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Life, Death and Burial Practices during the Inca Occupation of Farfán on Peru's North Coast

Carol J. Mackey

California State University, Northridge, caroljmackey44@gmail.com

Andrew J. Nelson

University of Western Ontario, anelson@uwo.ca

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Life, Death and Burial Practices during the Inca Occupation of Farfán on Peru's North Coast



Carol J. Mackey & Andrew J. Nelson

Andean Past Monograph 2

University of Maine, Department of Anthropology

ANDEAN PAST MONOGRAPH 2

LIFE, DEATH, AND BURIAL PRACTICES DURING THE INCA OCCUPATION OF FARFÁN ON PERU'S NORTH COAST

by **CAROL J. MACKEY**
California State University, Northridge
and
ANDREW J. NELSON
University of Western Ontario

2020



and appendices by

Gail Ryser and Judy Newland; Margaret A. Jackson;
Regina A. Richter Lagha; Abigail Levine;
Christine D. White, Fred J. Longstaffe, and Andrew J. Nelson;
and Carol J. Mackey

edited by

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Inquiries and manuscripts submitted for future volumes should be sent to:

Monica Barnes
1 Harborside Place, 426
Jersey City, New Jersey 07311

Telephone (201) 721-6682, e-mail: monica@andeanpast.org

or to: Daniel H. Sandweiss daniels@maine.edu

Cover photo: Exterior dividing wall between Sectors 1 and 2, Compound II, Farfán.

Title page design: Farfán place signifier. This motif, unique to Farfán, is a Late Horizon Inca version of the Lambayeque anthropomorphized wave.

ANDEAN PAST MONOGRAPH 2

2020

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EDITORS' PREFACE

ANDEAN PAST MONOGRAPH 2

This volume is the second in our book-length series, *Andean Past Monographs*. We are pleased to present a report by Carol J. Mackey, Andrew J. Nelson, and their colleagues on Farfán, a large and important Lambayeque, Chimú, and Inca site in the lower Jequetepeque Valley of Peru's North Coast. Mackey conducted excavations there for six seasons from 1999 until 2004. Bioarchaeologist Nelson undertook the analysis of human remains found at the site. Excavation was followed by three years of laboratory analysis.

Carol Mackey has focused on Andean research for over fifty years. A multi-year project on the comparison of ancient and modern quipu was the subject of her dissertation research. She obtained her doctorate in 1970 from the University of California, Berkeley. Her interest shifted to the archaeology of the North Coast of Peru and its Lambayeque, Chimú, and Inca cultures. She served as the co-director of the Chan Chan–Moche Valley Project, and as the principal investigator at Manchan, in the Casma Valley, and at El Algarrobal and Farfán in the Jequetepeque Valley. Her publications include research results in Andean mortuary practices, strategies of statecraft as evidenced in large administrative centers, iconography, and ceramic analysis. Carol's teaching at California State University, Northridge spanned thirty years. Involving students in her archaeological projects was an important aspect of her career.

Andrew J. Nelson undertakes research in the fields of Peruvian bioarchaeology, mummy studies, and the use of non-destructive imaging in archaeology and bioarchaeology. He earned his doctorate at UCLA, and is a professor of anthropology at the University of Western Ontario. He has worked on the North Coast of Peru at the sites of San José de Moro and

Farfán, and has studied the osteological collections from the site of Pacatnamú. His publications include a forensic reconstruction of delayed burial practices among the Moche and the use of isotopic and elemental analysis to reconstruct mobility patterns and diet on the Peruvian North Coast. He is currently working on the radiographic analysis of mummy bundles on the Central Coast, including from Pachacamac.

In this volume Mackey and Nelson report on five Inca cemeteries at Farfán in a holistic manner that considers the tombs, their contents, and bioarchaeological descriptions and analysis of their occupants. They argue persuasively that Huaca Burial Platform contained the tombs of *aqllas*, the chosen or sacred women whose existence was a fundamental Inca institution. Their work is an important contribution to our knowledge, because only two other *aqlla* cemeteries have been scientifically excavated to date.

The first was at Pachacamac, where, in 1896, Max Uhle uncovered the graves of sacrificed women in a terrace of what he identified as a Sun Temple (Uhle 1991 [1903]:84–96). Although Uhle promulgated the concept of grave lots on the basis of his excavations at the site of Moche on Peru's North Coast and in the Ica Valley of the South Coast, the associations of particular garments and other objects with individual women at Pachacamac were not maintained.

The other *aqlla* cemetery to have been scientifically examined is at Tucumé in the La Leche Valley, on Peru's North Coast, where excavations initiated by Thor Heyerdahl have continued since 1988 (see Heyerdahl *et al.* 1995: 92–97), but the cemetery there has not been completely published. Mackey's report, by

contrast, presents the findings from the *aqlla* cemetery of Farfán in as full a manner as possible.

This present volume follows *Andean Past Monograph 1*, *Julio C. Tello, Politics, and Peruvian Archaeology 1930–1936* by Richard E. Daggett. *Andean Past Monograph 3*, *Prehistory of the Ica-Nazca Littoral, Peru* is by Patrick H. Carmichael and reports on the survey he conducted in 1989 and 1990. In press is *Andean Past Monograph 4*, *Julio C. Tello and the Institute of Andean Research: 1936–1943*. In this Richard E. Daggett continues his almost day-by-day reconstruction of the activities of Tello and his circle.

Special thanks for this volume go to Daniel H. Sandweiss, editor and founder of *Andean Past*, for his encouragement and advice during the preparation of this monograph. I also thank associate editor Ruth Anne Phillips for her companionship and extraordinary attention to detail. Thanks are due to David Fleming for his invaluable work in layout. I appreciate the bibliographic assistance rendered by Sumru Aricanli, Tamara Bray, Robyn Cutright, Francis Hayashida, Doris Kurella, Jeffrey Quilter, Maria-Louise Sidoroff, and Hartmut Tschauner.

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Monica Barnes: monica@andeanpast.org

or Daniel H. Sandweiss:

Daniels@maine.edu

Monica Barnes
in the City of New York
22 May 2020

ACKNOWLEDGMENTS

Carol J. Mackey

The Farfán Project evolved into a large, multi-year investigation—an outcome I had not foreseen when it began in 1999. During the first field season it became apparent that there was not just a Chimú occupation at Farfán; the earliest occupants were of the Lambayeque culture, and the last polity, after the Chimú, was the Inca. In response to the new artifacts and architecture that were revealed, new questions arose as to the nature of these occupying polities, their duration, and the function of the site under all three. Hypotheses were reformulated, then revised as each season brought new information and discoveries.

The original concept of a one-season project evolved into six seasons of fieldwork with additional years in Peru for lab work, artifact analysis, illustration, and photography of the excavated assemblage. I was fortunate that the people who joined the project had the same curiosity about the site and the same love of archaeology and Peru that I have. Archaeology is about team work and cooperation, and I had the best staff, crew, and excavators, ensuring the success of this project. Many of the crew began their field work when they were graduate students and were invaluable to the project. I am proud to say that during and after the Farfán project many of the students continued in archaeology, receiving their doctorates and initiating their own projects. Listed here are the names of the participants of the Farfán Project. The list of names is large, as are my thanks to them for their contributions:

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Bridget Cooney, María Fe Cordova, the late Alana Cordy-Collins, Jorge Cortina, Robyn Cutright, Oscar Figueroa, Pedro Ibarrola, Hugo Ikehara, Debra Isaac, César Jáuregui, María Jesús Jiménez, Kyle Kuns, Abigail Levine, Claudia Mader, Kimberly Madison, Omar Malca, Charles Merbs, Sophia Ohara, Angela Pacheco, José Palacios, Regina Richter Lagha, Gail Ryser, Víctor Sánchez, William Sapp III, Ed Schoch, Yuki Seo, Maria-Louise Sidoroff, David Silva, Jorge Terrones, Howard Tsai, Jason Toohey, Lisa Trever, Saul Vargas, Melissa Vogel, Jeff Voorhis, Bill White, and Enrique Zavaleta.

Many institutions and people supported the field and laboratory research over the years. The project would not have been a reality without the financial backing of the Brennen Foundation, the California State University at Northridge, Dumbarton Oaks, the John B. Heinz Charitable Trust, and the National Geographic Society. Individual donors also aided the project and demonstrated their interest in scholarship and Peruvian archaeology by giving generously to the project; these include William and Marsha Herrman, Howard and Shirley Miller, and Baerbel Struthers, among others. Thank you all for making the project possible.

Responsibility for the project was shared by two Peruvian co-directors who aided it with their knowledge of the North Coast and their expertise in archaeology. My thanks go to Enrique Zavaleta who was co-director for one year (1999) and to César Jáuregui who was the co-director for the remaining years (2000–2006).

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The organization of the vast archive of material from Farfán and the writing of the results of the project was to take many years after excavation ceased. Many people gave of their time and skills. Their contributions are crucial to the presentation of the data, and my thanks go to them.

Illustration

Jorge Gamboa deserves credit for the reconstruction drawings of the burials in all five of the burial facilities and the schematic drawings of all cemeteries and tombs. He also illustrated the detailed reconstruction of the spondylus offering from the Center Tomb of the Huaca Burial Platform (Figure 3.18). In addition, Jorge completed fine renderings of a number of ceramic vessels from several cemeteries. Very special thanks go to Hélène Bernier for the detailed illustration of the maize goddess (Figure 3.53) and the majority of the vessel drawings from the Huaca Burial Platform.

César Jáuregui is credited with the precise illustrations of the skeletonized bodies that are so important to the understanding of the burial practices. Jorge Terrones deserves thanks for his excellent work in depicting the designs on the pyro-engraved gourds, as well as his participation in drawing many of the metal objects. Assistance was provided by José Luis Rojas.

Photography

I offer many thanks to Kimberly Madison, Bill White, and Sophie Ohara for photographing

the large ceramic collection and artifacts and to Ed Schoch for his photography of the textiles. Howard Tsai and Robyn Cutright provided photographs of the surrounding landscape and the *Nectandra* seeds (Figure 3.30). *In situ* photographs were provided by Mackey, and by Jáuregui, who always strived to get the best angle. Skeletal material was photographed by Andrew Nelson.

Lab Directors

Many of the students and staff worked in the project lab, but the organization, cataloguing of all objects by accession number, and the preservation of the objects, work that was so integral to the project, fell to two individuals. My thanks go to Maria-Louise Sidoroff, who was director of the lab from 1999 to 2002, and to Claudia Mader who directed lab operations in 2003 and 2004. Their roles were difficult and complex, and their jobs were well done.

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The mapping of the site was another important factor in the success of the project and I want to thank Jeff Voorhis for this. Creating plan views of the compounds as well as the three-dimensional models of the architecture was the responsibility of Omar Malca, who deserves great thanks for his excellent work. I also wish to thank Kyle Kuns for the revisions he made to the three-dimensional models.

Excavation Crew

As important as everyone named above was to the project, it would not have been successful without the participation of the excavation crew. These men, who mainly lived in the village of San José de Moro, were seasoned excavators, and had worked with me during my investigations on the San José de Moro Project/Algarrobal de Moro (1995–1997). Although the

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Manuscript Organization and Graphic Design

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Last but certainly not least, I wish to thank Richard Keatinge and Geoffrey Conrad for their initial work at Farfán and generous sharing of their field notes and drawings. They did note the presence of Late Horizon materials at the site, but their main focus was to affirm, mainly by architectural features and spatial organization, Farfán's affiliation with the Chimú Empire, and in this they succeeded. Their article on this subject (Keatinge and Conrad 1983) is a testament to the Chimú expansion, and their first provincial center in the Jequetepeque Valley.

I have been fortunate to lead archaeological investigations at several North Coast adminis-

trative centers (Chan Chan in the Moche Valley; Manchan in the Casma Valley; and the Algarrobal de Moro and Farfán in the Jequetepeque Valley). Of all of these large and complex sites, Farfán was one of the most challenging, and I am pleased to be able to share the results of this important research.



The project directors: Carol Mackey, Director; Enrique Zavaleta, Co-director (1999); and César Jáuregui, Co-Director (2000–2006).

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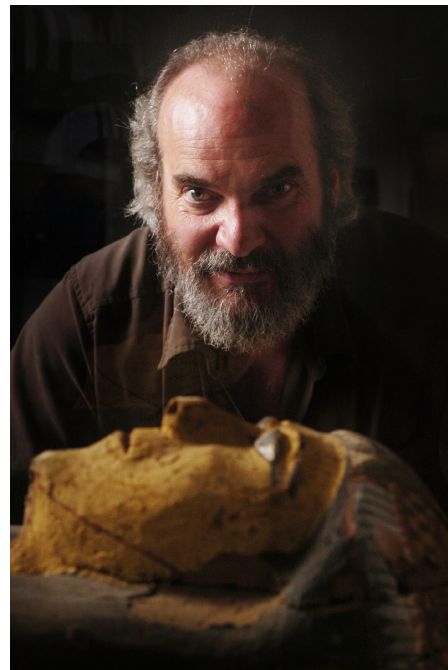
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Bioarchaeologist Andrew J. Nelson.

