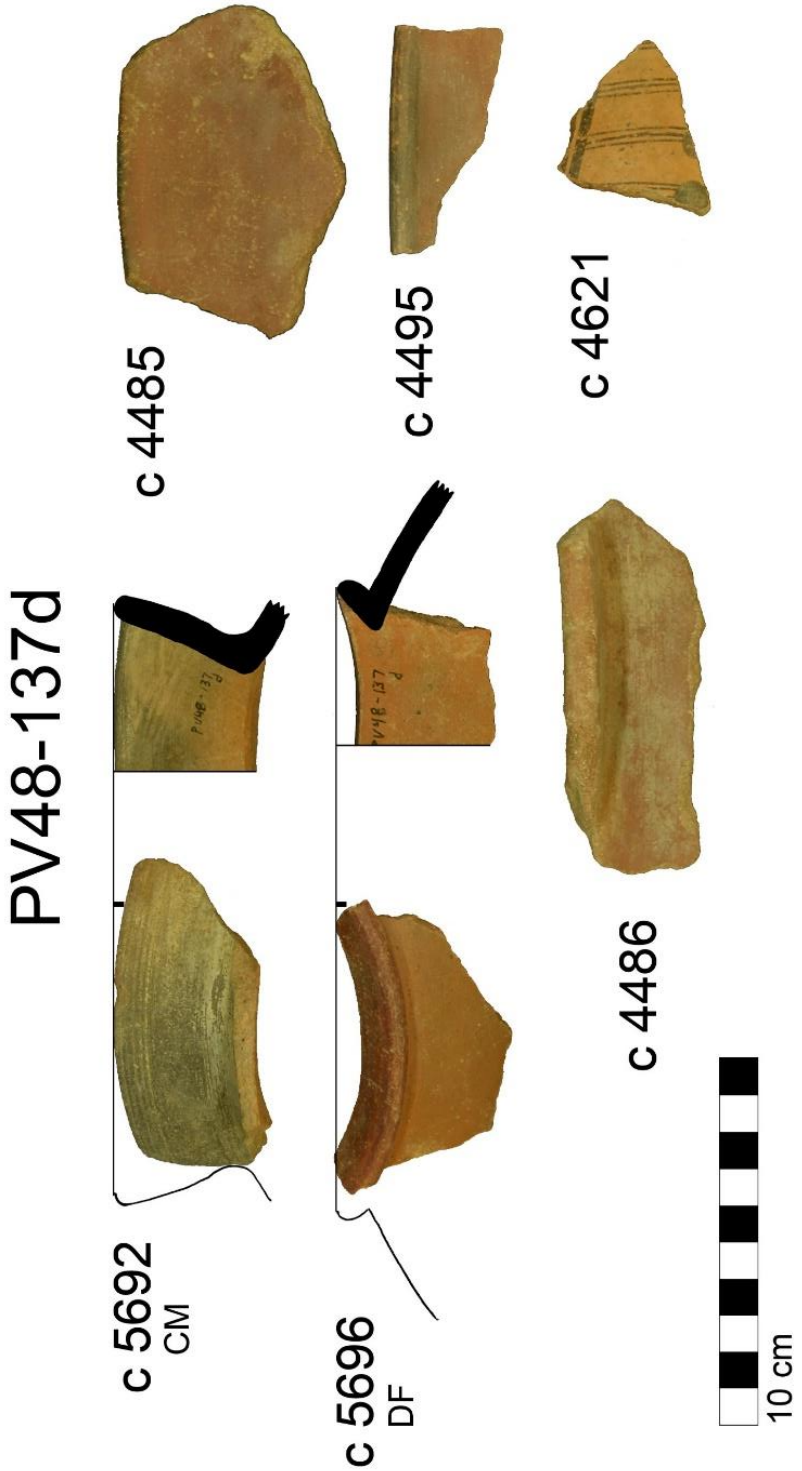


Plate 57. A sample of sherds recovered from PV48-137d.

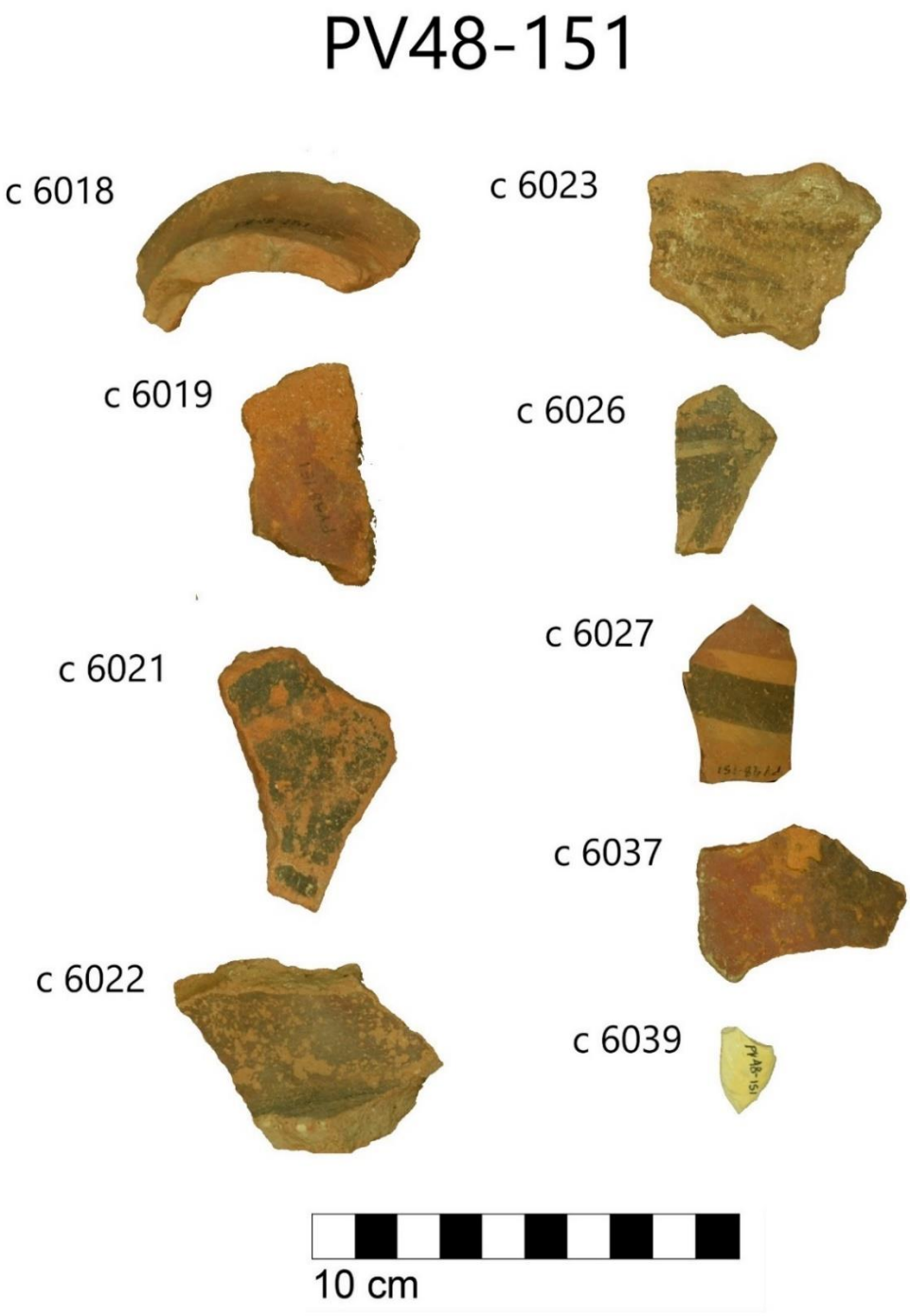


Plate 58. A sample of sherds recovered from PV48-151.

Plate 59. A sample of sherds recovered from PV48-152.

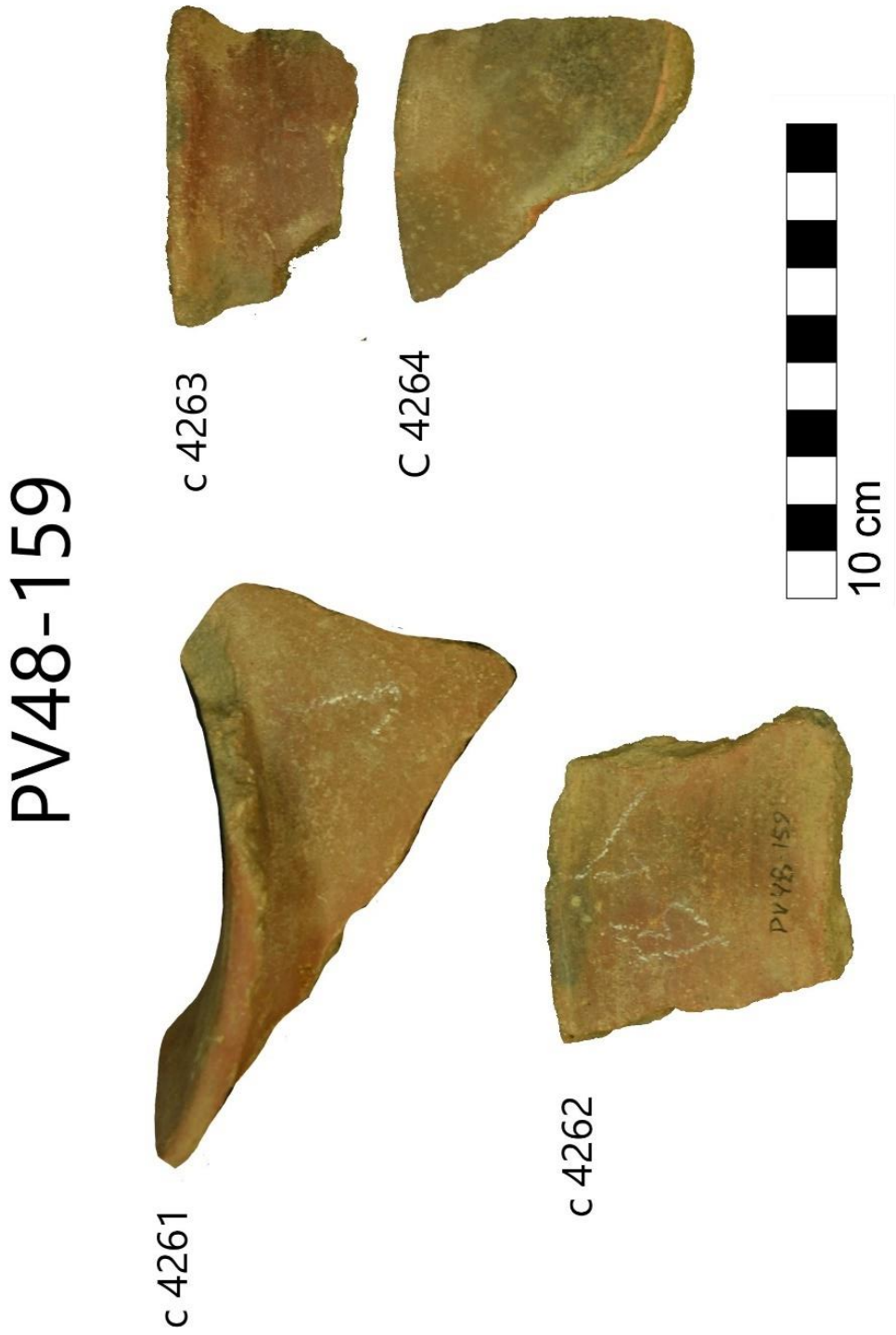


Plate 60. A sample of sherds recovered from PV48-159.