CHAPTER 1

THE ARCHAEOLOGICAL SITE OF FARFÁN

Carol J. Mackey

California State University, Northridge

caroljmackey44@gmail.com

In the fifteenth century (c. A.D. 1470), the Inca Empire conquered the Peruvian North Coast, and ousted the Chimú from the site of Farfán. Over a period of more than sixty years, the Inca transformed Farfán into their religious, cultural, economic, and administrative center in the Jequetepeque Valley. Today the archaeological site of Farfán, in the lower Jequetepeque Valley, stretches for three kilometers along the valley margin (Figure 1.1). The site consists of six compounds that are large rectangular enclosures measuring up to 250 meters in length, each containing rooms and plazas of various sizes. Some have adobe brick perimeter walls that still rise five meters in height, though their original heights may have been greater. In addition, partial perimeter walls of other, earlier, compounds, most likely Lambayeque in date and cultural affiliation, lie buried beneath the sands (Mackey 2011 [2016]: 151–152, figure 2, top left).

Farfán was occupied by several cultures during a four hundred year time span and the site's architecture and other material remains attest to its long and complex history. When the Farfán Project started excavations in 1999, the prevailing opinion was that Farfán had been constructed by the Chimú Empire when it expanded north from its capital of Chan Chan in the Moche Valley. Prior to our work, only Compound II had been excavated, and the results of these archaeological investigations by Keatinge and Conrad (1983) clearly demonstrated that the majority of the architecture and

ceramics conformed to Chimú style. Based on this study, they theorized that the rest of the site was also built and occupied by the Chimú. It was not until some twenty years later, during the Farfán Project, that we learned Farfán had not one, but three significant occupations: Lambayeque, Chimú, and Inca (Table 1.1). What we found during our mapping and excavation of the site changed the prevailing ideas of how Farfán functioned under the rule of each occupying polity. Our findings provided strong evidence for direct Inca control of Farfán and, more broadly, for many North Coast administrative centers (see Figure 1.2 for the location of some of these centers).

Beginning dates of occupations at Farfán	
Inca/Late Horizon	AD 1470
Chimú/Late Intermediate Period	AD 1300
Lambayeque/Late Intermediate Period	AD 1100

Table 1.1: Chronological chart of the late North Coast time periods and beginning dates of the polities' occupations of Farfán.

One of the most surprising results of our research was the magnitude of the Inca occupation and the resulting socio-political transformations to the site (Mackey 2003, 2006, 2010). These findings were unexpected, because the prevalent notion among scholars was that the Inca Empire had had little influence on the North Coast. The Incas' dominant strategy was

thought to have been indirect rule, either governing through local lords (Rowe 1982) or controlling the coast from installations between the coast and the highlands (Dillehay 1977). However, archaeological evidence from Farfán and other coastal administrative centers does not support the notion that under Inca rule state administration was left entirely in hands of local lords (Netherly 1998; Ramirez 1990). These views have been slow to change, as there was little recognition of the archaeological variables that characterized the Inca on the North Coast. However, due to our work and other North Coast investigations, these ideas are changing as archaeologists find new evidence for Late Horizon occupations (Conrad 1977; Hayashida 1999; Heyerdahl *et al.* 1995; Kremkau 2011; Mackey 2003, 2006, 2010; Sapp 2002). There is now a clearer idea of many of the construction techniques, architectural canons, ceramic characteristics, and mortuary patterns associated with the Inca occupation of the North Coast. Many of these attributes will be presented in the following chapters.

The focus of this monograph is the Inca occupation of Farfán and the ninety-eight Inca period burials excavated at the site, the largest funerary sample with associated grave goods yet to be published for Peru's North Coast. Although I have discussed elsewhere the socio-political changes wrought by the pre-Inca polities (Mackey 2009a), it is important to note that one of the major differences wrought by the Inca occupation of Farfán was their treatment of the ritual landscape. Although cemeteries and mounds were constructed for ceremonial and mortuary purposes during the earlier occupations by the Lambayeque and Chimú, it was during the Inca occupation that construction of earthen funerary mounds, an adobe Huaca Burial Platform, and public spaces for rituals reached its peak. Farfán is an excellent example of how an expansionist state, such as the Inca Empire, used death and mortuary rituals to

solidify and legitimize control of a newly-conquered area. Because ritual was often closely associated with politics in the prehistoric Andes, this Inca strategy can aptly be termed the politics of death.

This monograph is divided into four sections. The first section is introductory, comprising two chapters which cover much of the background information necessary to understand Farfán and our long-term research. The first, and current chapter, places Farfán in its environmental context on the North Coast, and provides an overview of the site's four hundred year political history. The questions that guided our research are presented, as are our archaeological methods for excavating the mortuary facilities at Farfán. The second chapter is an introduction to the bioarchaeological aspects of the individuals interred at Farfán and the methodologies employed.

In the second section, each of the chapters, three through seven, is divided into two parts: The first (part A), by Carol Mackey, examines the context, treatment, and associated grave offerings of the excavated burials. The second part (part B), by Andrew Nelson, comprises a study of the bioarchaeological aspects of the individuals in each mortuary facility. The third section, chapters eight and nine, summarizes the results of the excavation and analyses. The final and fourth section consists of appendices that focus on specialized topics, and include illustrations of the complete ceramic assemblage excavated at Farfán. As will be shown by the evidence, Farfán's burials share a number of characteristics: they were well planned, they were generally placed in three distinct levels within the cemetery or tomb, they are predominantly female interments, and they all entailed a significant labor investment.

THE JEQUETEPEQUE VALLEY AND THE POLITICAL HISTORY OF FARFÁN

The Jequetepeque Valley (Figure 1.3), one of the largest and most productive areas on Peru's North Coast, has a long cultural history dating from the Early Preceramic Period (as early as ~12,000 B.C.; Dillehay *et al.* 2011; Maggard 2015). This monograph focuses on the periods from middle Moche (c. A.D. 400) to the arrival of the Spanish in A.D. 1532. During this time the lower Jequetepeque Valley supported large ceremonial/urban settlements such as Dos Cabezas (Donnan 2007), Cañoncillo (Donnan 1997); Farfán (Keatinge and Conrad 1983; Mackey 2009a); Pacatnamú (Donnan and Cock 1986) and San José de Moro (Castillo 1993, 2003, 2010).

When traveling through this valley, Cieza de León remarked that it was the most fertile and populous of the valleys he had seen (Cieza de León 1984 [c. 1553]: Chapter LXVIII). As many as 88,000 hectares were under cultivation during pre-Hispanic times (Eling 1987:107) and the majority of these fields were, and are today, in the lower Jequetepeque Valley (Figure 1.4). This location provided a compelling reason for the placement of an administrative center, such as Farfán, to control the land and agricultural resources in the lower valley area. The middle valley is characterized by the rise of the Andean foothills and the constriction of the valley neck (Figure 1.5).

Two rivers provide water to the valley, the Jequetepeque with its source in the highlands near Cajamarca and the smaller intermittent Chamán (a.k.a. río Seco; Eling 1987:96). The principal river, the Jequetepeque, was the major source for the irrigation systems that water the fields of the arid plain of the lower valley, while the Chamán periodically supplied water to the northern part of the valley (Figure 1.3). Today the fields of the lower valley are planted with

Old World cultigens such as rice (*Oryza sativa*) and sugar cane (*Saccharum barberi*), while the most common Late Intermediate Period comes-tibles include corn (*Zea mays*), beans (*Phaseolus* sp.), and squash (*Cucurbita* sp.), as well as a tree fruit, guanabana (*Annona muricata*), and chile peppers (*Capiscum frutescens*; Cutright 2009: table 6.1).

Although the cultigens from this large valley are important, so are the aquatic resources (e.g. fish, shellfish, and marine mammals) along its shores and in its rivers. However, these resources are periodically affected by changes in the ocean's currents (El Niño or ENSO events) that cause the cold waters that flow northward along South America's west coast to meet the warmer waters originating in the western Pacific Ocean. This disturbance of the ocean's currents results in rain storms, floods, and the erosion of rich agricultural lands in the normally rainless coastal valleys, as well as disruption of the marine ecosystem (Dillehay and Kolata 2004). It has been suggested that rituals of sacrifice and other ceremonies were associated with these severe climatological changes.

THE SOCIO-POLITICAL CHARACTERISTICS OF FARFÁN UNDER THE THREE POLITIES

The results of six seasons of mapping and excavation changed any previous notions I had formed about Farfán, its occupation, and its function. Our project firmly established that there had been three occupations of the site by the Lambayeque, Chimu, and Inca polities. This is demonstrated by various lines of evidence, such as architectural features, construction techniques, and artifactual remains that materialized the strategies of these polities, attesting to the site's function as an administrative center.

The Lambayeque Occupation of Farfán

The Jequetepeque Valley was culturally and politically affiliated with the Lambayeque polity (also known as Sicán), a complex, non-centralized federation of polities that wielded influence over a large area of the North Coast from Piura to the Chicama Valley (Figure 1.2; Sandweiss and Narváez in Heyerdahl 1995:197; Kosok 1965:178). The heartland of the Lambayeque culture lay to the north of the Jequetepeque in the La Leche Valley. In the Jequetepeque Valley, the site of Pacatnamú, the largest Lambayeque settlement, most likely served as the Lambayeque capital (Figure 1.3). Pacatnamú covers one square kilometer (Donnan 1986a:19), and flourished under Lambayeque control from approximately A.D. 1100 until its conquest by the Chimú Empire c. A.D. 1320 (Mackey 2011 [2016]:151).

Under Lambayeque rule, Farfán was a secondary center subordinate to Pacatnamú, the valley capital. In keeping with its secondary ranking, the site was smaller, but it then had at least three compounds identified by our excavators: first we mapped the northern portion of the foundations of a Lambayeque compound that had been covered and built over by a later Chimú structure, Compound II (Figure 1.1) and described by Mackey (2011 [2016]); second to be revealed was the partial remains of a compound northeast of Compound III. This partial compound is poorly preserved and consists of portions of an exterior perimeter wall and patches of flooring. The third Lambayeque structure is Compound III (Figure 1.1). It measures 285 meters in length by 134 meters in width. The architecture and its internal organization echoed features found at Pacatnamú's Huaca Compound 1 and smaller versions of these features were identified in Farfán's Compound III. These consist of: an altar; a small platform with ramps oriented east-west (Donnan 1986b); a Concillio (*sic*), a low U-shaped

structure that is often roofed (*sensu* Mackey 2011:152 where it is described as a "low U-shaped bench" and following Chiswell n.d.); and two low platforms (Figures 1.6, 1.7; Mackey 2011 [2016]:151). These features at Farfán are not as elaborate or large as those at Pacatnamú, but certainly show the influence of the valley capital (see Donnan 1986b, 1986c).¹

The Lambayeque settlement of Farfán included a potters' village (9–10 houses) built of cane architecture (*quincha*). The craftspeople who resided here produced only one ceramic form: ring base bowls (Mackey 2011 [2016]:160, figure 9). Based on these data it appears that during the Lambayeque occupation, Farfán was characterized by differences in occupation and class. The most likely function of the Lambayeque secondary center was control of the land and water resources in the lower Jequetepeque Valley and perhaps trade with the highlands via the nearby route to Cajamarca (Figure 1.3).

The Lambayeque Compound III at Farfán contained small platforms that mimicked the physical location of those at Pacatnamú (Figures 1.6, 1.7; *ibid.*:152). These platforms, 1.5 meters in height, probably served for local rituals, while larger ceremonies were carried out at the imposing huacas in the valley capital, Pacatnamú. In addition, the Lambayeque occupation at Farfán shows a separation of funerary facilities by occupation and class. There is a small earthen burial mound adjacent to the potter's village, while the administrators and their families were interred in a large mound (Mound G) next to Compound III (Figures 1.6, 1.7).

Farfán was occupied by the Lambayeque for at least two hundred years and then included at least three compounds. The settlement housed

¹ The Roman numerals shown next to the compounds in Figure 1.1 were used by Keating and Conrad (1983:269), and continue to be used throughout this monograph.

administrators and their families. However, due to its size and rank, only a limited number of mid-level administrators probably resided there. During the Lambayeque occupation a small number of craftspeople involved in pottery production lived in a village adjacent to Compound III (*ibid.*:152). The initial Lambayeque settlement demonstrated that individuals of different classes engaged in various tasks occupied the site.