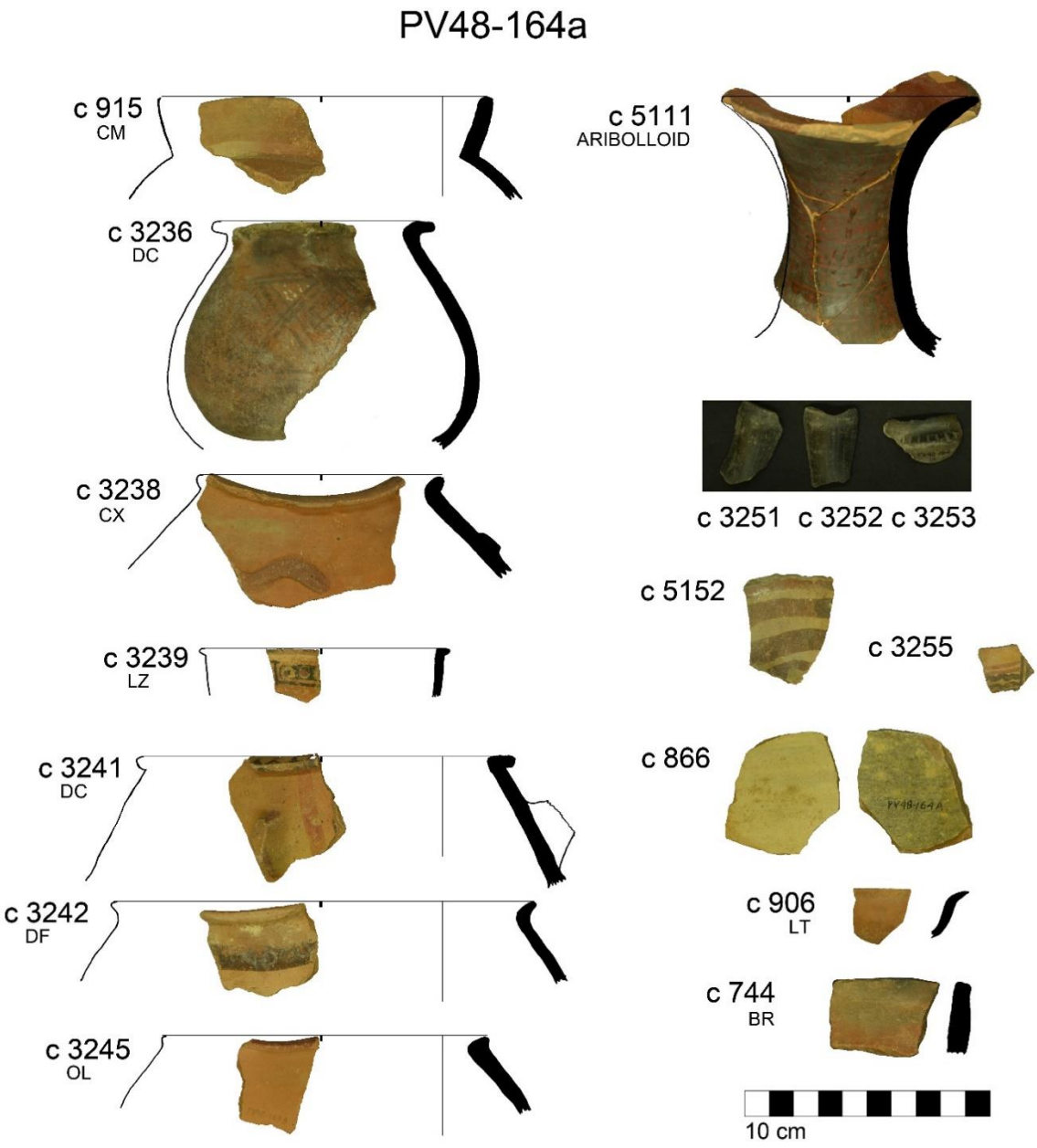


Plate 61. A sample of sherds recovered from PV48-164a.

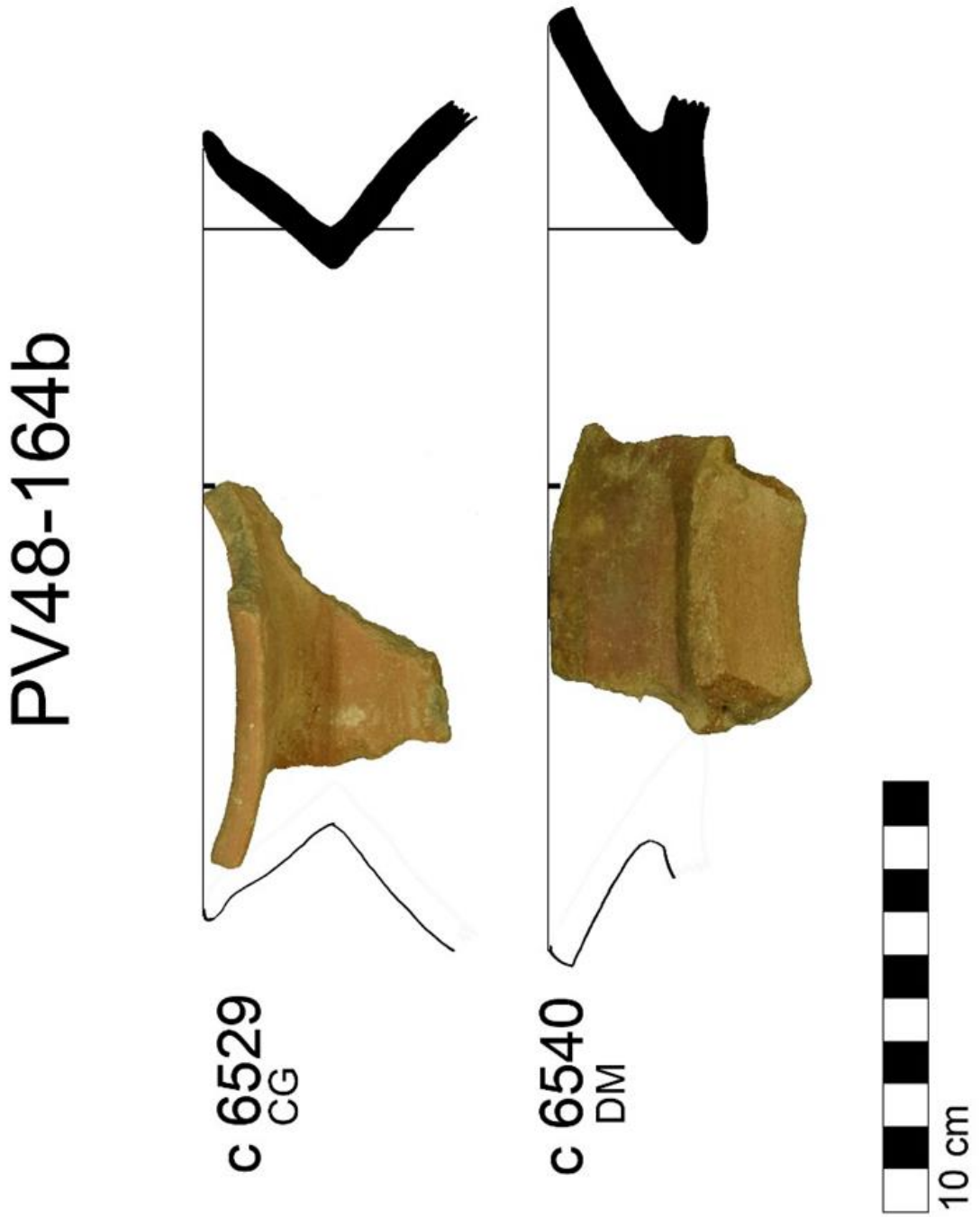


Plate 62. A sample of sherds recovered from PV48-164b.

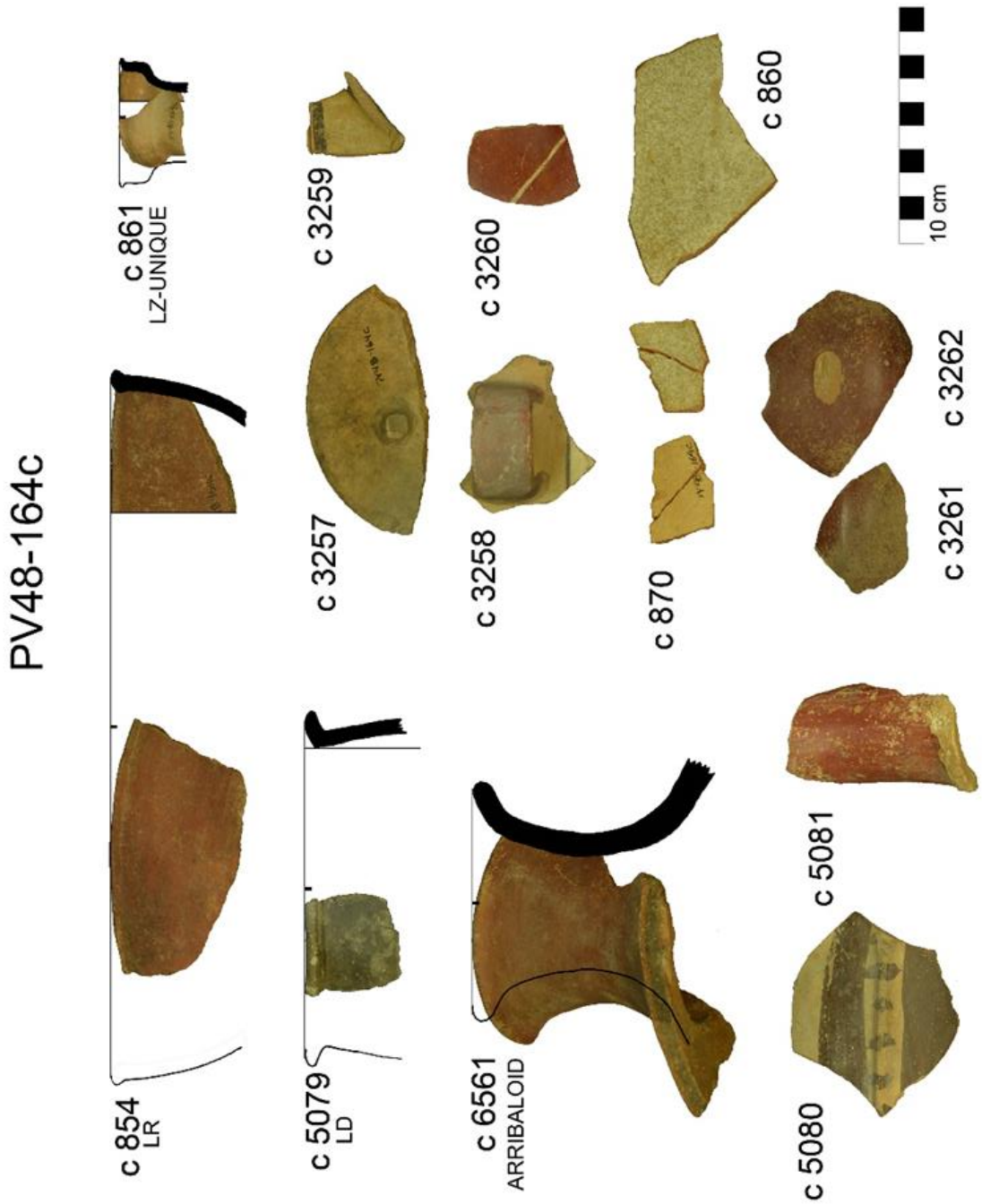


Plate 63. A sample of sherds recovered from PV48-164c.

Plate 64. A sample of sherds recovered from PV48-164d.

Plate 65. A sample of a sherd recovered from PV48-164e.

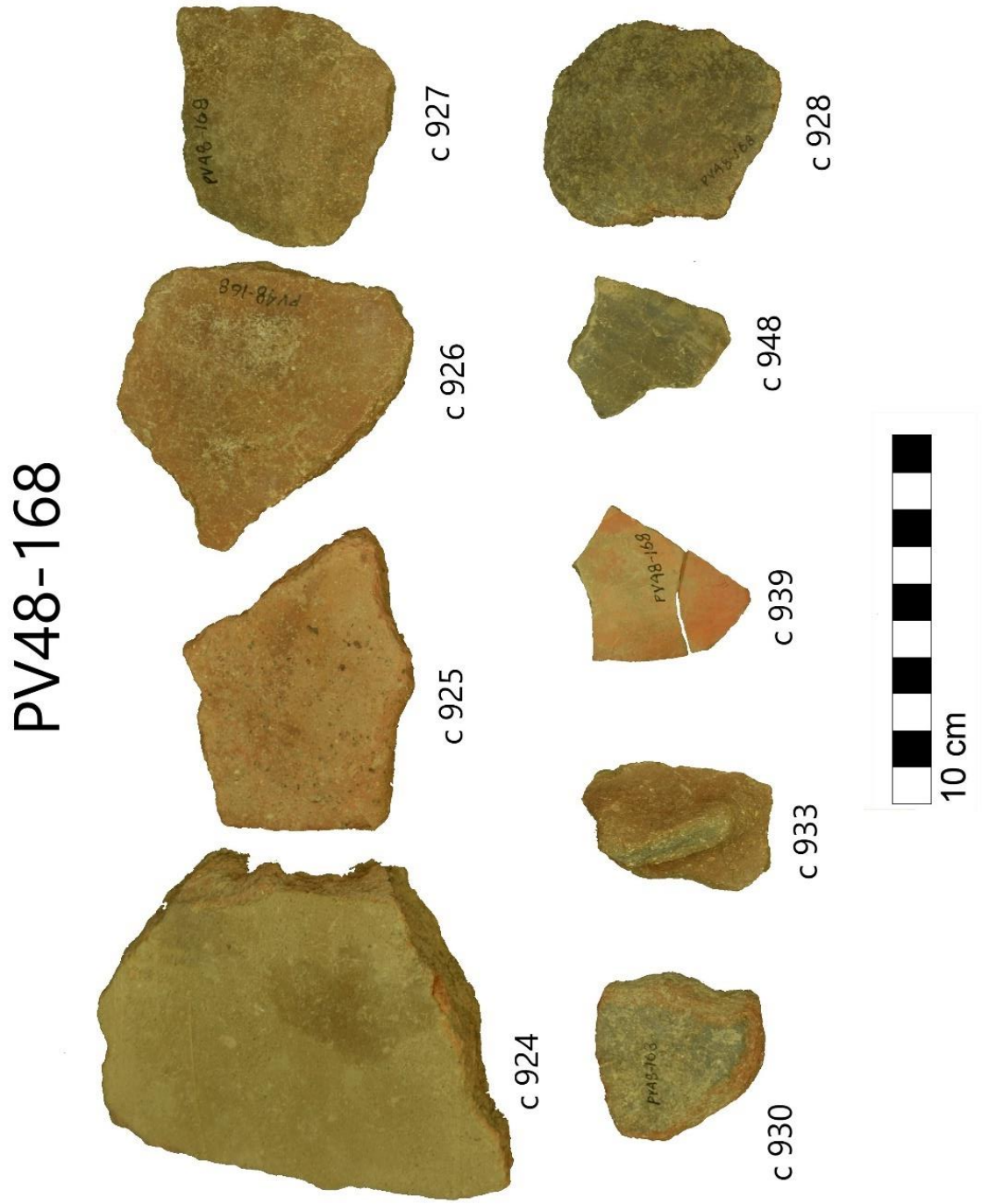


Plate 66. A sample of sherds recovered from PV48-168.

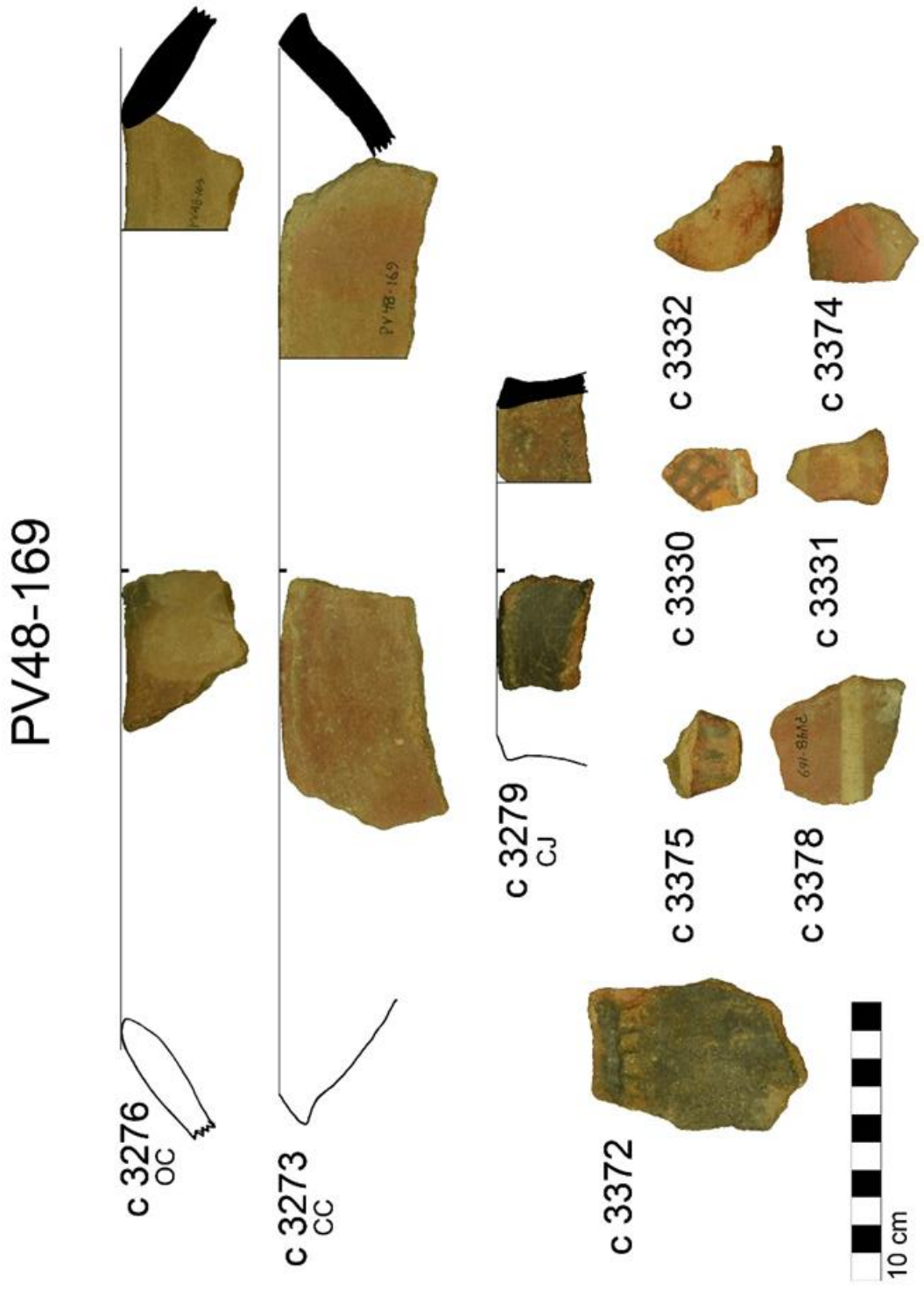


Plate 67. A sample of sherds recovered from PV48-169.

Plate 68. A sample of a sherd recovered from PV48-175.

Plate 69. A sample of a sherd recovered from PV48-177.

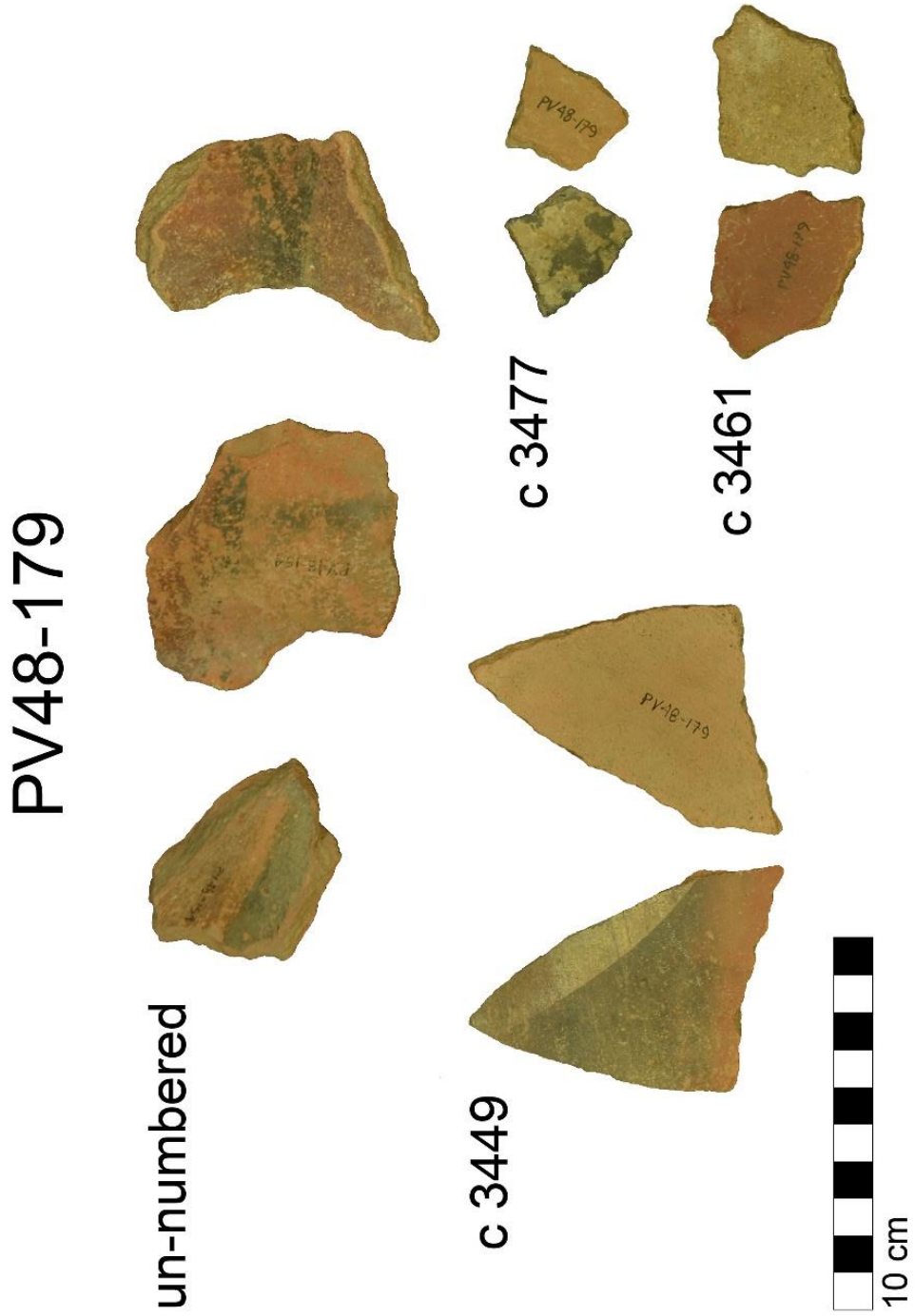


Plate 70. A sample of sherds recovered from PV48-179.

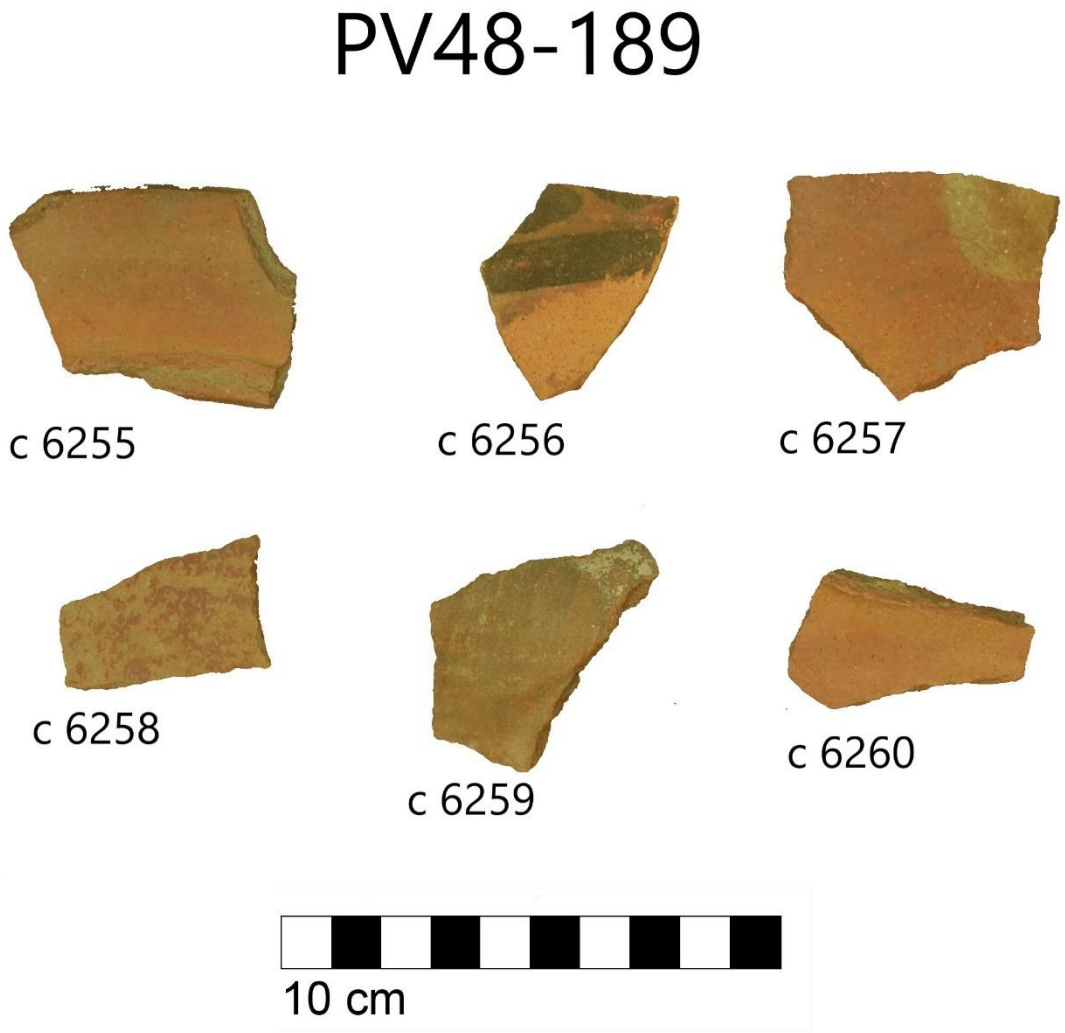


Plate 71. A sample of sherds recovered from PV48-189.