The Chimú Occupation of Farfán

The Chimú Empire controlled much of Perú's North Coast from A.D. 1300 to 1470. The Chimú capital of Chan Chan, in the Moche Valley, developed into one of the largest urban settlements in South America and exerted its direct influence on the North Coast from the Motupe Valley in the north, to the Casma in the south (Figure 1.2; Mackey 2009a; Mackey and Klymyshyn 1990). At the Chimú capital, the palaces of the kings are distinguished by a complex of related architectural features that include: *audiencias* or U-shaped structures, a defining feature of Chimú administrative architecture found throughout the Empire (Andrews 1974), storerooms, which warehoused goods to be used as gifts and to sponsor public works (Day 1982:59–60, figure 3.2; Klymyshyn 1987: 102–107); plazas, that functioned as the settings for large-scale feasts and ritual celebrations in which the redistribution of much of the accumulated goods took place (Uceda *et al.* 1997); and aboveground burial platforms that were mausoleums for royalty. In addition to their mortuary function, burial platforms (Figures 1.8, 1.11) represented the ancestors of the royal dynasty, as well as the state's religious and political power (Conrad 1982).

In their northward territorial expansion that began c. A.D. 1300, the Chimú conquered the Jequetepeque Valley, absorbing the Lambayeque administrative center of Farfán (Mackey 2009a:

329–330, figure 18.3; Topic 1990:178, 186–118). After the Chimú conquest, Farfán became the Chimú principal administrative/ceremonial center and a focal point for trade with the highlands. Conquering the Lambayeque forces in the valley proved to be a challenge for the Chimú, as recorded in the chronicle of Antonio de la Calancha (1974–1981 [1638]:Volume 4, p. 1227), who describes a fierce battle between the Chimú and the Lambayeque forces for control. The Chimú did not co-rule Farfán with Lambayeque local level lords—perhaps the memory of the violent valley takeover created a reluctance on the part of Lambayeque and Chimú administrators to share power at Farfán (Mackey 2011 [2016]:159). Nonetheless, after the fall of the Lambayeque capital Pacatnamú, several authors have shown that Lambayeque communities in the Jequetepeque Valley under Chimú control continued to use their traditional architecture and ceramics, and appeared to have had near-autonomy (Cutright 2013:5; Sapp 2002:144–147).

The Chimú built three new compounds at Farfán and destroyed most of the pre-existing Lambayeque structures. Since *audiencias* were elite residences, and there are very few in each Chimú-built compound, it appears that the bureaucracy was limited (Figures 1.9, 1.10). No evidence for craft production has been found under Chimú rule at Farfán, other than the large quantities of chicha that were most likely consumed in ceremonies held periodically according to their ritual calendar. It is unlikely that a lower-class population existed at Farfán, because the only structures found from this time are adobe Late Chimú style elite compounds (Keatinge and Conrad 1983:280–281) or tapia and adobe walls, a construction feature dating to the Late Horizon (Figure 1.12; Mackey 2010:233–234). One possible explanation is that maintenance and additional support were provided by individuals from nearby communities who “commuted” to Farfán, but had no perma-

nent residence there. Farfán under the Chimu was a homogenous center with no inclusion of other ethnic or non-elite personnel. I have postulated that Farfán, during Chimu rule, may not have been occupied throughout the entire year (Mackey 1987:127–128).

The Chimu ritual practices established at their capital Chan Chan were replicated at Farfán. Plazas functioned as settings for ceremonies, as evidenced by chicha preparation and fragments of large jars (tinajas) for storage of the corn beer. Farfán's burial platforms, similar to those at the capital of Chan Chan, were a symbol of the Chimu state, its king and the royal lineage. Because there are two burial platforms at Farfán, it seems likely that there were at least two governors from the Chimu royal lineage—one in Compound II (Figure 1.11), as suggested by Conrad (1990:228–229), and the other in Compound VI (Figure 1.8; Mackey 2009a:330, figure 18.4). No other Chimu cemeteries have been reported at Farfán (Keatinge and Conrad 1983:268; Mackey 2009a:330, 340). Farfán was a flagship center for the Chimu northern expansion, until the Chimu expanded further north and conquered the Lambayeque Valley later in the fourteenth century. Although Farfán was a symbol of Chimu power and ideology, it was not a complex urban site.

The Inca Occupation of Farfán

In less than one hundred and fifty years, the Inca became the rulers of the largest prehistoric New World empire. From the basis of a small polity in the Cusco Basin of the Central Andean highlands, they expanded throughout western South America, eventually governing a vast area of over five thousand kilometers in length (Hyslop 1990:275). The Inca Empire stretched from what is now modern Chile, north to present day Ecuador, and encompassed diverse ethnic, linguistic, and political systems. The Inca controlled these populations by employing

a variety of strategies to incorporate these groups into their developing empire.

The Inca capital city, Cusco, incorporates various architectural types and construction techniques, typified by the use of stone masonry buildings constructed without mortar. Rectangular structures with gabled roofs were located facing a central courtyard in a configuration known as *kancha* (also spelled *cancha*) while storehouses, called *qollqas* (also spelled *colcas*), were generally placed on nearby hillsides. *Ushnus* are another common architectural feature. These platforms, used by officials for civic and ceremonial purposes, typically found in provincial centers. Well-known Inca architectural details include wall niches, windows, and double-jamb doorways in trapezoidal form (Gasparini and Margolies 1980:124, figure 113; Niles 1987). On the coast, these architectural features and the presence of *ushnus* identify many Inca installations (Villacorta 2003).

Farfán showed great social diversity under Inca control, with distinct architectural and artifactual evidence for different occupational groups and ranks of administrators. Farfán housed an *aqllawasi*, a residence of the *aqllakona* or the “Chosen Women” of the Inca Empire. These women, of all ages, had been selected from regions throughout the empire and sequestered in state-controlled installations where their primary task was weaving. *Aqllakona* were sacrificed and interred in Farfán's Huaca Burial Platform, with weaving implements and quantities of fine finished textiles similar to the *aqllakona* excavated at Túcume, in the La Leche Valley to the north (Narváez 1995a in Heyerdahl *et al.* 1995:93, figures 49, 50). The geographic origins of these women and the evidence for their high status is detailed in Chapter 3.

The Inca co-opted the three Chimu-built compounds (II, IV, and VI) and expanded

Farfán's bureaucratic population. Former storage rooms were remodeled and other areas constructed to house administrators of various ranks. Residential Types A, B, and C were defined by their size, location, and construction materials. In contrast to Types A and B residences, Type C were communal, located outside the compound walls and constructed of tapia, or tapia and adobe walls (Figure 1.12; Mackey 2010:233–234).

The most luxurious of the residences, Type A, was located in the most secure southern sector of Compound VI (Figure 1.12). This residence, that would have been fit for a visit by the Sapa Inca, consisted of connecting rooms. One had a sleeping platform; another is a patio with sub-surface offerings; and yet another is a benched room with a fireplace and an attached kitchen. A known Inca architectural feature, an *ushnu* measuring seventeen meters in length by fifteen meters in width and two meters in height, was excavated in Compound VI adjacent to the Type B residences of the administrators (Figures 1.12, 1.13; Mackey 2006:341–342, figure 11.19, 2010:243–244 figure 9.16; cf. Staller 2008: *passim*).

Two new compounds were constructed during the Inca occupation, I and V (Figure 1.1). Compound V contains small rooms similar to the Lambayeque elite compound excavated in San José de Moro (Prieto 2010:239–240, figure 12.5). The excavated ceramics in Compound V, such as ring-based bowls, also suggest that the compound was occupied by Lambayeque lords who co-ruled Farfán with the Inca (Mackey 2011[2016]:165–166). Compounds I and V differ in their functions. Compound V appears to be mainly residential in nature, while open plazas are a feature of Compound I. Large sherds of tinajas, used to hold chicha, and bowls were found in the open plazas, indicating that they were used for ceremonies and feasting. During our excavations, and those of Keatinge

and Conrad (1983), no commoner residences of service personnel were identified. Like the Chimú before them, the Inca administrators relied on individuals from adjacent villages for services. These individuals, who were probably fulfilling their taxation requirement, came to Farfán for work, and returned home at the end of the day.

Dramatic changes to the ritual landscape were instituted by the Inca who constructed five burial facilities, many with their own feasting areas. These funerary structures consisted of three above ground mounds (Compound VI Cemetery, Mound G, and Cemetery I), a subterranean cemetery (Cemetery J), and an adobe, three-tiered Huaca Burial Platform. Each cemetery shows selective interment of individuals. For example, the Huaca Burial Platform held the bodies of the sacrificed *aqllakona*, while Cemeteries J and VI mainly held individuals affiliated with administrative duties. Two cemeteries, Mound G and Cemetery I, included individuals who identified with Lambayeque culture, as evidenced by their cranial modification and grave offerings.

The Inca faced a difficult challenge in the Jequetepeque Valley in realizing their goal of integrating conquered peoples into the Empire—all three polities, the Lambayeque, Chimú, and the Inca, had a history of violent confrontation. Under Inca rule, there was a notable increase in public spaces. Areas devoted to funerary and civic purposes confirm that a major strategy of Inca rule was to promote social bonding and reciprocity as a way to incorporate this North Coast valley into their empire.

Summary

In summarizing Farfán's three occupations, several important points stand out. The three separate polities that spanned four hundred years shared many of the same characteristics. All of these polities devoted space to adminis-

trative and ceremonial activities. Most likely they all controlled the valley's hydraulic systems, roadways, and adjacent agricultural fields. However, there were differences between the three polities. The size of the site and its rank under each regime varied, as well as the allotment of space to storage and participation in craft production. Under Lambayeque rule there were both elite and non-elite residences, yet under the Chimú and Inca, Farfán did not have a retainer or commoner resident population. All three polities were similarly involved in creating areas for interment of the dead and performance of associated rituals. The most dramatic changes to the ritual landscape were instituted by the Inca, who constructed five burial facilities. The Inca placed great importance on public gatherings, and there was an increase in the number of areas to accommodate groups for both civic and ceremonial purposes.

Farfán was part of the Inca administrative hierarchy. Given that it was a large multifunctional center, an important question that remains to be answered is: what characteristics did Farfán share with other Inca administrative centers in the Empire?

COMPARISON OF FARFÁN WITH OTHER INCA ADMINISTRATIVE CENTERS

When Farfán is compared with other Inca administrative and ceremonial centers throughout Inca territory, it is found to have many of the same characteristics as others. It was Dorothy Menzel (1959), in her seminal work, who offered a reason for the differences in construction and architecture among the myriad administrative centers within the empire. Menzel demonstrated that there were two types of Inca administrative settlements found in areas conquered by the Inca. She posited that the differences were linked to a region's previous political history. In areas that had not been consolidated prior to the Inca conquest, new administrative

centers were built that used Inca specifications and followed their architectural canons. These centers provided infrastructure, housing for Inca personnel, and other imperial needs. By contrast, the second type of administrative center was already in existence at the time of the Inca conquest, these being part of previous polities with existing infrastructure. The Inca reused and/or remodeled these existing facilities for their own purposes.

Examples of the First Type of Inca Administrative Centers

Examples of the first type, centers built where no previous polity or centralization existed, are found both on the coast and in the highlands. Three highland sites serve to define the characteristics of the first type: Huánuco Pampa in the North Central Andes (Morris and Thompson 1985), Pumpu (Matos 1994) and the Mantaro Basin (Earle *et al.* 1987) in the Central Andes.

The best known and the largest of these three centers is Huánuco Pampa. This vast installation, constructed in accordance with Inca architectural style, contained over four thousand rooms, including residences for individuals of various ranks, and perhaps an area of royal lodging (Morris and Thompson 1985:59–61, 63, plate III). The site also housed an *aqllawasi* where the Inca Chosen Women lived and worked (*ibid.*: 70–71, figure 8). A surrounding hillside contains an area of storerooms (*qollqas*) of different sizes and for different goods (Morris and Thompson 1985:97–107, figures 14, 16–18). The analyzed ceramics from the site were predominately Cusco-Inca in style and few examples of local wares were found.

Another highland center, built in an area with no pre-Inca political consolidation, was Pumpu (Matos 1994) located next to Lake Junín in the central highlands. Like Huánuco Pampa,

this center exhibited Inca characteristics in architecture and ceramics. Morris speculated that the administrative center perhaps contained royal lodgings like Huánuco Pampa (Morris 2004:320). Survey of the area surrounding Pumpu found that there had been little change in settlement pattern or relocation of the population after the Inca occupation.

An entirely different Inca strategy was in place in the Mantaro Basin (Earle *et al.* 1987). At the time of the Inca conquest, the existing polity was undergoing changes due to internal conflicts. The Inca conquest brought a major alteration in settlement pattern, with the majority of the population relocated to a lower elevation, to increase maize production. The original pre-Inca administrative center, Huatunmarca, was remodeled, and exhibited Inca as well as local stylistic features. However, a new center, Hatun Xauxa, was built in the area where the relocated population now lived. This installation conformed to traditional Cusco-Inca architectural style. The Mantaro example is of interest, because it contains both a remodeled and a newly-built administrative center.