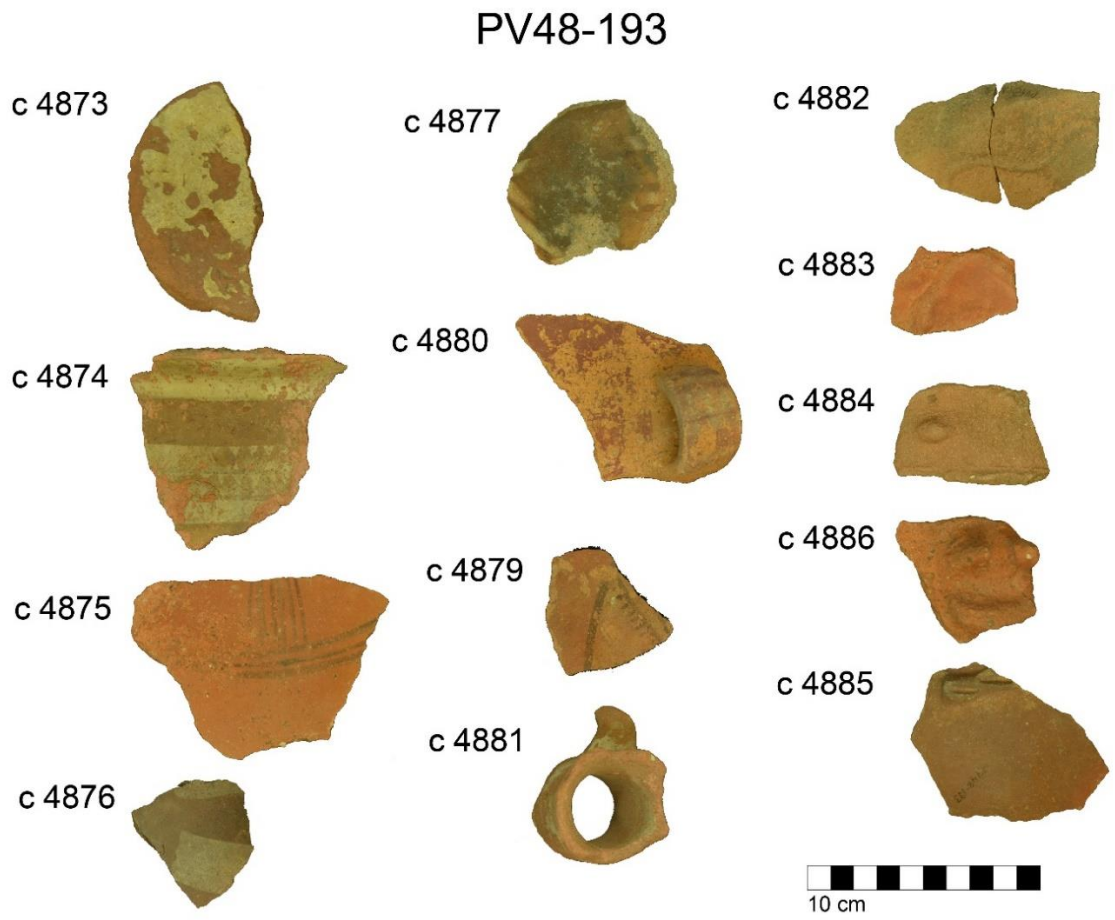


Plate 72. A sample of sherds recovered from PV48-193.

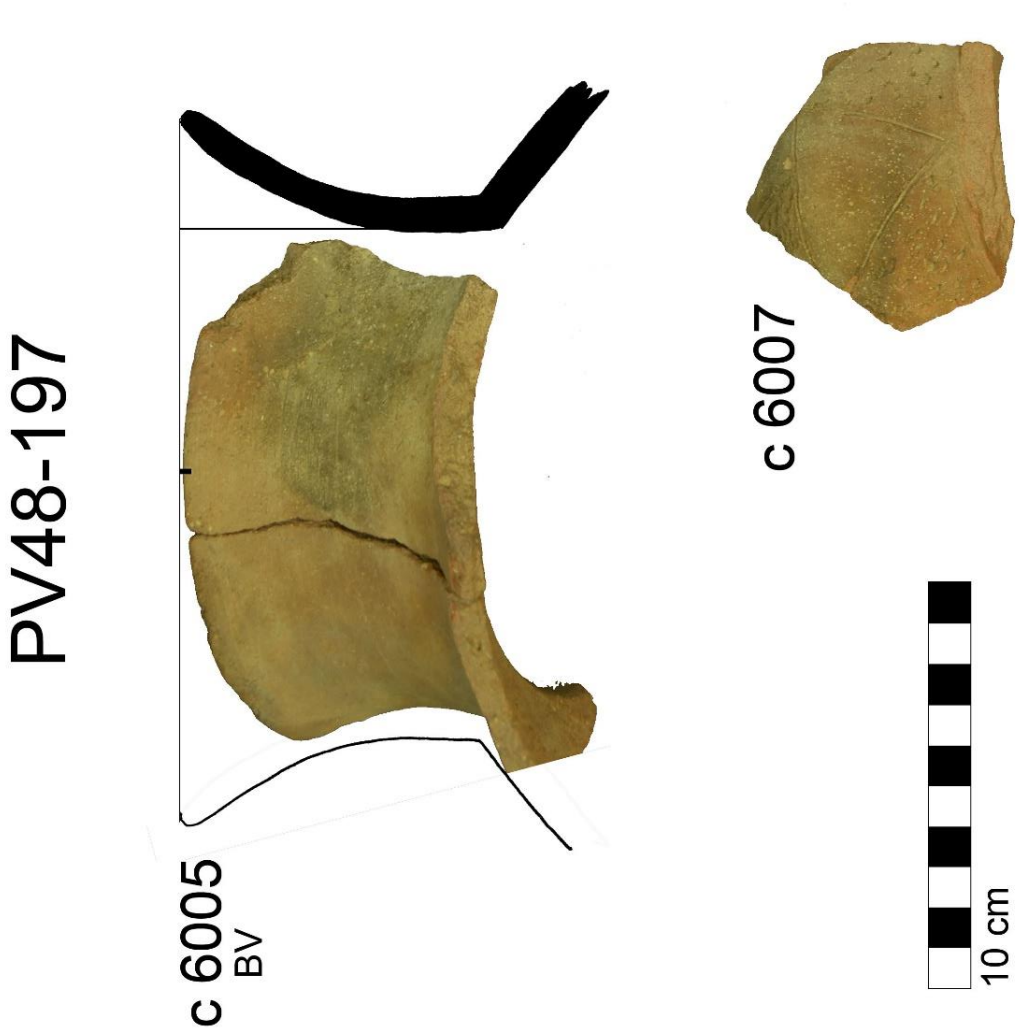


Plate 73. A sample of sherds recovered from PV48-197.

Plate 74. A sample of sherds recovered from PV48-199.

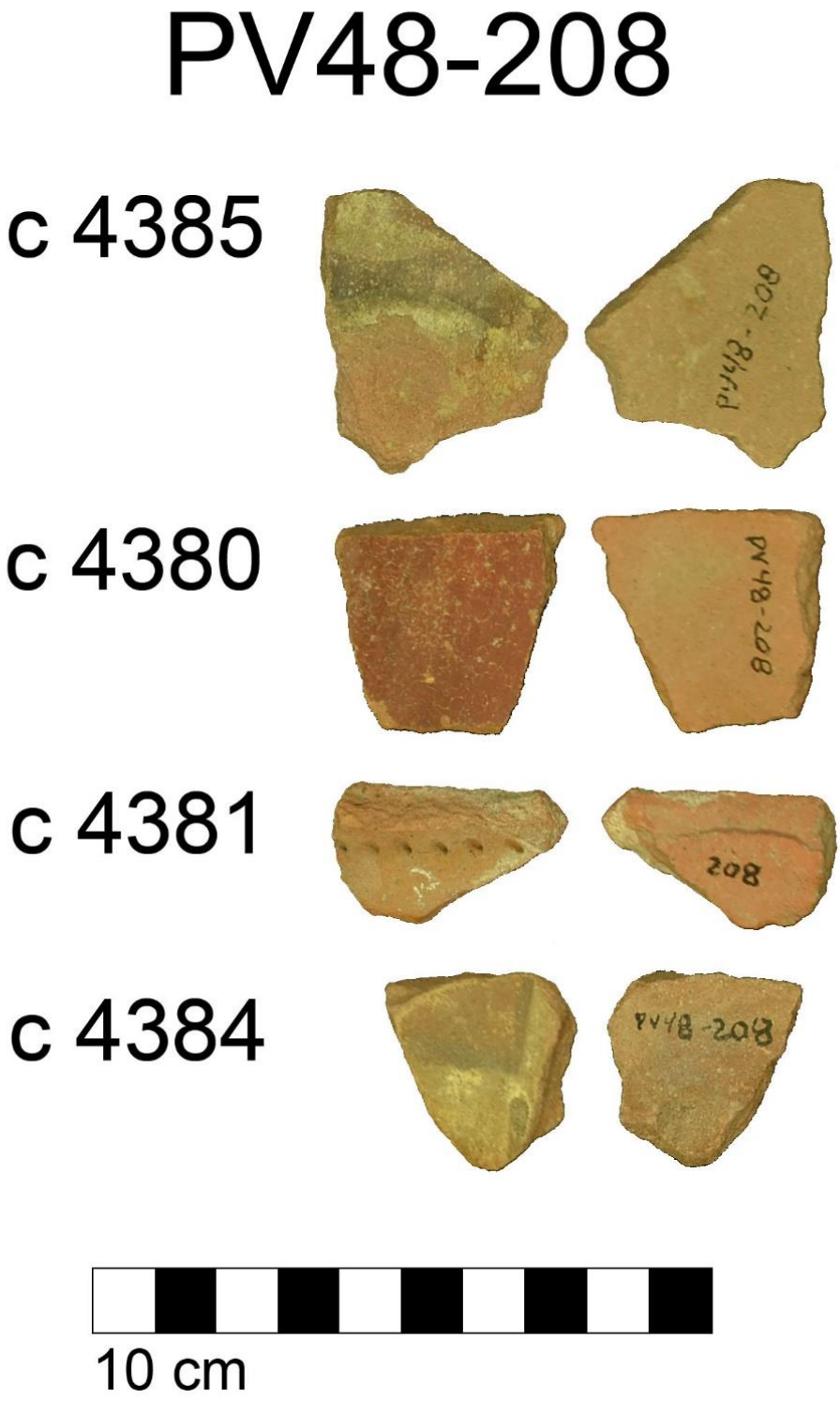


Plate 75. A sample of sherds recovered from PV48-208.

Plate 76. A sample of a sherd recovered from PV48-222.

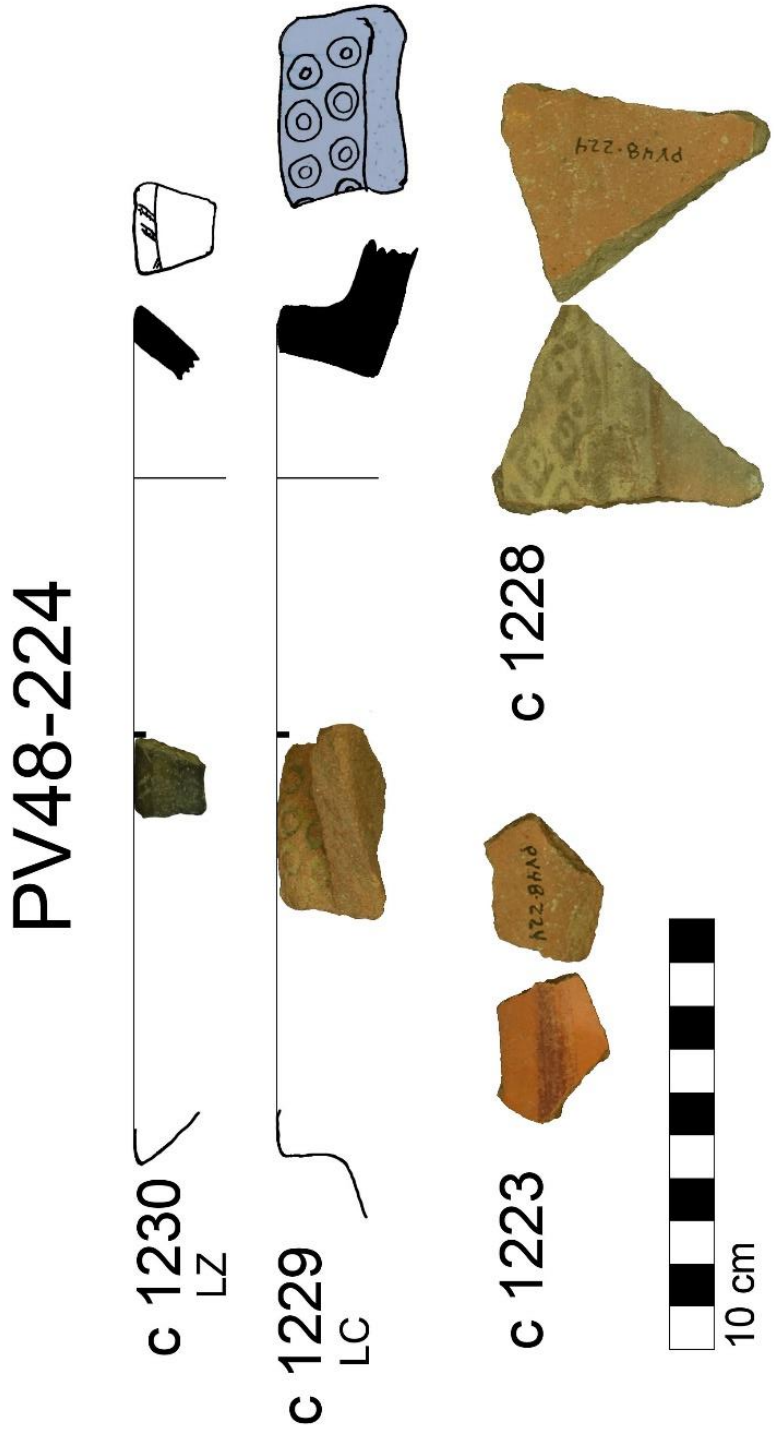


Plate 77. A sample of sherds recovered from PV48-224.

Plate 78. A sample of sherds recovered from PV48-229.

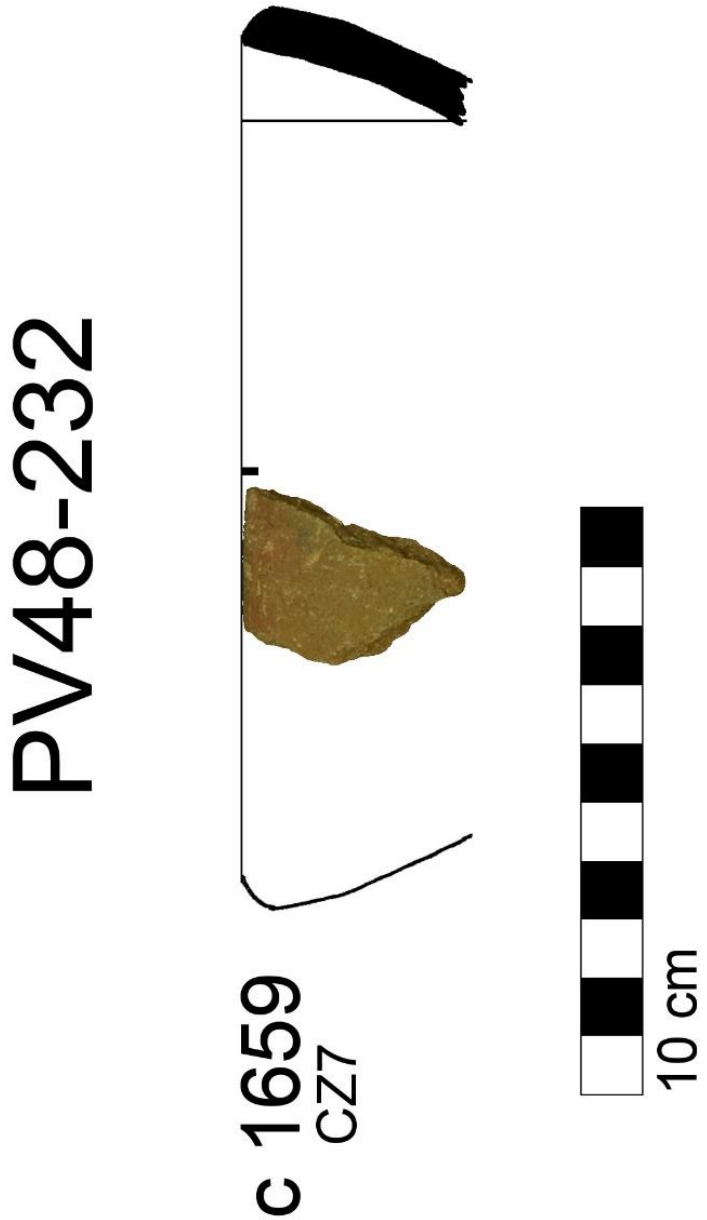


Plate 79. A sample of a sherd recovered from PV48-232.

Plate 80. A sample of sherds recovered from PV48-234.

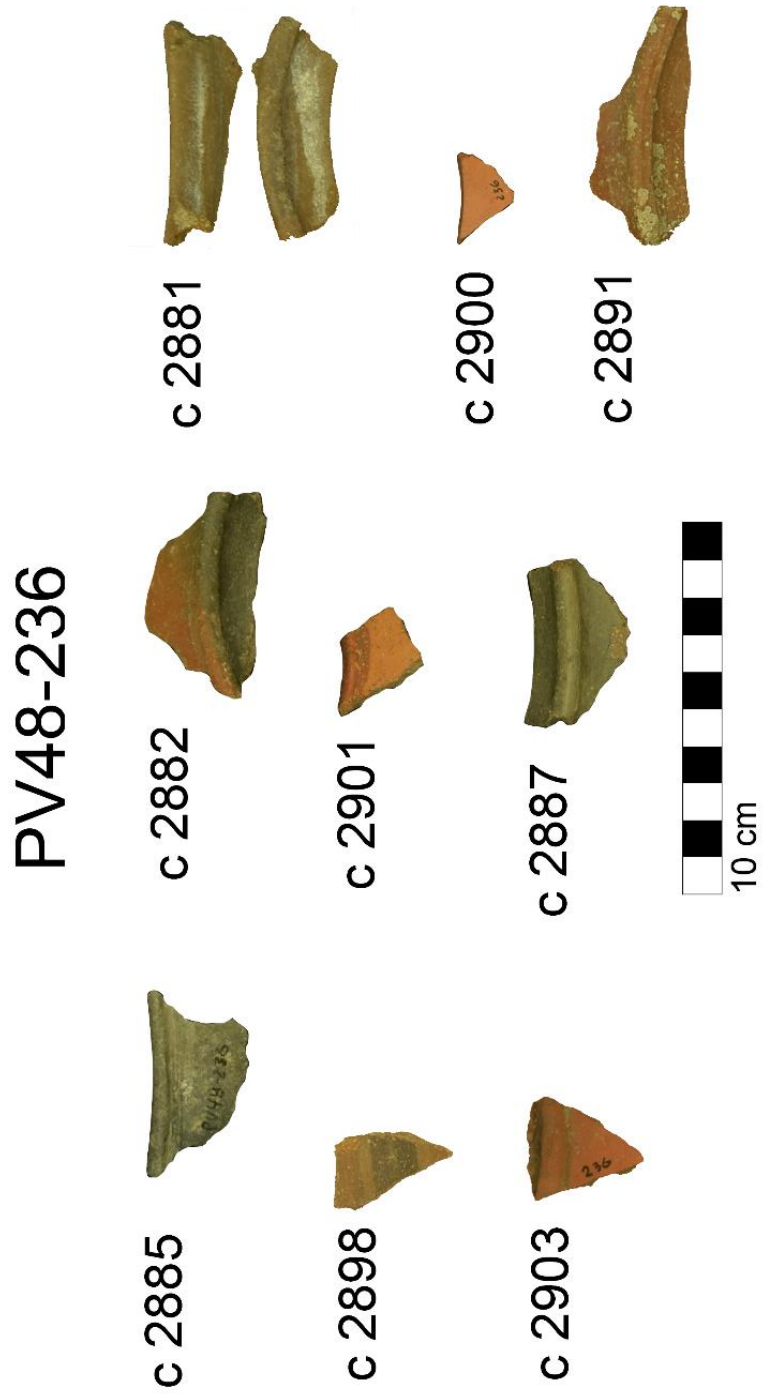


Plate 81. A sample of sherds recovered from PV48-236.

Plate 82. A sample of a sherd recovered from PV48-254.

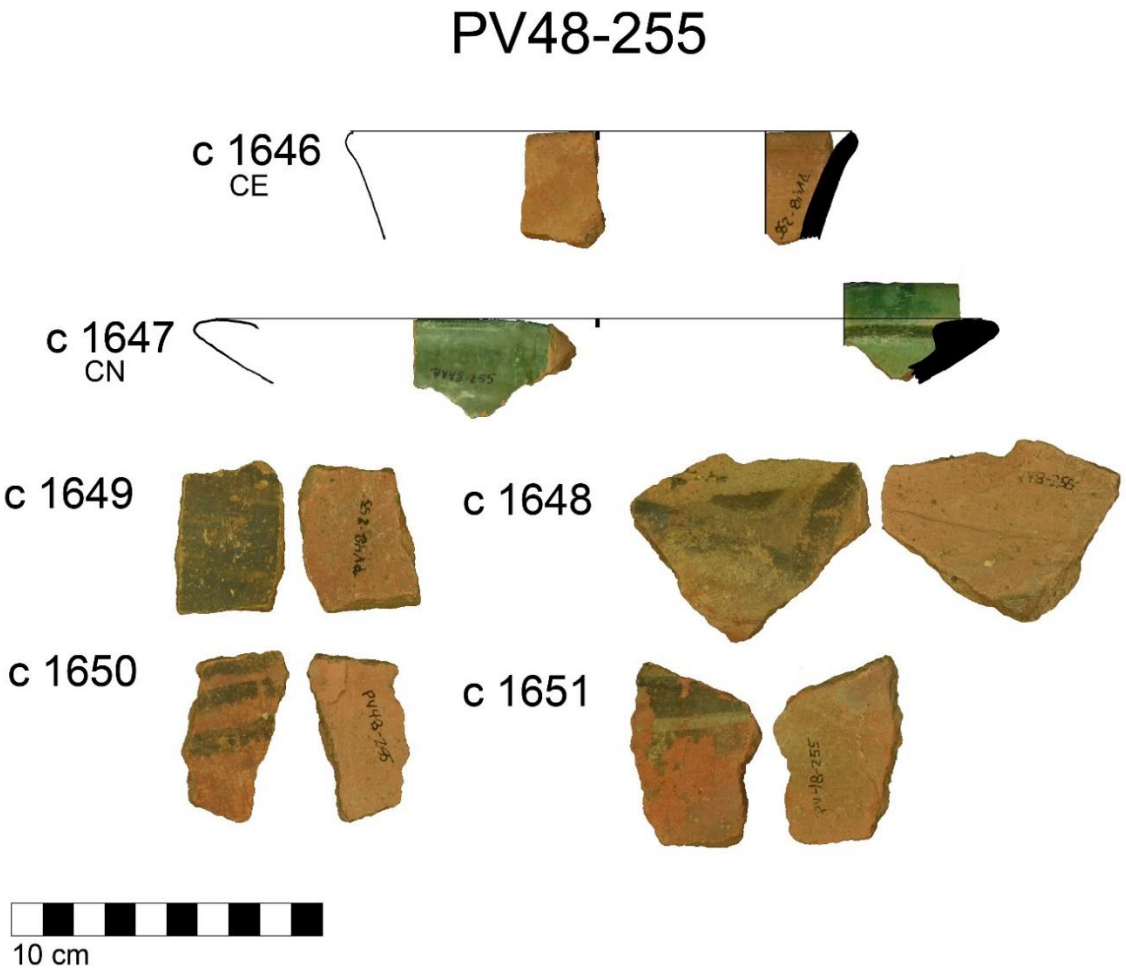


Plate 83. A sample of sherds recovered from PV48-255.

Plate 84. A sample of a sherd recovered from PV48-257.

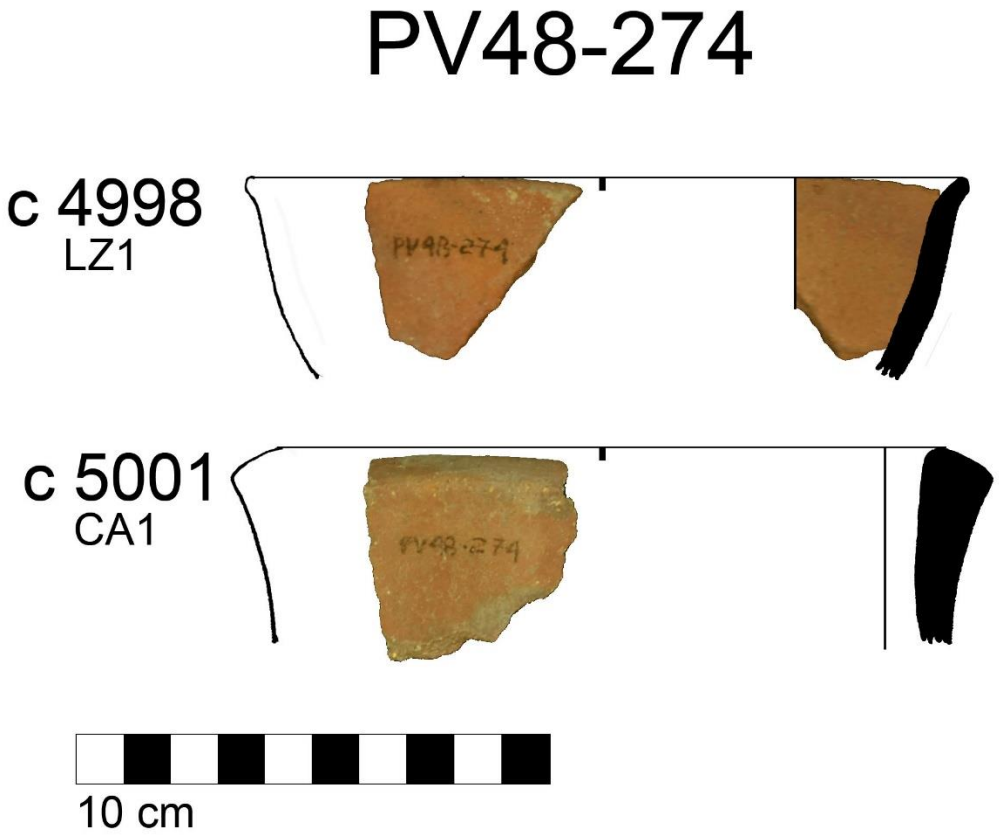


Plate 85. A sample of sherds recovered from PV48-274.