These three highland centers, though conforming to Inca architectural standards, showed several differences. Huánuco Pampa was the most complex in terms of architecture and occupants, housing individuals of various classes and occupations, from workers to Chosen Women. The other two highland centers did not show this amount of diversity, nor did they house an *aqllawasi*. Only the Mantaro region had evidence of major changes in settlement patterns. Centers that illustrate Menzel's first type also exist on the Peruvian coast. Examples include Inkawasi (Chu 2015, 2016; Hyslop 1990:175–176; Urton and Chu 2015) and Cabeza de Vaca near the Ecuadorian border (Moore and Vélchez 2016) referred to as the “templo del Sol junto a la Fortaleza de Tumbes” by Cieza de León (1984 [c. 1553]: Chapter LIII).

Examples of the Second Type of Inca Administrative Centers

Menzel's second type of Inca installation—administrative centers in regions previously consolidated under a polity—are illustrated by the following centers on Peru's coast: La Centinela, the Chinchá capital on the South Coast (Morris 2004:311–314); and centers controlled by the former Chimú Empire on the North Coast, such as Farfán (Keatinge and Conrad 1983; Mackey 2010); and Túcume (Heyerdahl *et al.* 1995).

The result of the Inca occupation of the Chinchá capital of La Centinela was a fusion of Chinchá and Inca architectural features (Morris 2004:313). A new Inca structure, built of adobe brick, and containing Inca-style trapezoidal niches, was placed within the existing *tapia* walls of the former Chinchá center. The ceremonial mound also retained Chinchá features. Ceramic styles, like the architecture, also drew on both cultures. Morris believed that the mixture of styles reflects an attempt to soften the Inca occupation, because Chinchá was a strong ally of the *Sapa Inca*.

The Chimú State (c. A.D. 1000–1470) was the major power on the North Coast prior to the Inca conquest. It appears that Chimú expansion began as early as A.D. 1200, and by the time of the Inca conquest the Chimú had established a network of administrative centers of various ranks in their territory (e.g. Mackey 2009a; Topic 1990). Although there was some Inca influence at the Chimú capital of Chan Chan in the Moche Valley (Mackey 1973), there was never extensive remodeling or building at the capital, as in other areas subjugated by the Inca. The relationship between the Chimú state and the *Sapa Inca* was antagonistic. There had been a long and violent confrontation with the Chimú for the conquest of the Chimú capital (Cieza de León 1967 [1553]: Chapter LIX, p.

195). After the Inca victory over the Chimu, the conflict was prolonged by a Chimu rebellion which was then put down by the Inca. Nevertheless, as with strategy in Chíncha, the Inca maintained a softened or diplomatic approach to the Chimu and did not impose many highland imperial architectural features at former Chimu-built administrative centers (Mackey 2003, 2006:329–343, 2010:223). The former Chimu centers, Farfán and Túcume, are excellent examples of Menzel's second type of Inca installation—centers that were not built anew because the Inca could remodel the existing administrative installations.

Major changes were brought by the Inca to these prior Chimu centers. Túcume, located in the La Leche Valley (Heyerdahl in Heyerdahl *et al.* 1995: figure 2), was constructed under Lambayeque rule, then occupied by the Chimu after their conquest of the Jequetepeque Valley, and finally incorporated into the Inca bureaucratic hierarchy. Research has shown that the Inca invested significant time and labor in the remodeling of Túcume, most notably around El Purgatorio, or La Raya Mountain (*ibid.*: 179–189). The Inca installed an *aqllawasi*, as a residence for the Chosen Women (Toyne 2002), who were responsible for the production of cloth and chicha, items that were an integral part of gift giving and hospitality under Inca control (Narváez 1995a in Heyerdahl *et al.* 1995: 92–93). The nineteen sacrificed females excavated from within Túcume's Stone Structure were most likely *aqllakona*, who were interred adjacent to males who may have been the elite administrators of the center (*ibid.* 93). A separate group of sacrificed individuals, non-*aqllakona*, was excavated in the Stone Structure near the Temple of the Sacred Stone (Toyne 2008). These sacrifices illustrate the ritual importance of Túcume throughout its history.

The former Chimu administrative center of Farfán (described above) also demonstrates the

Inca strategy of co-opting an existing center. As in the Inca occupation of Túcume, there is evidence of Inca remodeling. As I have noted above, in Farfán the Inca constructed an *ushnu*, an architectural feature found in most Inca provincial centers (e.g. Staller 2008:285, 289–305). There is also evidence at Farfán for an *aqllawasi* that housed the Chosen Women, some of whom were sacrificed and interred in the Huaca Burial Platform. The Farfán pottery sample was made up of both local and Inca influenced wares, though North Coast sites had far fewer hybrid or Inca ceramics than, for example, the Chíncha capital of La Centinela on the South Coast.

In the ensuing years since Menzel's hypothesis was first stated, many Inca administrative sites have been located and excavated, the results of which prove that her hypothesis was correct—Inca strategy was focused on building anew in unconsolidated areas and co-opting centers of previous polities. It appears that both types of centers wielded Inca influence. The Farfán data suggest that both Inca and local lords were involved in the governing of Farfán (Mackey 2011 [2016]:160–162). These new findings enable us to reaffirm that Chimu provincial administration did not continue under Inca rule as was once thought, illustrating that Late Horizon administrative structure was changed by the Inca (Netherly 1998 [1988]:93–100).

A key component of Inca strategy was the incorporation of new groups into the Inca hierarchy. Menzel's hypothesis highlights the flexibility of Inca strategy in their rule and incorporation of conquered areas with differing political control. The data recovered from Peru's coast over the past two decades show that the Inca had a strong interest in integrating this region into their bureaucratic hierarchy as demonstrated by three coastal centers—Chíncha, Túcume, and Farfán.

RESEARCH QUESTIONS AND METHODOLOGY ON MORTUARY FACILITIES THAT GUIDED OUR WORK AT FARFÁN

Two very important facts were unknown when the Farfán Project began mapping and excavation. The first was, as stated above, that the site had significant occupations by three polities—Lambayeque, Chimú, and Inca. The second, and perhaps most surprising, was the discovery of five burial facilities within Farfán. The excavation of ninety-eight burials was unexpected because Farfán was not in a good state of preservation due to long-term looting, destruction from El Niño events, and run-off from the adjacent mountain, Cerro Faclo. The results of the Farfán Project combine data on the context of the Late Horizon burials, the associated artifacts, and the bioarchaeological history of the interred. This study supports earlier research, such as the Túcume Project (Heyerdahl *et al.* 1995) to demonstrate a strong Inca presence on the North Coast, and sheds new light on our understanding of Inca expansion and strategy in this region,

Developing the Research Questions

During excavation and laboratory analysis, research questions were developed that focused on material and human remains, based on what we might expect in the Farfán cemeteries. These questions addressed variables that would provide the necessary data to reconstruct Late Horizon burial practices and their social, religious, and biological significance. Key to this understanding was the use of existing data on mortuary practices both before and during the Late Horizon that could be incorporated into our research questions. For the bioarchaeological work, Andrew Nelson developed a separate series of research questions (Chapter 2).

Moche Burial Patterns

The research on Moche burial practices (A.D. 200–800) constitutes one of the most complete and comprehensive data sets available for the North Coast. This includes archaeological investigations carried out over a number of years in a wide area of the North Coast (e.g. Bawden 1996; Castillo and Quilter 2010; Chicoine 2011).

Moche funerary treatment encompasses a wide range of burial contexts from simple pit interments to elaborate burial chambers (Alva and Donnan 1993). These contexts have been examined to elicit information on body position and treatment and the location, size, and labor involved in tomb preparation (e.g. Donnan 1995; Donnan and Mackey 1978; Millaire 2002, 2004). The variation in these characteristics can generally be correlated with differences based on status and/or societal role (e.g. Chapdelaine 2004; Donnan 1995; Donnan and Castillo 1994); the variability in the rich array of grave goods attests to this hypothesis, and is further evidenced by the detailed iconography on Moche ceramic vessels (Donnan 1978).

Other than status differentiation, studies on Moche populations have focused on religious beliefs and ideologies (Castillo 2010; DeMarrais *et al.* 1996; Donnan 2010) as well as group membership and community (Zori 2011[2016]). In recent years, there has also been an emphasis on the bioarchaeology of the Moche interments (e.g. Verano 1997a). This corpus of information on Moche mortuary practices provided a solid foundation upon which to formulate our research questions. In addition, familiarity with this data aided our research, because many of the burial practices found in Farfán's Late Horizon interments had their antecedents in the earlier Moche culture.

North Coast Inca Burial Patterns

The abundance of scholarship on Moche mortuary practices is contrasted with the paucity of data for Late Horizon Inca burials on the North Coast. Within the North Coast, the site of Túcume is one of the best reservoirs of Late Horizon data (e.g. Heyerdahl *et al.* 1995; Toyne 2002, 2008). These data include those provided by the grave goods and bioarchaeological information from different burial facilities at Túcume. Interments of mid-level individuals were found in simple pit burials in the Southern Cemetery (Narváez 1995b in Heyerdahl *et al.* 1995:169–177). Women thought to be *aqllakona*, responsible for the production of cloth and chicha during the Inca reign, may have been sacrificed to accompany the *fardo* burials of three elite male administrators found in Room 1 of the same building, the Stone Structure at Túcume (*ibid.*: 92–97, figure 37; Toyne 2002: 17–21). A separate group of sacrificed individuals who were not *aqllakona* was excavated in the area around the Temple of the Sacred Stone, which had been a repository for animal, human, and other high-status offerings from Lambayeque to Inca times (Narváez 1995a in Heyerdahl *et al.* 1995:93–115; Toyne 2008:42). Although some information on the grave goods from the Túcume burials has been published, the remainder is unavailable for comparison with Farfán. To the south of the Jequetepeque Valley, there are reports of excavated Late Horizon burials from the Moche Valley (e.g. Donnan and Mackey 1978:356–376), as well as from the Casma Valley (Mackey 1982; Vogel 2016: 153–154).

Several observations emerge from this small sample regarding treatment and context of Late Horizon North Coast burials. At Túcume, there are two types of burials based on status and affiliation within the Inca bureaucracy. The South Cemetery appears to contain mid-level individuals who are seated, with knees apart

(Narváez 1995b in Heyerdahl *et al.* 1995:169–177). The nineteen sacrificed *aqllakona* entombed in Room 3 of the Inca Stone Structure and the three male individuals in Room 1 (*ibid.*: 92–101, figure 37; Toyne 2002:18–21) are in seated positions, with knees flexed. Their corpses are covered with multiple cloth wrappings, creating *fardos*, or mummy bundles, typical of traditional Inca burials. Of the nineteen female burials in a separate room, Recinto 3 (*ibid.*), only one is well preserved and in an upright position wrapped as a *fardo*. However, Toyne, in her analysis, notes that based on body position, the other females may have been in seated, flexed positions at the time of burial and wrapped as *fardos* (*ibid.*:19). It is most likely that during the process of decomposition the disintegration of the wrappings allowed the bodies to fall (Baitzel 2019). Other than the Túcume burials, *fardos* have not been recorded at other sites on the North Coast. On the Central Coast, the *aqllakona* burials from the Cemetery of Sacrificed Women at Pachacamac may have been *fardos*. Tiballi (2010:128) refers to the burials as wrapped mummies, and Uhle (1991 [1903]:37, figure 3.5) describes them as mummies that form bales of irregular shape. It is, however, impossible to say for certain how the bodies were wrapped. The seated position with knees apart and often flexed, contrasts with the highland practice in which the interred is seated, but with the flexed knees under the chin and the hands placed on the knees or face (Julien 1987–1989 [2004]: figures 171, 215).

The valleys to the south of the Jequetepeque Valley show more variation. In the Moche Valley, bodies are buried seated with knees slightly flexed in an upright position, but not under the chin (Donnan and Mackey 1978:19, 244–265, 323–331, 351–367). In the Casma Valley, bodies have been found in both seated and extended positions at the site of Manchan (Mackey 1982). In general, it appears that standardization of burial position during the

Inca occupation was more evident north of the Moche Valley, and these burials consciously received a northern North Coast seated burial treatment during the Inca occupation.

Research Questions

A series of related questions guided our work during the excavation of the burials and the analyses that followed. These questions focused on two major themes: first, was there a comprehensive burial pattern at Farfán? Second, how was Inca political strategy materialized in the rituals and practices surrounding the interments? Stated below are our research questions. The recovered data used to answer these questions will be presented in the following chapters and the summary.