Plate 86. A sample of sherds recovered from PV48-286.

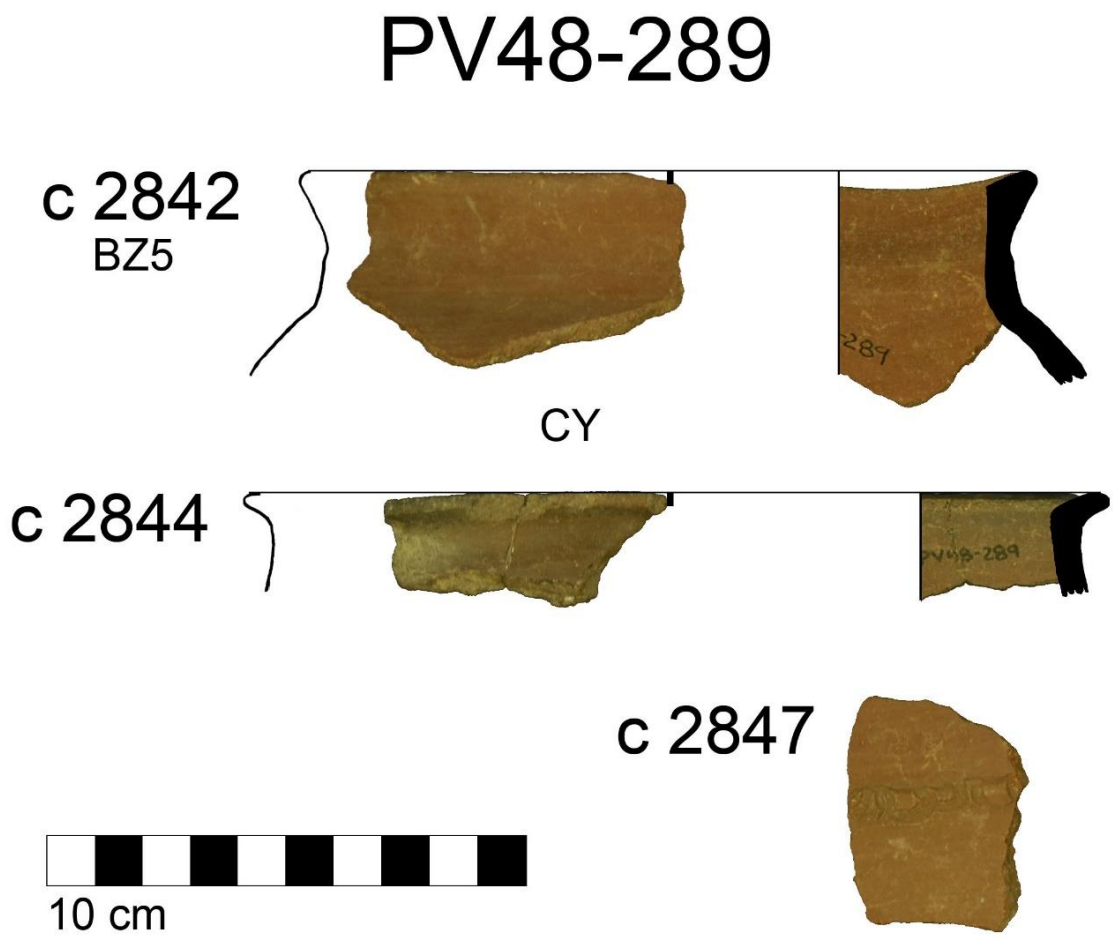


Plate 87. A sample of sherds recovered from PV48-289.

Plate 88. A sample of sherds recovered from PV48-290.

Plate 89. A sample of a sherd recovered from PV48-295.

Plate 90. A sample of sherds recovered from PV48-299.

Plate 91. A sample of a sherd recovered from PV48-302.

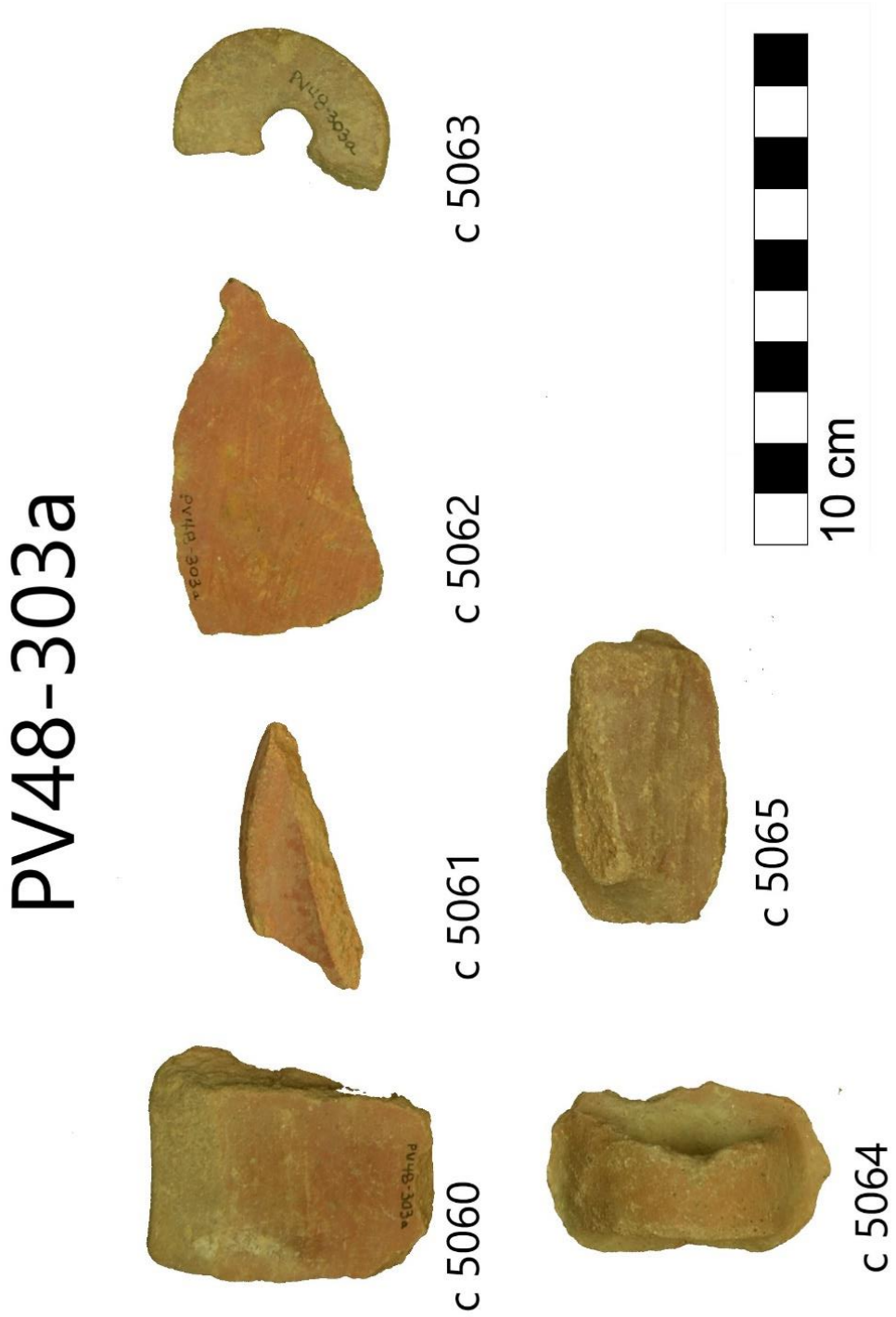


Plate 92. A sample of sherds recovered from PV48-303a.

Plate 93. A sample of sherds recovered from PV48-303b.

Plate 94. A sample of sherds recovered from PV48-315.

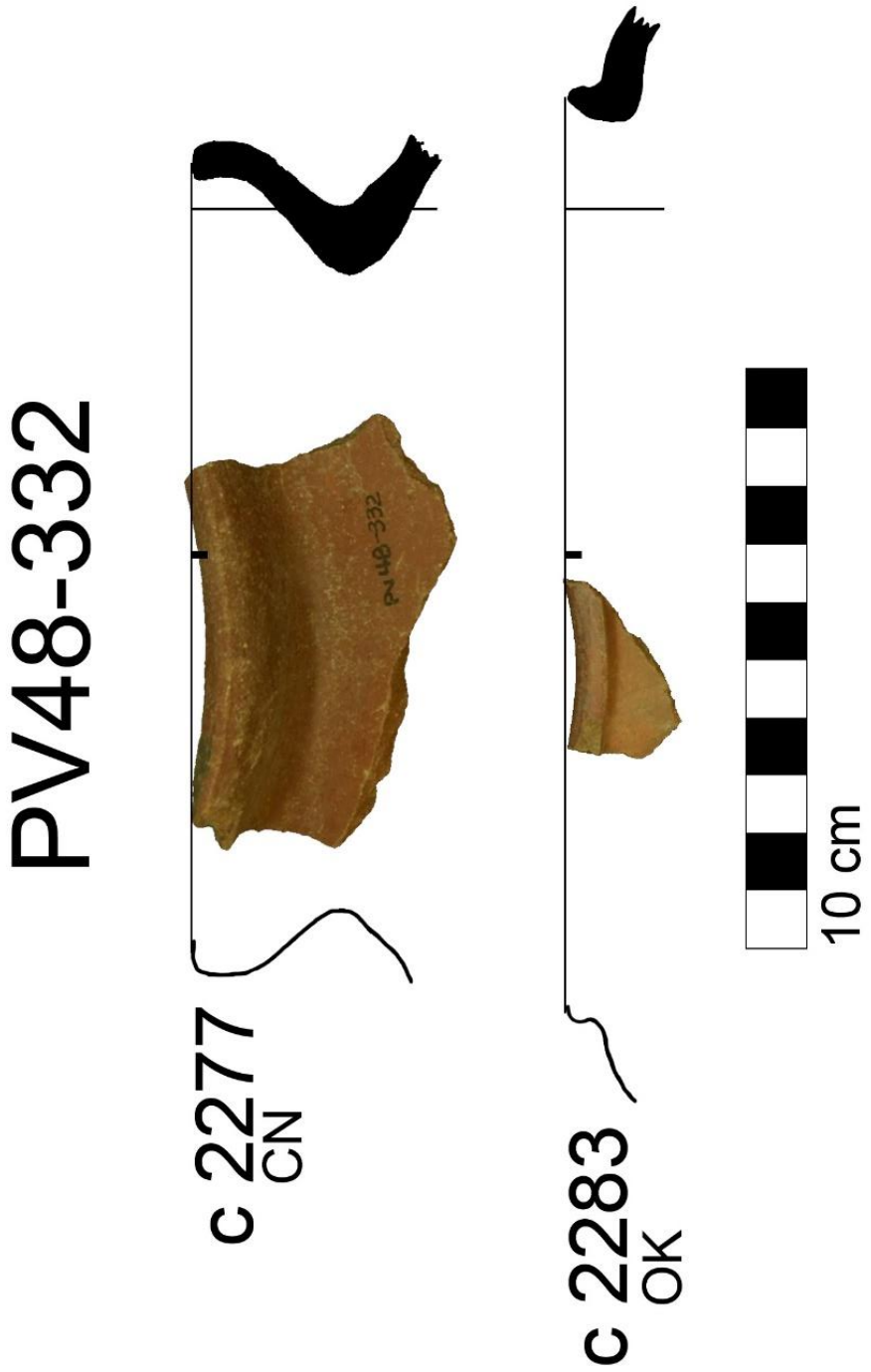


Plate 95. A sample of sherds recovered from PV48-332.