- 1) Does the intra-site analysis of burial treatment indicate a pattern for all five of Farfán's Inca mortuary facilities, and what are their antecedents?
- 2) Are the contextual aspects of the burial process also standardized at Farfán?
- 3) What does the intra-site location of the mortuary facilities at Farfán imply?
- 4) What differences and similarities exist between (a) the interments in the Huaca Burial Platform and other cemeteries at Farfán and (b) the *aqllakona* interments at other Inca coastal administrative centers?
- 5) Is there a difference in the quality or quantity of grave goods or style of goods by gender, age, or ethnicity in the non-*aqllakona* burials?
- 6) Did funerary rituals play an important role in Inca political strategy at Farfán? We proposed that mortuary practices and the rituals surrounding them were used by the

Inca to (a) integrate the groups in Farfán and in the valley into the Inca Empire and (b) to legitimize Inca rule in this conquered region by affiliating themselves with pan-coastal traditions.

- 7) What characteristics were exhibited by the secondary burials?

MAPPING AND EXCAVATIONS

The initial proposal to conduct field research at Farfán in 1999 stated that the archaeological site was built entirely by the Chimú. The research goal at that time was to compare the unexcavated northernmost Compound VI with Compound II excavated decades earlier by Keatinge and Conrad (1983), which was found to have Chimú architectural features. We began the mapping of Compound VI using compass and tape. However when we moved to other compounds with different architectural features, a professional surveyor, Jeff Voorhis, was hired to create detailed maps. These data were used by Omar Malca to create the floor plans, three-dimensional renderings of the compounds, and a site map of Farfán. To delineate the compounds, we continued to use the Roman Numerals, I through VI used by Keatinge and Conrad (*ibid.*), for the six visible compounds. We later identified the remains of partial perimeter walls to the northeast of Compound III that were affiliated with the Lambayeque occupation (Mackey 2011 [2016]:152, figure 2).

It was during the mapping and survey of the site that we discovered and excavated the five burial facilities. Three are above-ground earthen mounds: Compound VI Cemetery, Mound G, and Cemetery I. One is subterranean, Cemetery J, and the largest is a solid adobe, three-tiered platform, the Huaca Burial Platform. For various reasons, none of these cemeteries had been reported. The principal reason is that the earthen mounds were unfaced, covered with

sand and/or debris and difficult to detect. The Huaca Burial Platform is on the west side of the site, away from the adobe compounds, and was covered in sand. The subterranean cemetery is under the plastered floor of the plaza that fronts the former Chimu burial platform in Compound II, and was discovered by test excavations and as a result of looting.

All cemeteries were excavated using a similar methodology. The majority of the cemeteries were marked with five-meter-square units on the surface. These units were divided into four equal parts: the first quarter was fully excavated, followed by the remaining three quarters. On the other hand, the Huaca Burial Platform was also divided, but into smaller 2.5 square meter units, because this was a brick structure and adobes had to be removed. The identification of cultural or human remains initiated a complete excavation that entailed the measuring, cleaning, drawing, and photographing of the remains prior to excavation, followed by transport to the project's laboratory for further analysis.

Burials, as well as burials goods, in each unit were measured *in situ* from a fixed datum. After cleaning, each body was measured and the accompanying grave goods recorded in position using the datum, enabling the creation of a final drawing of the placement of the bodies within the cemetery. As we measured, drew, and photographed the burials, a unique phenomenon was observed—the internal layout of several cemeteries was divided into three levels or terraces, as can be seen in Figure 1.14 from the Compound VI Cemetery excavation. The use of the number three is repeated throughout the site; for example the Huaca Burial Platform has three tiers, and several of the tombs are divided into three parts. A possible explanation for the use of this number is explored in Chapter 3A.

The burial facilities held two types of interments. Primary burials (called Tomb or T) are those that had been buried in their original tomb. Secondary burials (called Secondary or S) are those that consist of partial bodies that had been buried or warehoused elsewhere, and then reburied in one of Farfán's cemeteries. These secondary burials of partial remains were not the product of animal or looter intervention, because many secondary interments were at the lowest level in a cemetery, beneath intact primary tombs, and their burial offerings were undisturbed.

In sum, this monograph provides an overview of the political history of Farfán, a detailed examination of its tombs, their contexts, and artifacts, and a bioarchaeological reconstruction of the lives of the interred individuals. The Farfán data represent a comprehensive investigation of Late Horizon Inca burials from a complex site on the North Coast of Perú.

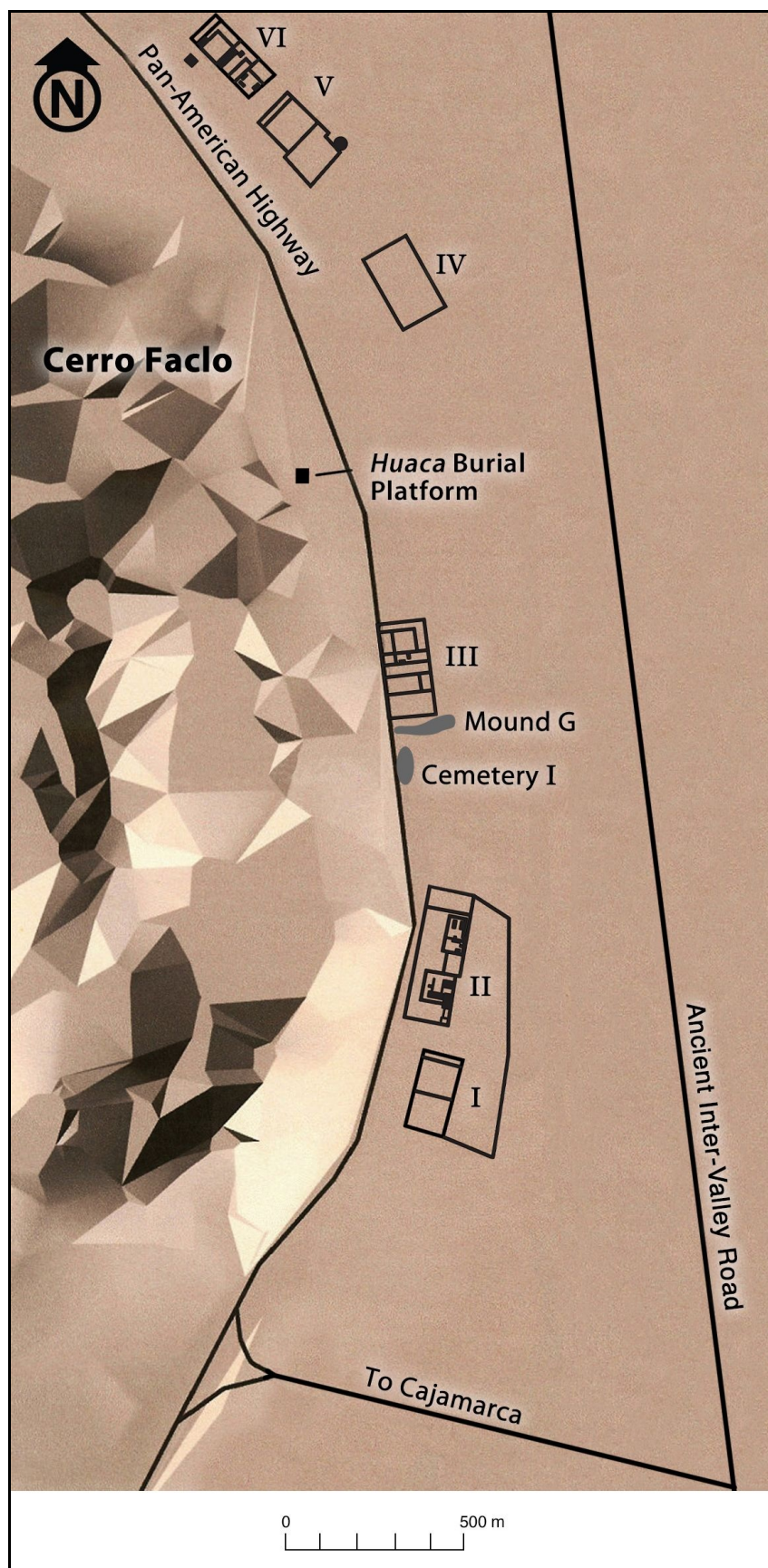


Figure 1.1. Overview of the archaeological site of Farfán showing the location of the six compounds.

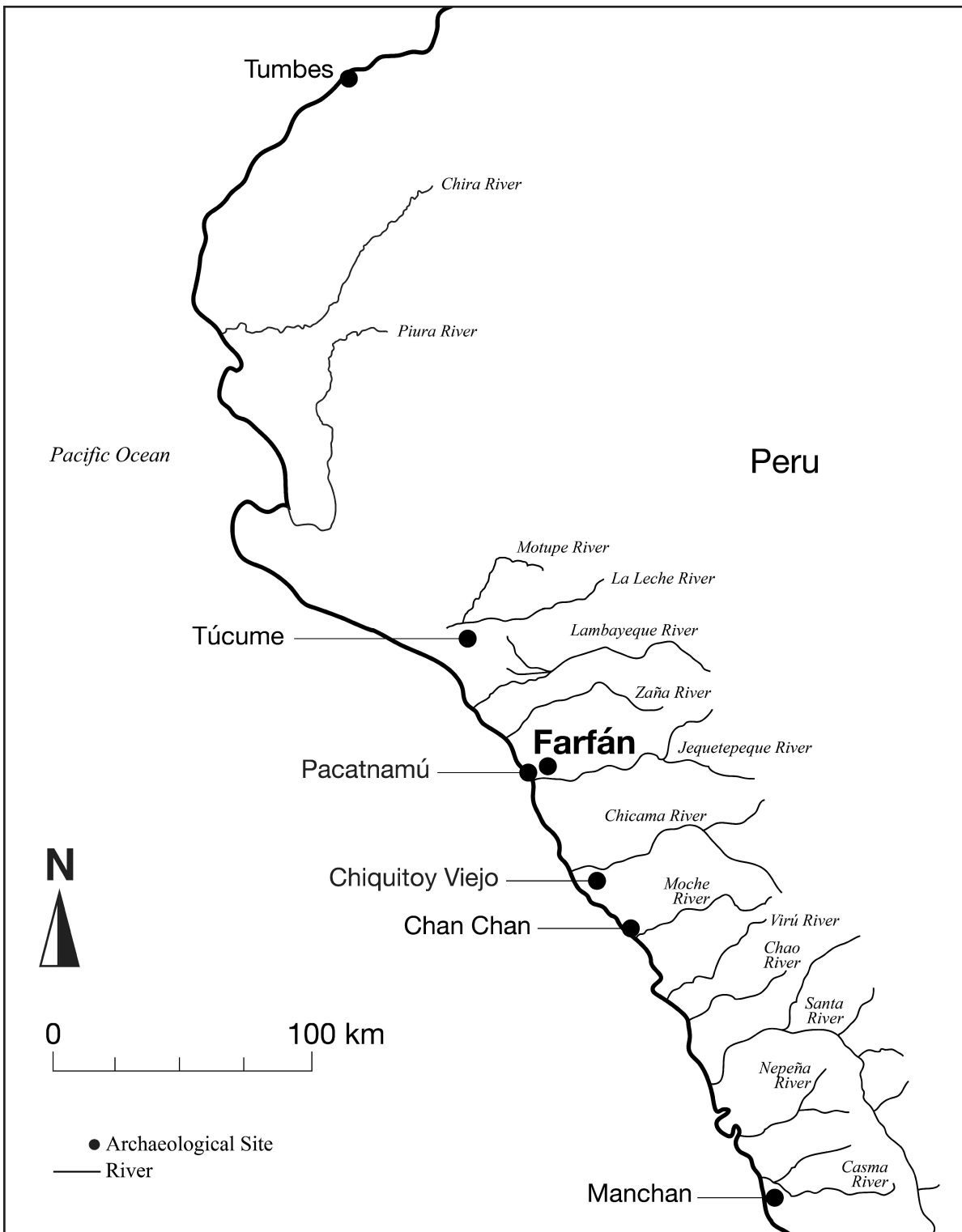


Figure 1.2. Map of the North Coast showing the location of the Jequetepeque Valley and administrative centers mentioned within the text.