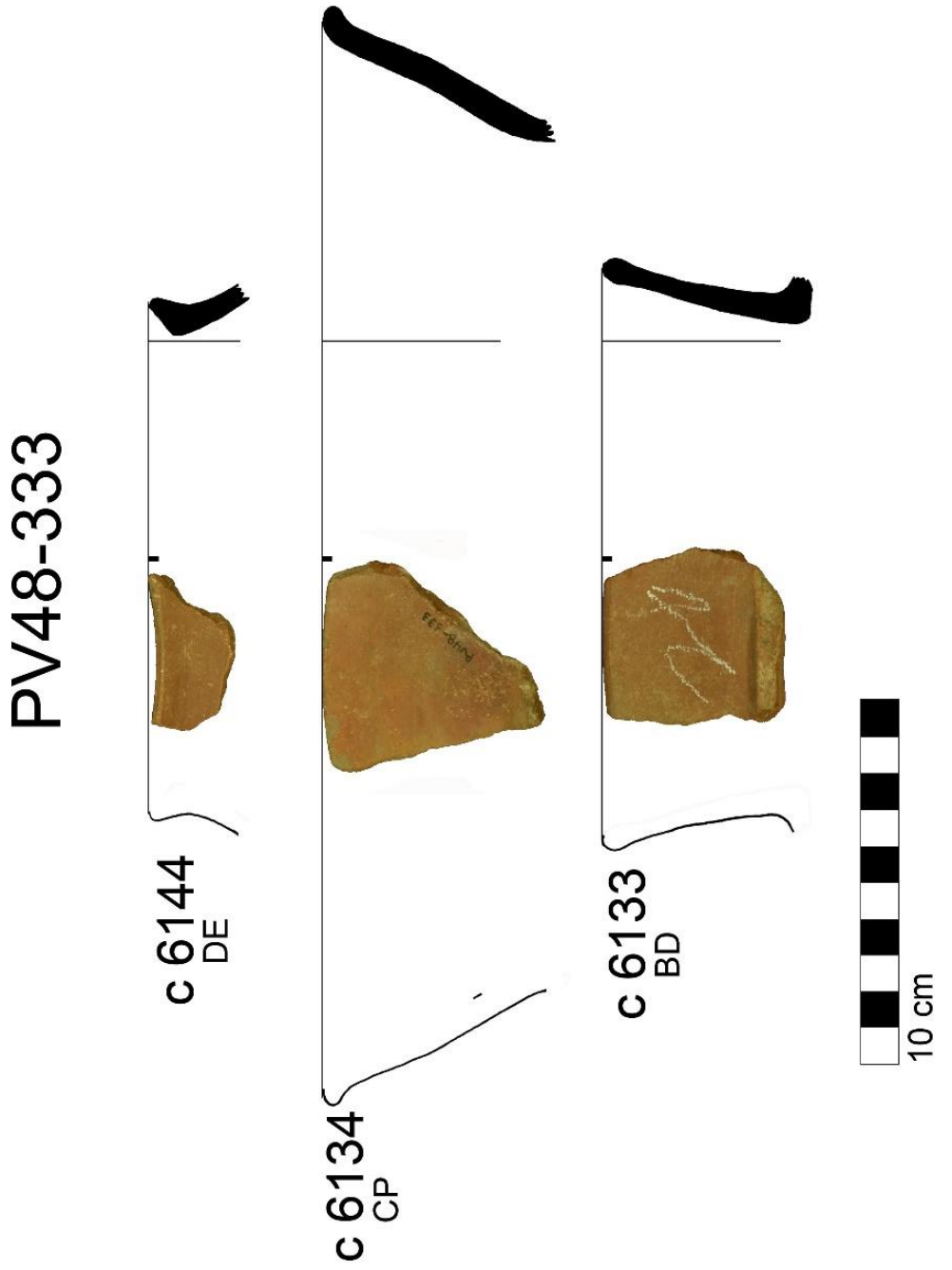


Plate 96. A sample of sherds recovered from PV48-333.

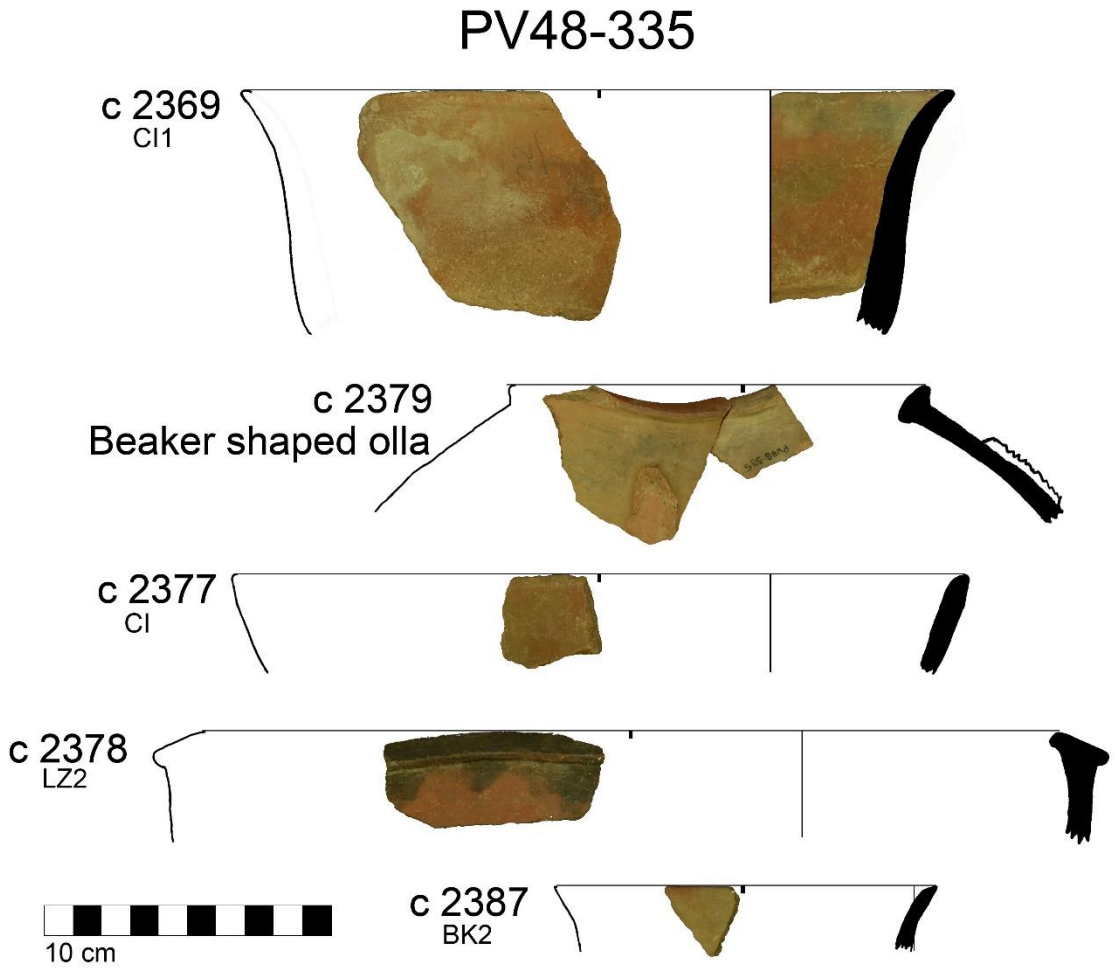


Plate 97. A sample of sherds recovered from PV48-335.

Plate 98. A sample of sherds recovered from PV48-337b.

Plate 99. A sample of sherds recovered from PV48-341.

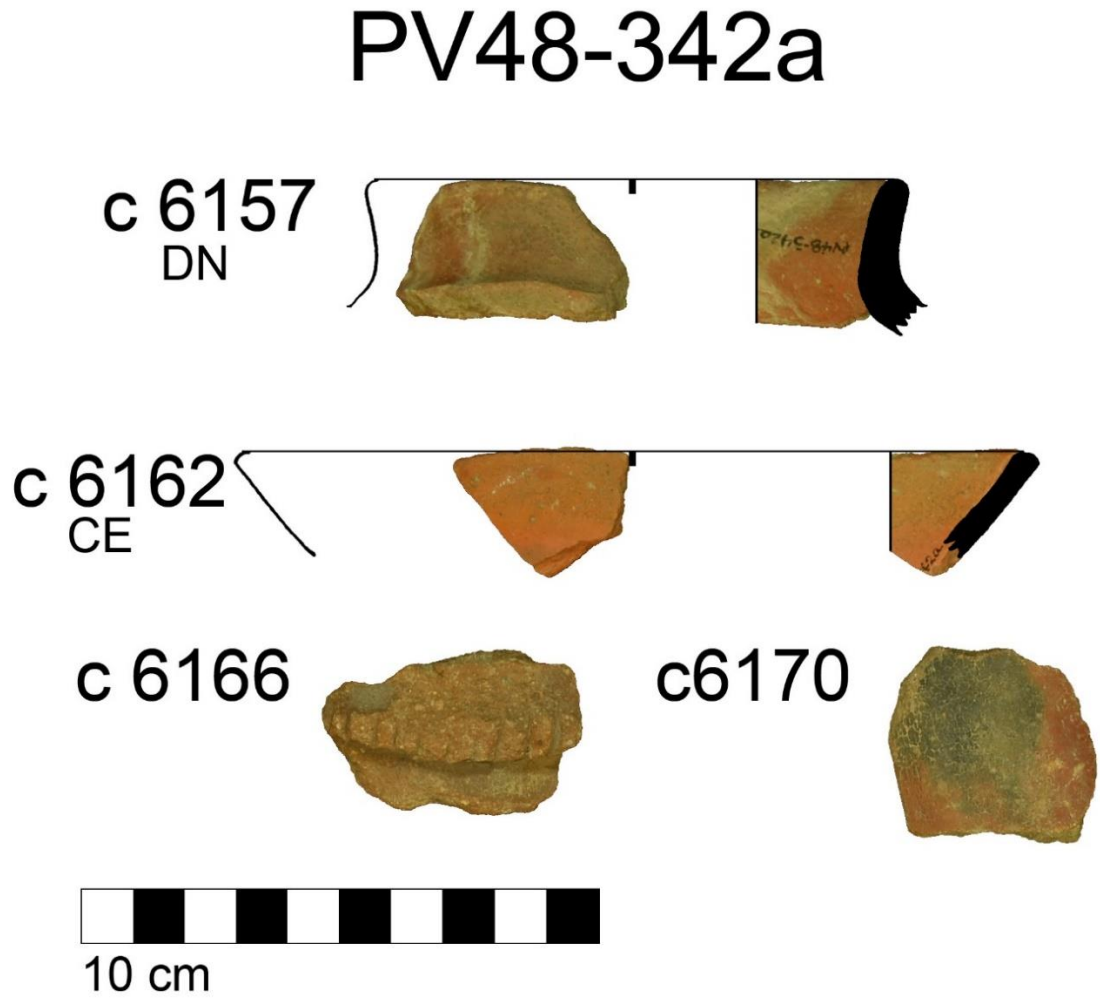


Plate 100. A sample of sherds recovered from PV48-342a.

Plate 101. A sample of a sherd recovered from PV48-343a.

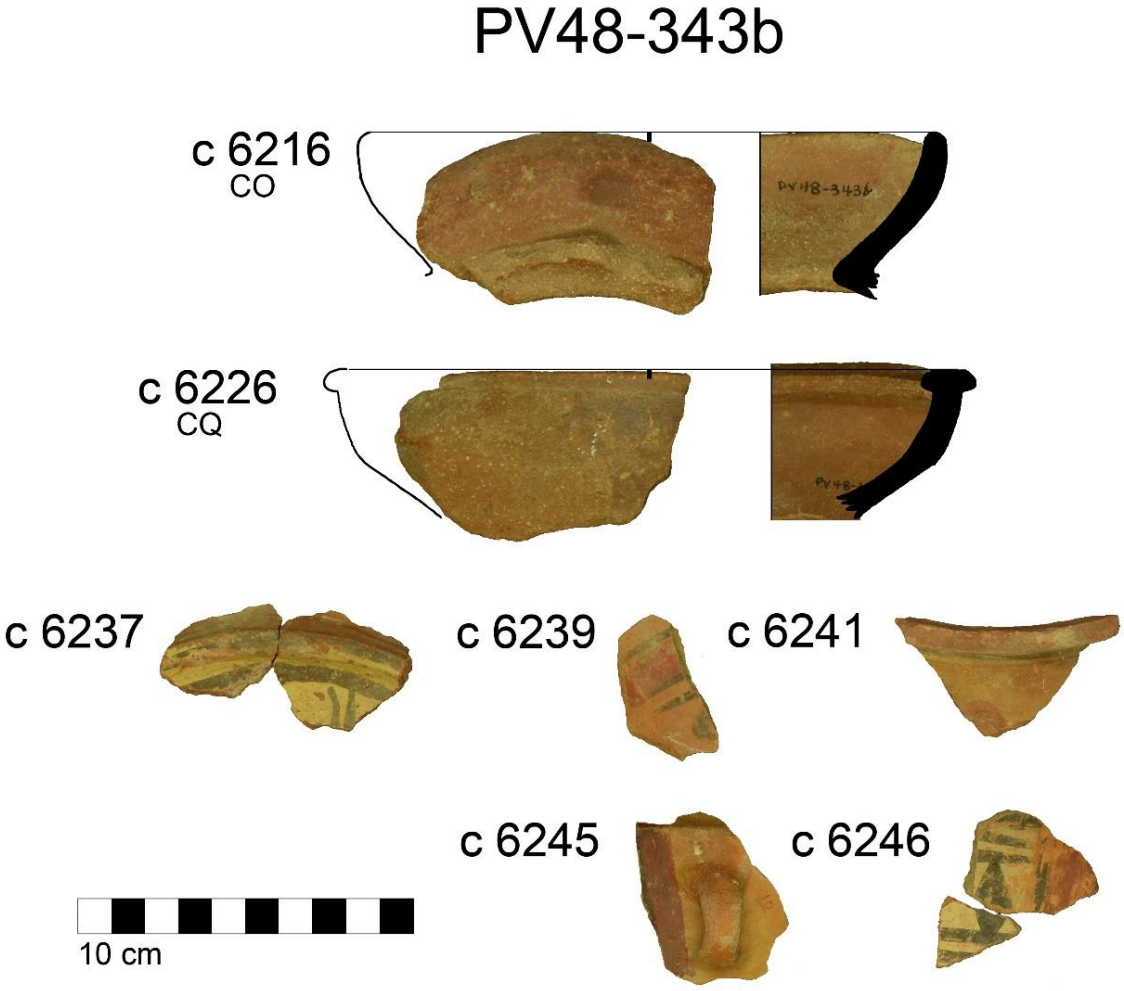


Plate 102. A sample of sherds recovered from PV48-343b.