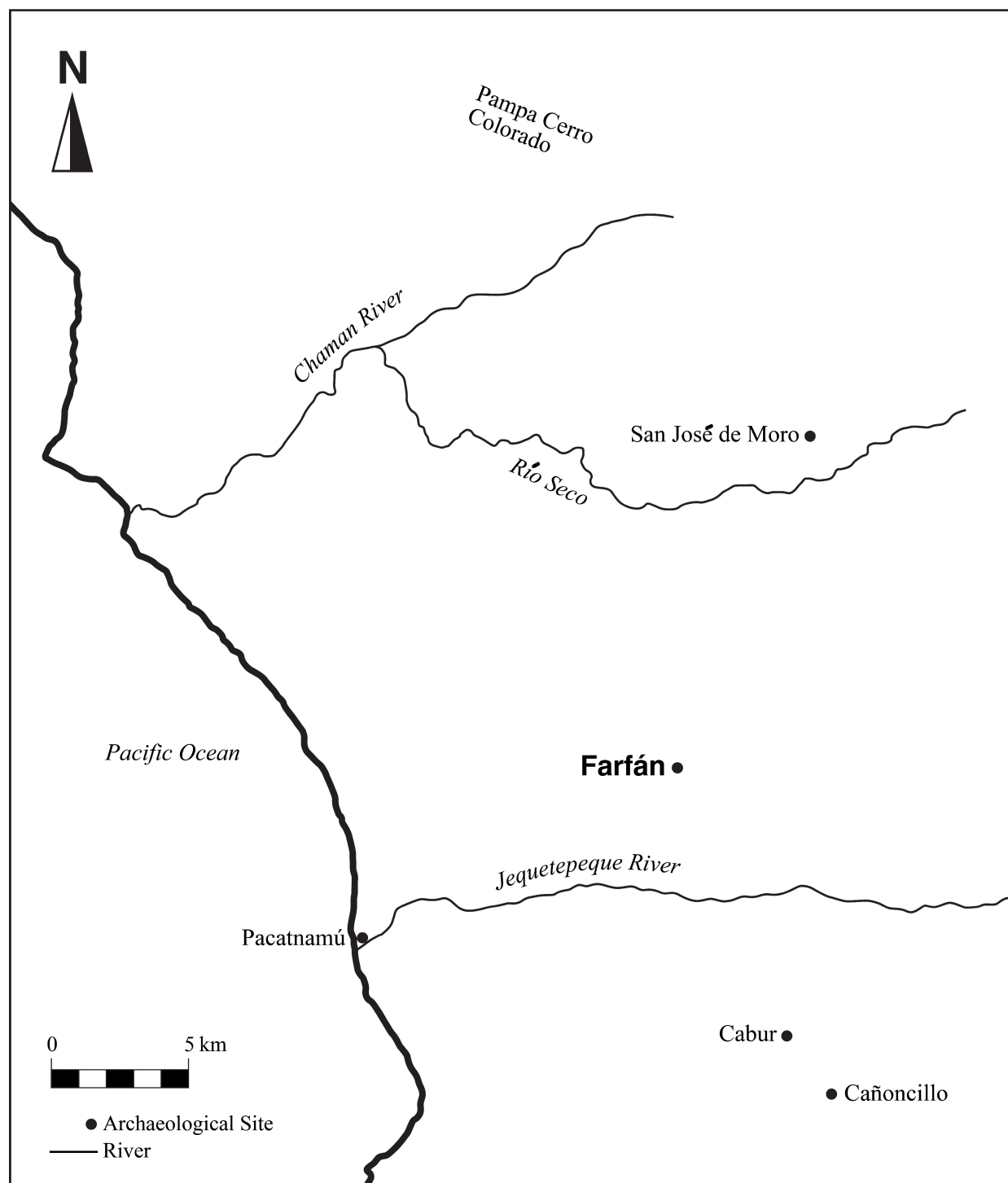


Figure 1.3. Map of the Jequetepeque Valley with archaeological sites mentioned in the text.



Figure 1.4. View of the lower Jequetepeque Valley and its farmland.



Figure 1.5. The middle Jequetepeque Valley showing the constriction of the valley neck.

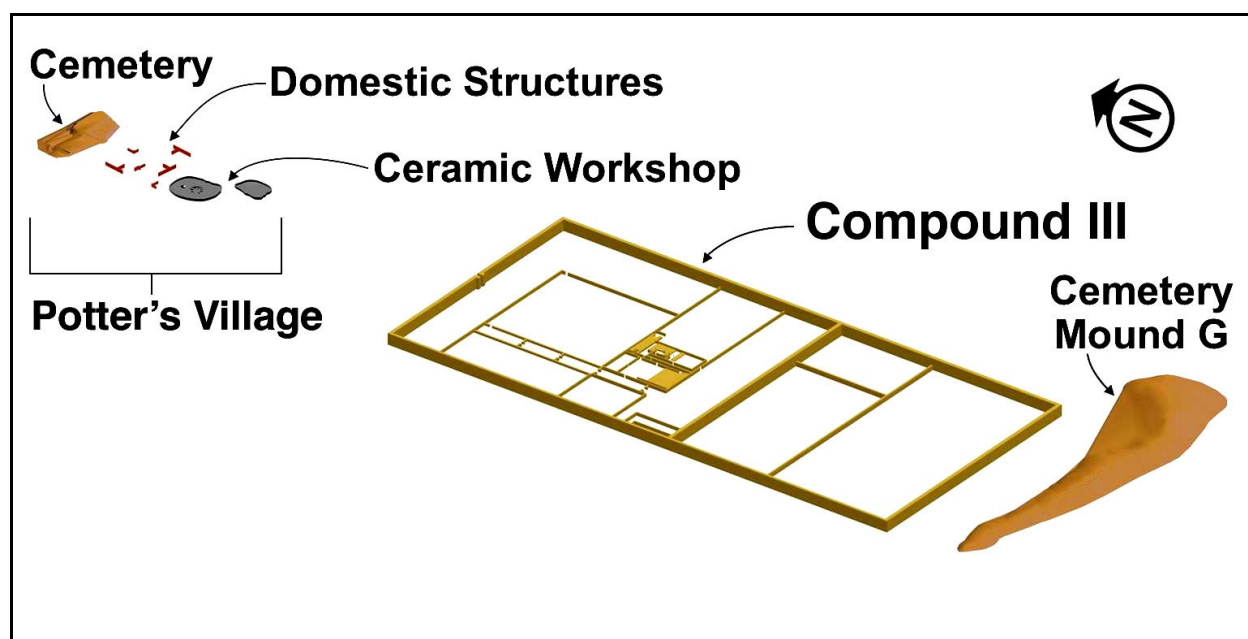


Figure 1.6. Lambayeque-constructed Compound III measures 285 meters in length by 134 meters in width. Other features are the Potter's Village and Mound G Cemetery (after Mackey 2011 [2016]: figure 3).

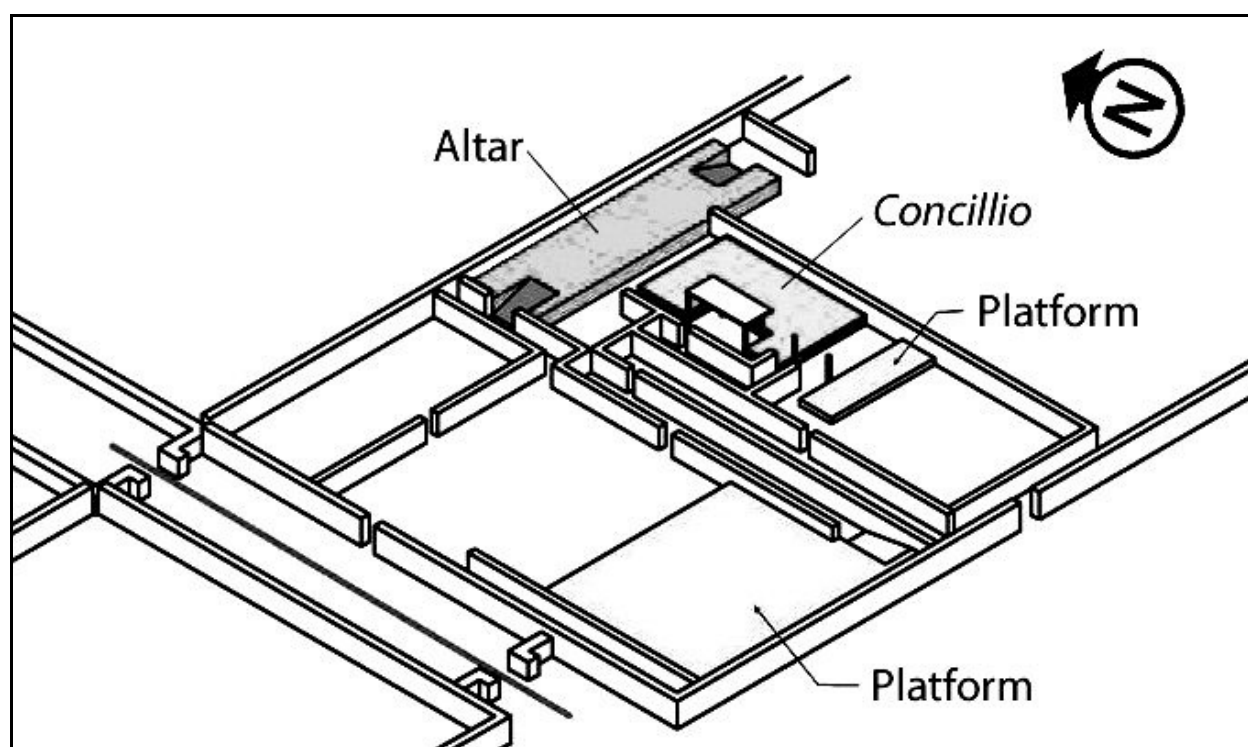


Figure 1.7 Detail of Compound III's architectural features measuring 37 square meters that mimic in smaller dimensions those from Pacatnamú.

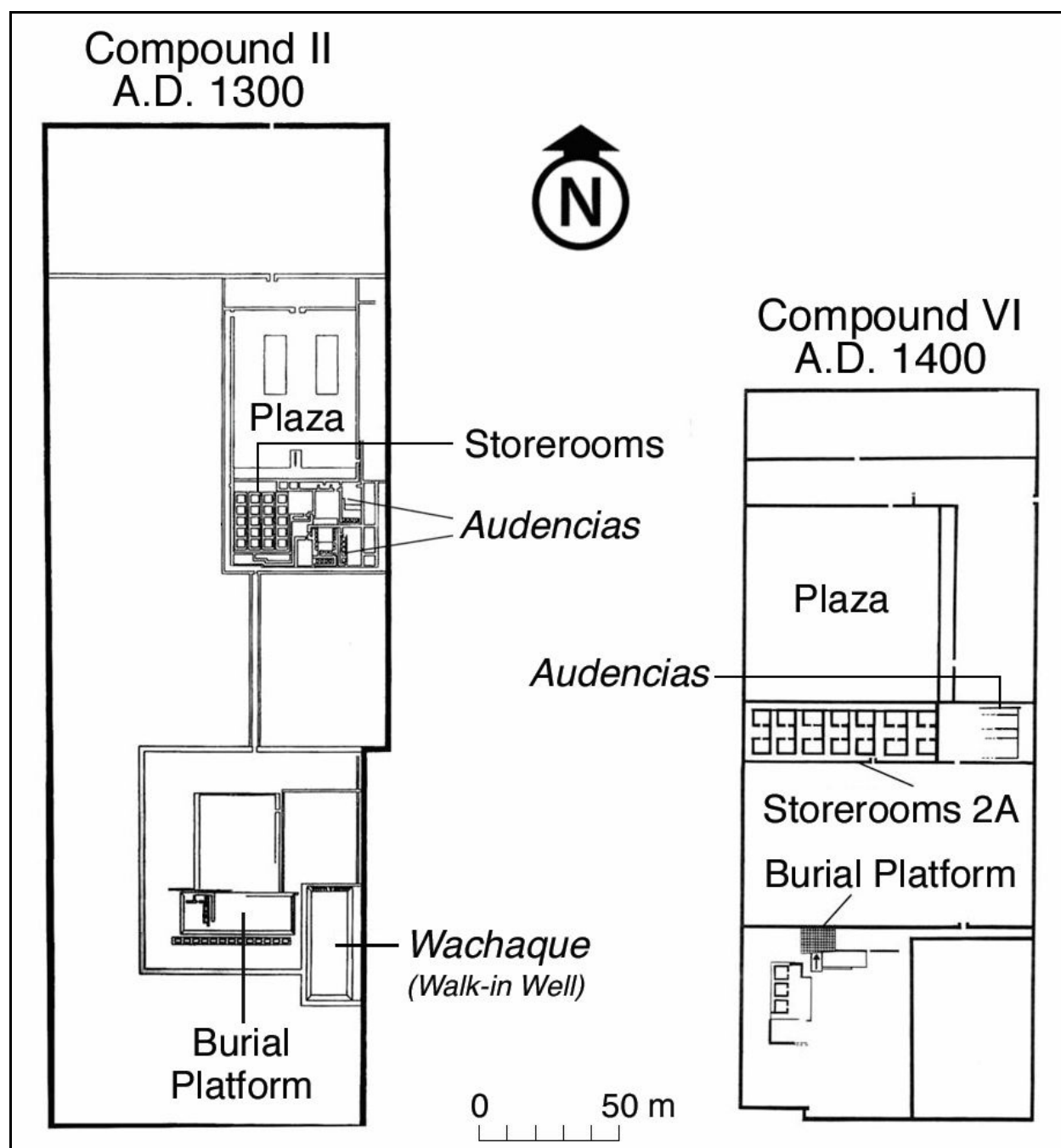


Figure. 1.8. Plan views of two Chimú-built compounds at Farfán (after Mackey 2011 [2016]: figure 7).

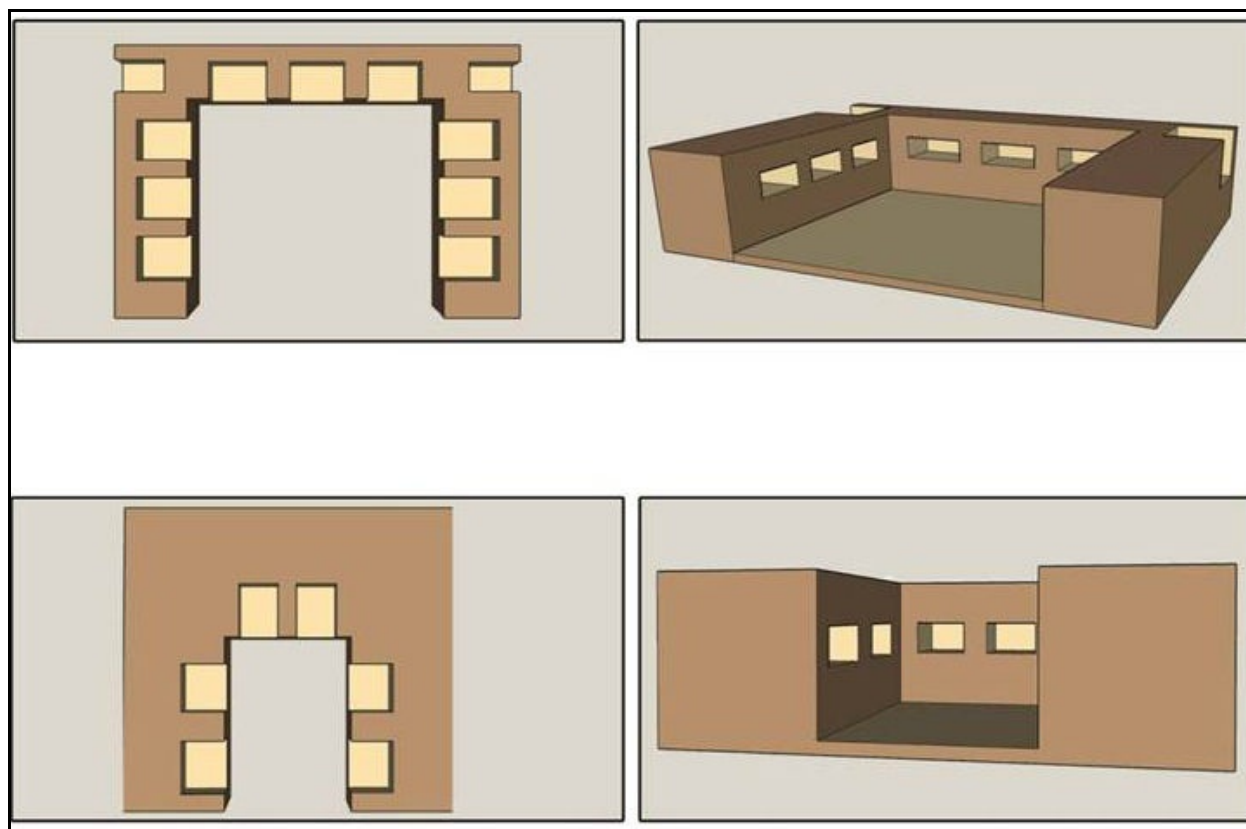


Figure 1.9. Two chronologically distinct audiencias at Farfán (top images c. 1200 A.D.; bottom images c. 1350 A.D.).

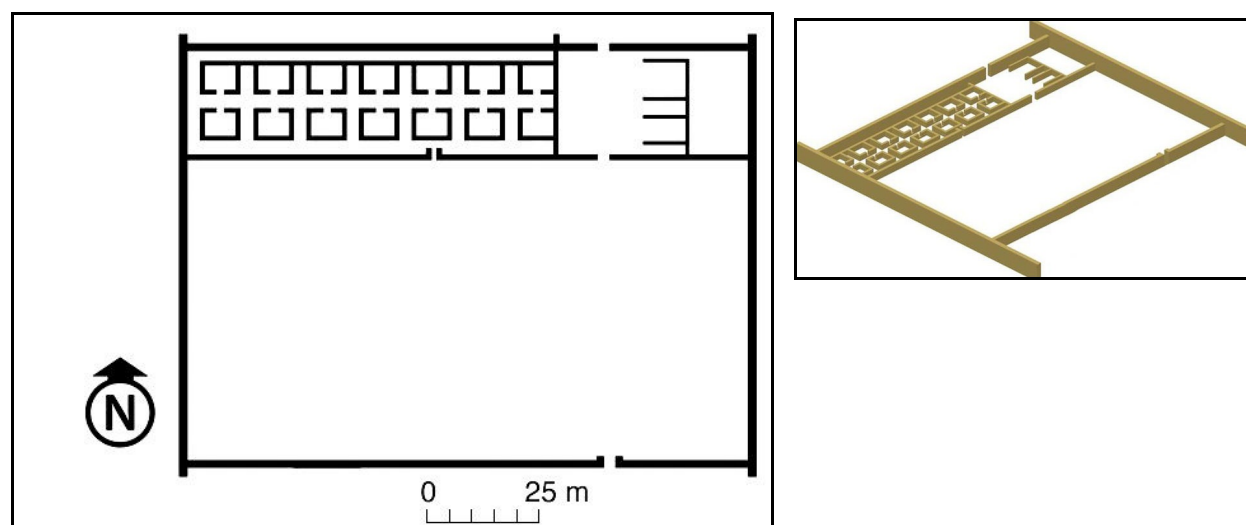


Figure 1.10. Plan (left) and perspective drawing (right) of one of the storeroom areas at Farfán (Compound VI) with an associated audiencia.

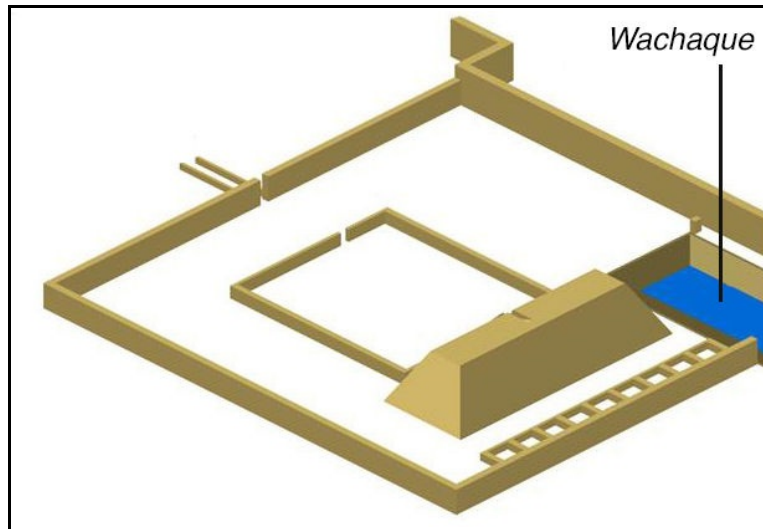


Figure 1.11. Perspective drawing of the Chimú Burial Platform in Compound II, Farfán.

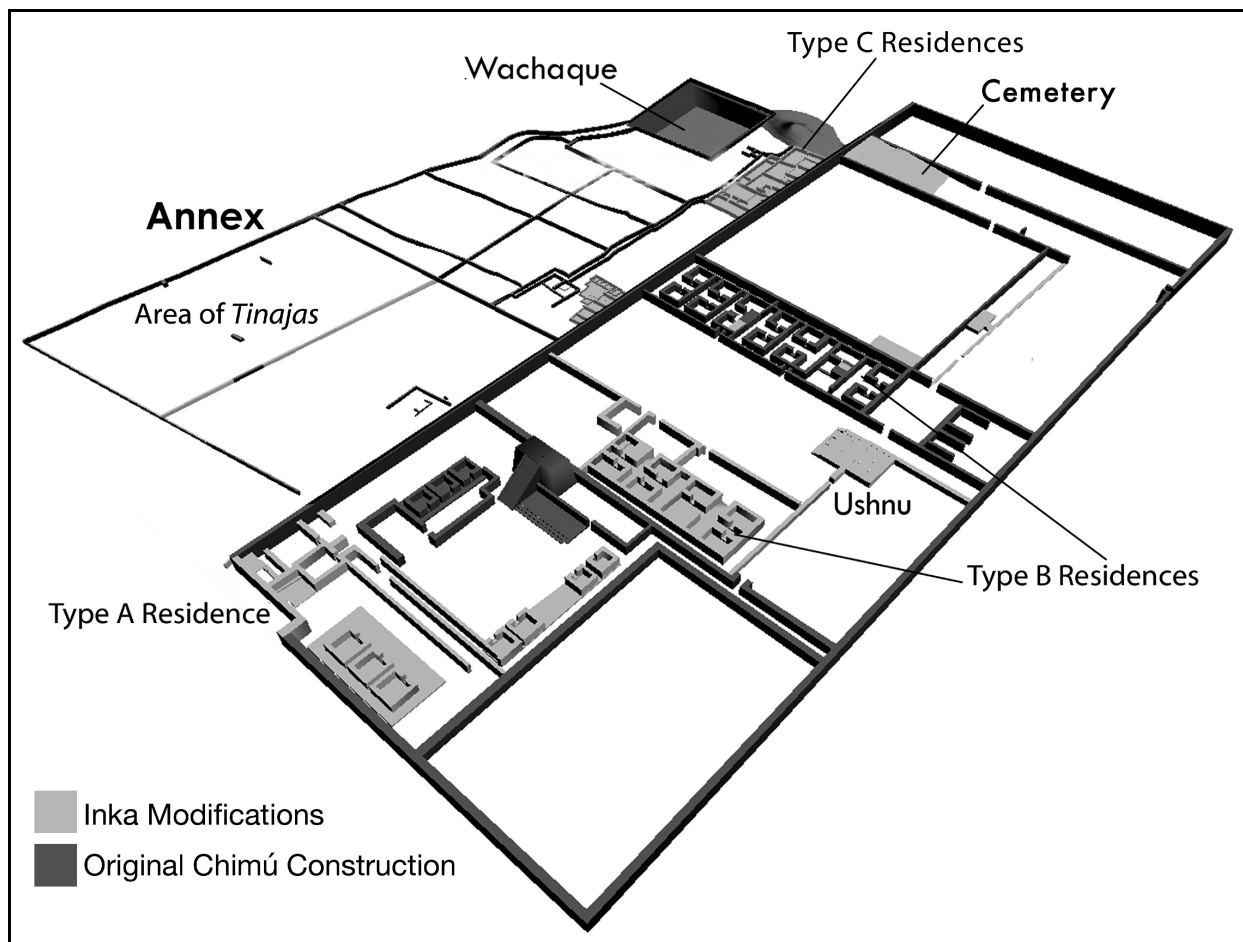


Figure 1.12. Architectural changes made by the Inca within compound VI shown in light gray. The Annex on the western exterior wall of the Compound that contains Type C residences, and Type A and B residences within the Compound are all Inca modifications.

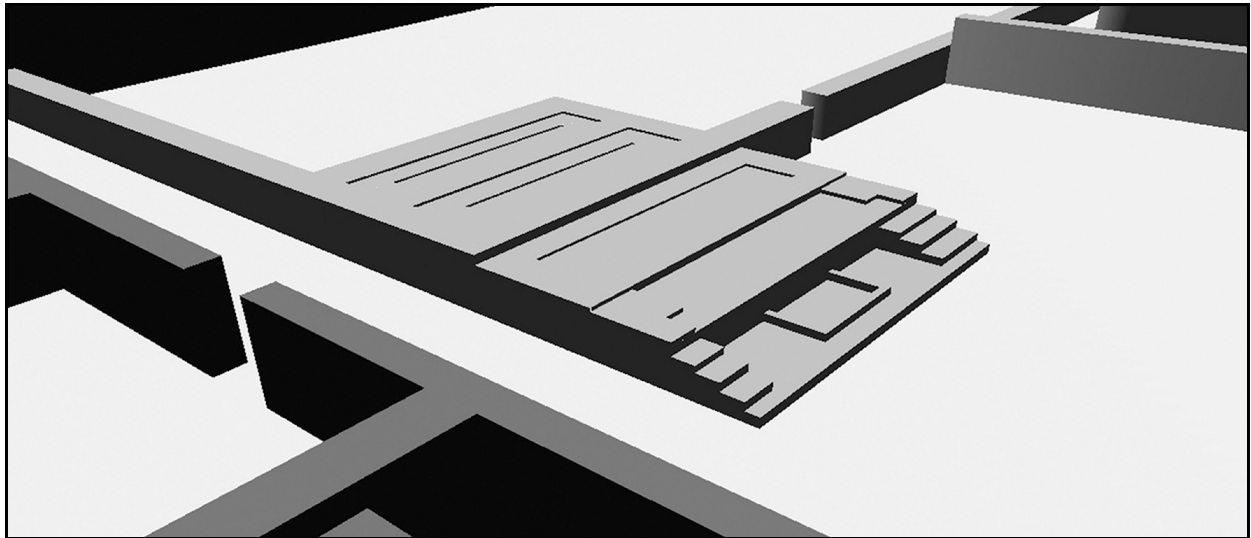


Figure 1.13. Inca-built ushnu in Compound VI.