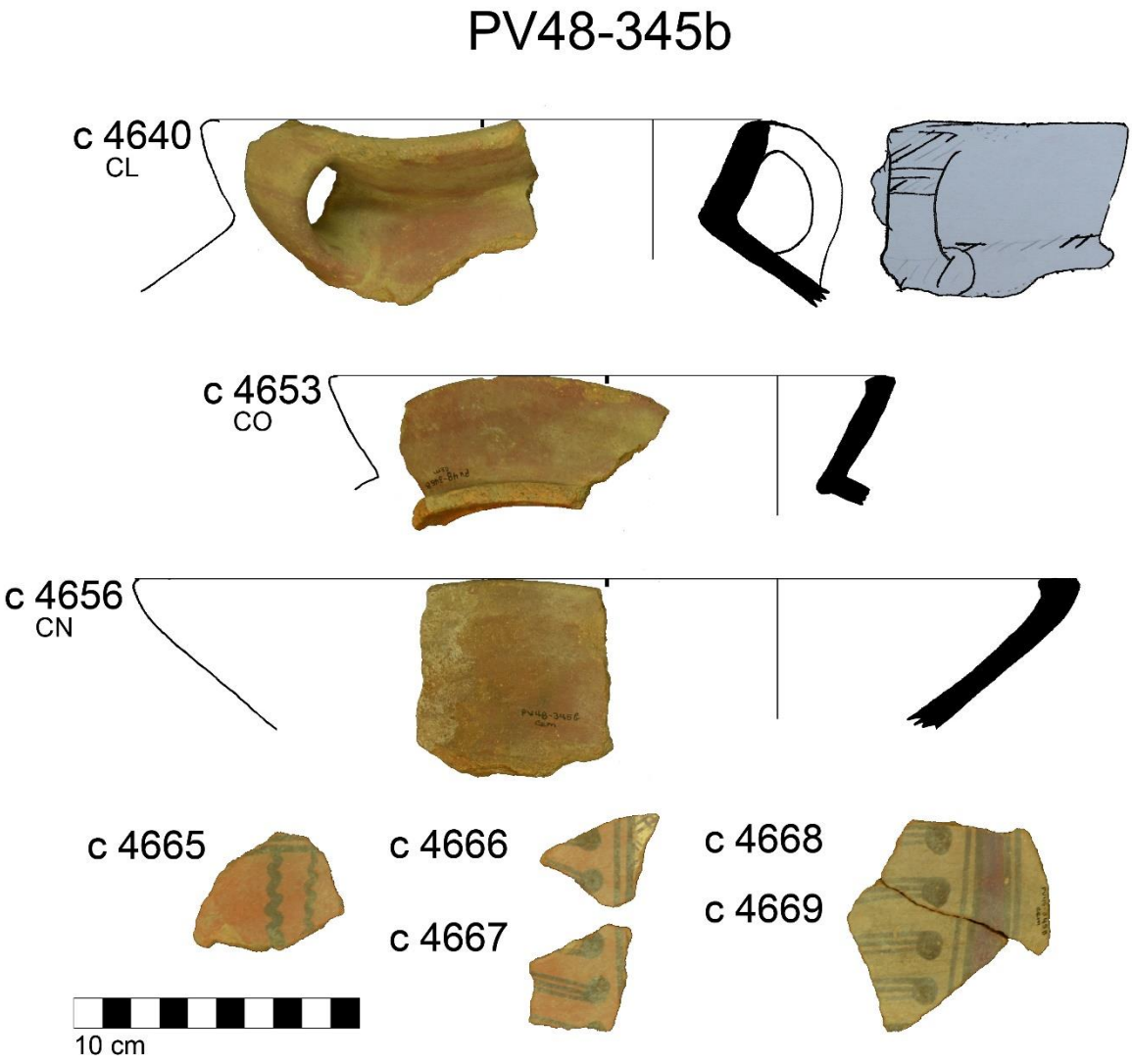


Plate 103. A sample of sherds recovered from PV48-345b.

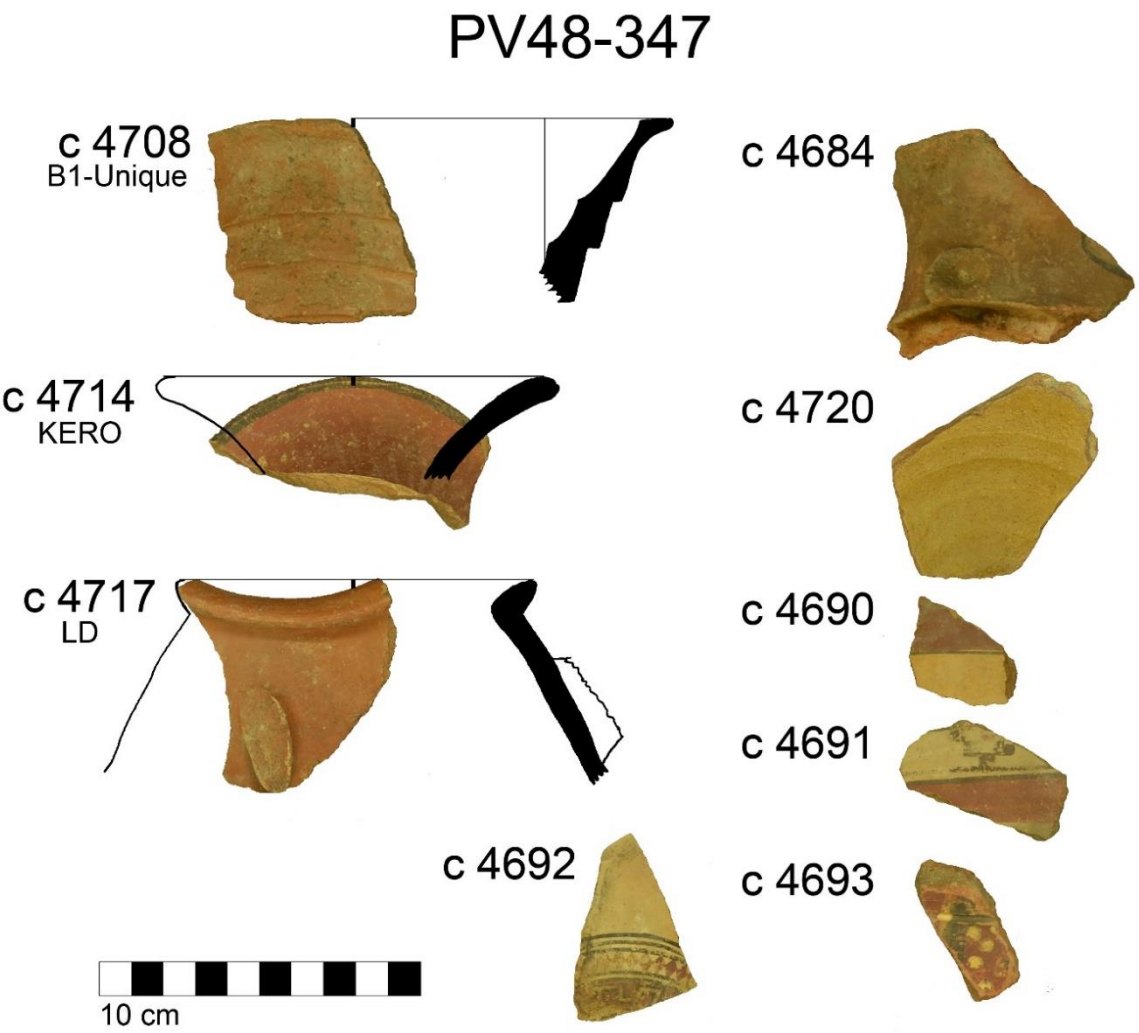


Plate 104. A sample of sherds recovered from PV48-347.

Plate 105. A sample of sherds recovered from PV48-349.

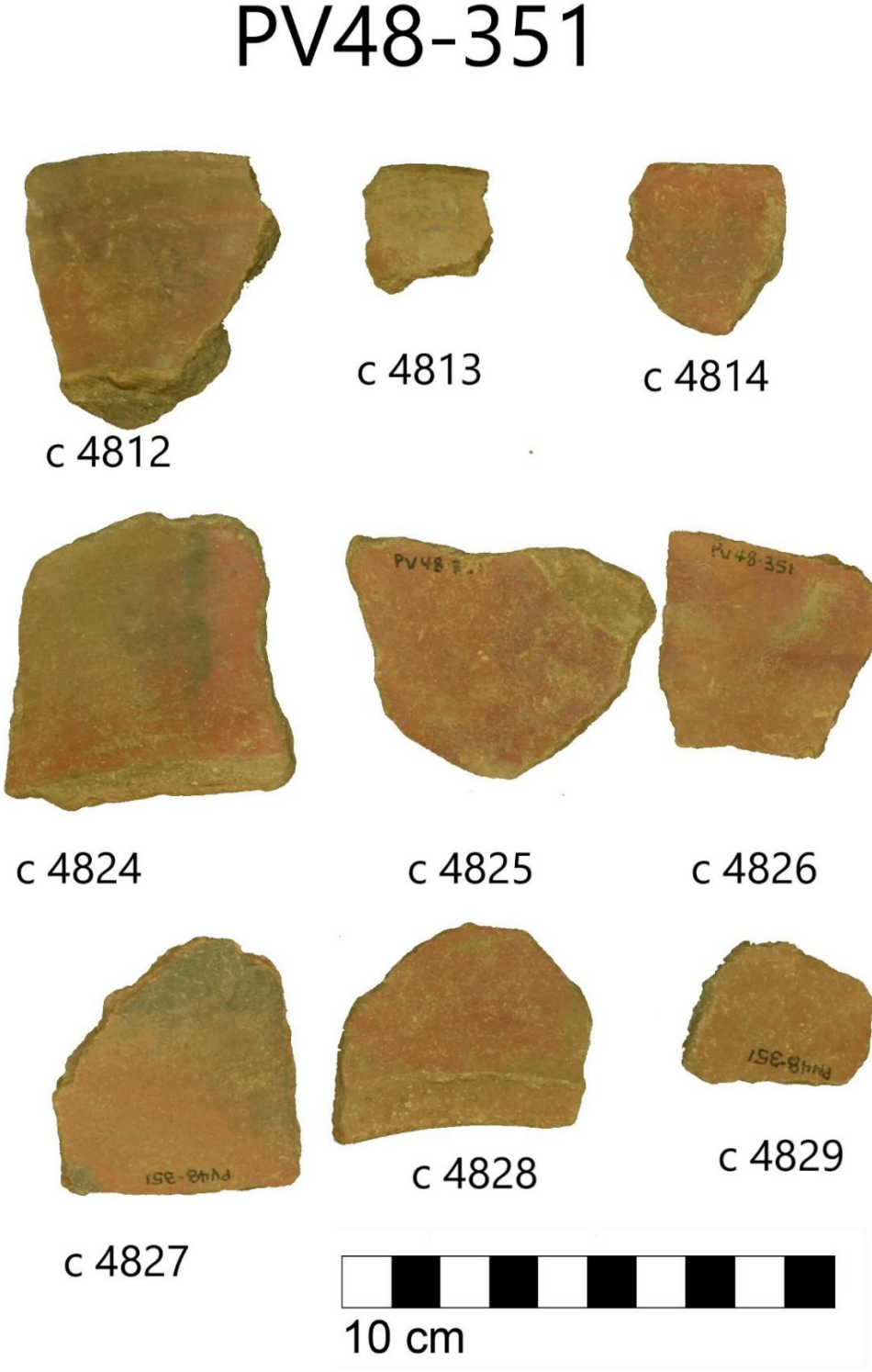


Plate 106. A sample of sherds recovered from PV48-351.

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