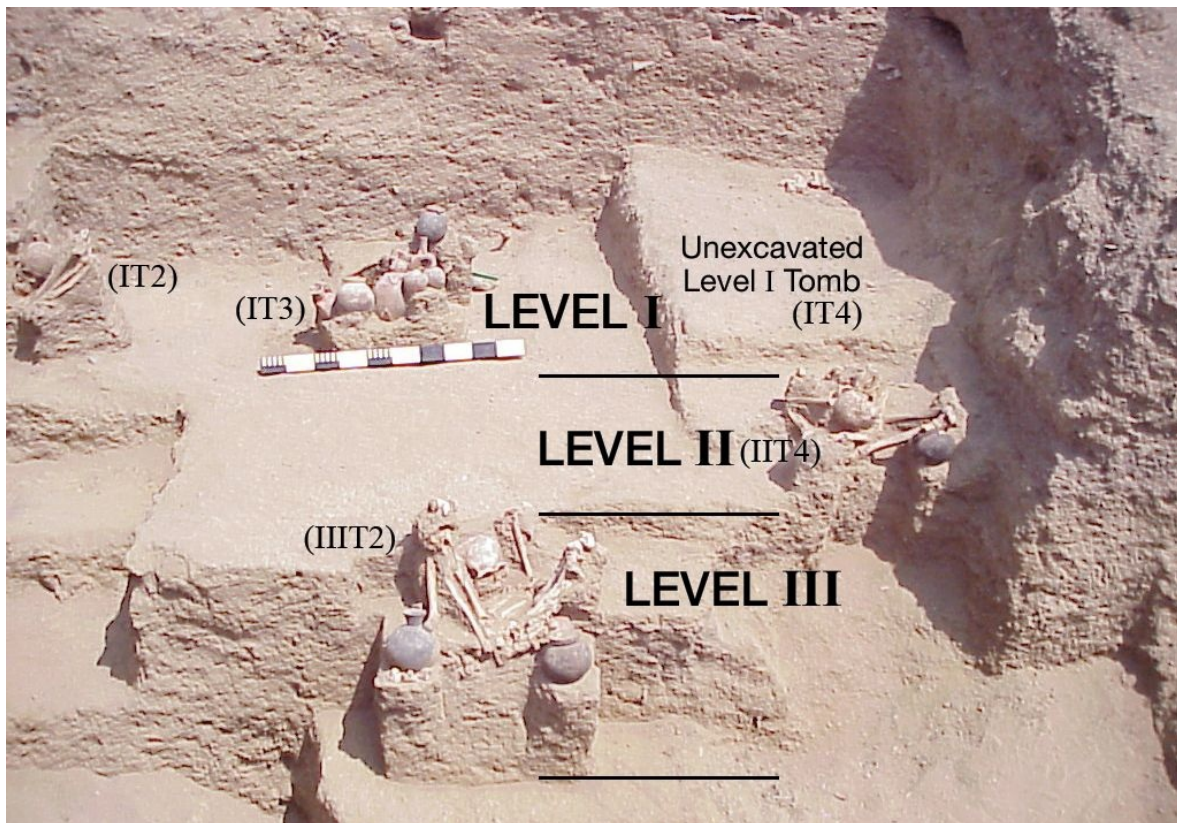


Figure 1.14. Partial view of the Compound VI Cemetery showing the burials placed in three levels. These levels and their solid earthen matrix were clearly revealed towards the end of the excavation, after most of the skeletal remains had been removed. The burial positions recorded from the datum were the basis of the schematic plan of the complete Compound VI Cemetery, shown in Chapter 7, Figure 7.2.

CHAPTER 2

INTRODUCTION TO THE BIOARCHAEOLOGY OF FARFÁN

Andrew J. Nelson

University of Western Ontario

anelson@uwo.ca

INTRODUCTION

The bioarchaeological analysis undertaken for this project follows Frank Saul's "osteobiographic" approach. Saul originally coined this term in 1961 and he uses it to "emphasize that skeletons record the life history of their occupants in various ways, and we should be extracting these life histories from their bones instead of making lists of often uninterpreted measurements" (Saul and Saul 1989:288). This approach is organized around four key questions: who was at the site? Where did they come from? What happened to them? What can be said about their way of life? These questions have been productively used in many different contexts (see Stodder and Palkovich 2012 for an edited collection of such studies). We have used it before in the analysis of a single Lambayeque skeleton from San José de Moro (Nelson, Nelson, Castillo, and Mackey 2000). In this project, we move from the single skeleton to an overview of the site. This change in focus makes it more difficult to personalize the individuals at the site, but the key questions are the same, as is the overall objective of trying to understand the lived experience of the individuals, and of those with whom they interacted.

"Bioarchaeology" is used here in the broad anthropological sense (*cf.*, Armelagos 2003), which is consistent with Weiss's "cultural osteology" (Weiss 1961). It is rooted in the processual theoretical paradigm, but incorporates many of the humanistic aspects of post-pro-

cessualism such as identity and ethnicity (*cf.*, Knudson and Stojanowski 2008). It is also crucial that the bioarchaeological information be tightly integrated with the rest of the archaeological contextual and cultural information to breathe more life into the osteobiographies and our understanding of the site as a whole.

Mackey (Chapter 1) has outlined several key questions that guide her analysis of the cultural material from Farfán. They are:

- 1) Does the intra-site analysis of burial treatment indicate a pattern for all five of Farfán's mortuary facilities, and what are their antecedents?
 - 2) Are the contextual aspects of the burial process also standardized at Farfán?
 - 3) What does the intra-site location of the mortuary facilities at Farfán imply?
 - 4) What differences and similarities exist between (a) the interments in the Huaca Burial Platform and other cemeteries at Farfán and (b) the *aqllakona* interments at other Inca coastal administrative centers?
 - 5) Is there a difference in the quality or quantity of grave goods or style of goods by gender, age, or ethnicity in the non-*aqllakona* burials?
 - 6) Did funerary rituals played an important role in Inca political strategy at Farfán?
- We proposed that mortuary practices and

the rituals surrounding them were used by the Inca to (a) integrate the groups in Farfán and in the valley into the Inca Empire and (b) to legitimize Inca rule in this conquered region by affiliating themselves with pan-coastal traditions.

7) What characteristics were exhibited by the secondary burials?

The bioarchaeological questions, following these archaeological questions and the osteobiographic questions above, that will guide this analysis are:

- 1) Can the five mortuary facilities be differentiated from each other on the basis of bioarchaeological observations? In particular, in what aspects do the burials of the *aqllakona* differ from others at Farfán?
- 2) What are the bioarchaeological antecedents on the North Coast?
- 3) What were the living conditions at Farfán?

For the master list of burials, see Table 2.1.

ORGANIZATION

The bioarchaeological chapter parts are all arranged in a similar manner, which reflects, in part, the research and osteobiographic questions posed above. First, an overview is provided of the demographic profile of the cemetery (Who was at the site?). This is followed by a discussion of stature, health and disease, and activity patterns (What happened to them? What can be said about their way of life?). Next, population traits and cranial modification are considered, followed by isotopic analysis of the skeletal material (Where did they come from? Who were they?). Some internal comparison among subsamples is then undertaken, followed by a summary for the cemetery. Individuals who stand out from the others are frequently highlighted.

Cemetery	N	Primary Burials	Secondary Burials
Compound VI	11	11	n/a
Mound G	7	7	n/a
Cemetery I	13	5	8
Cemetery J	20	16	4
JO S1	1	n/a	1
Huaca Burial Platform - East Tomb	7	7	n/a
Huaca Burial Platform - Center Tomb 2	6	6	n/a
Huaca Burial Platform - Center Tomb 11	4	4	n/a
Huaca Burial Platform - North Tomb 1	3	3	n/a
Huaca Burial Platform - Looted Chamber 1	7	7	n/a
Huaca Burial Platform - Secondary Burials	19	n/a	19
	98	66	32

Table 2.1. Master list of Inca burials at Farfán.

METHODOLOGICAL CONSIDERATIONS

The methods of osteological analysis utilized here follow widely-accepted techniques, particularly those assembled by Buikstra and Ubelaker (1994). However, a few specific methods do demand some additional clarification.

Sex and age are fundamental aspects of an osteological analysis, because they are basic aspects of an individual's identity. Biological sex of all adults was determined primarily on the basis of pelvic morphology (Phenice 1969; Buikstra and Ubelaker 1994:16–17), as well as generally accepted cranial morphological criteria following Buikstra and Ubelaker (*ibid.*:19–20), with due consideration of changes brought about by cranial modification. Subadult individuals were not assigned a sex (*cf.* Brooks and Suchy 1990), with the exception of some late adolescent individuals who demonstrated clear secondary sexual characteristics. In subadult individuals, dental formation (Moorees *et al.* 1963) or eruption (Ubelaker 1984:115) patterns and epiphyseal fusion (Buikstra and Ubelaker 1994:43) were the methods used to determine age. Subadults were placed in general categories following Bogin (1999) as elaborated in Thompson *et al.* (2003). The categories are: neonate (0–0.9 years), infant (1–2.9 years), child (3–5.9 years), juvenile (6–11.9 years), and adolescent (12–19.9 years). Adults were aged into young (c. 20–29 years), mid (c. 30–39 years) and old (c.

40+ years). Adult categories were determined on the basis of fusion of the medial clavicle, fusion of the basisphenoid, and conformation of the pubic symphysis (Brooks and Suchy 1990; Buikstra and Ubelaker 1994:23–24), as well as by considering dental decay and spinal degeneration. Cranial suture closure could not be utilized because of the presence of cranial modification.

STATURE, HEALTH AND DISEASE, AND ACTIVITY PATTERNS

Health in archaeological populations can be assessed and interpreted in a variety of ways. The standard techniques utilized in the discipline will be touched upon below, but an initial discussion of the osteological paradox (Wood *et al.* 1992) is in order. Wood *et al.* noted that caution must be exercised in any bioarchaeological analysis because our study collection is a sample of the members of the population who died, as opposed to those who were alive at any given time, and, thus, are a biased representation of the full population. The publication of this paper stimulated a wide-ranging discussion in the discipline (see Wright and Yoder 2003) that is beyond the scope of this chapter. However, one key component of the discussion surrounding the issue of acute versus chronic illness must be acknowledged: does an apparently healthy skeleton represent a healthy individual, or one who died quickly before a disease could affect the bone? Conversely, does an individual who appears to have been sick actually represent a strong individual who managed to resist a disease long enough for lesions to be manifested on the skeleton? We must temper any interpretations with those questions in mind. Further, it is clear that any bioarchaeological analysis must use a multidisciplinary, multi-method approach to data gathering and interpretation in order to deal with the difficulties inherent in the bias introduced by the paradox.

The first way that health is assessed here is by an examination of stature. Stature is a variable affected by underlying genotype as it is expressed within a complex physical and social environment. Stature, and how it is achieved, is affected by nutritional adequacy, stress, disease load, and many other factors. Thus, Steckel (1995:1903) has argued that stature is a “net measure that captures not only the supply of inputs to health but demands on those inputs.” For the purposes of this study, stature was estimated using the equations presented in Del Angel and Cisneros (2004), which are based on the tables published by Genovés (1967). All available long bone lengths were used to calculate the estimate, and the median was calculated from each individual estimate. Stature, calculated in centimeters, was converted into short, medium, and tall categories, using the 25th and 75th percentiles of the sex-specific stature distributions for the Jequetepeque Valley as a whole (primary data from San José de Moro, Pacatnamú, and Farfán). How stature or growth was achieved was examined here by plotting bone lengths on dental age using Gaither’s (2004) data from Puruchuco-Huaquerones, an Inca site on the Central Coast, and El Brujo, a Lambayeque Period site on the North Coast, as comparators.

The second way that health is assessed here is by the analysis of skeletal and dental markers that are caused by infectious or other diseases, trauma, or degenerative changes of the skeleton (especially the spine), including those that are indicative of stress. The definition of “stress” utilized here is from Webb *et al.* (2010:807) “... a physiological disruption caused by real or subjective threats, which perturb an individual’s physical or psychological state and may be caused by single or combined physical, physiological and psychosocial conditions or stressors.” Diseases are approached using a differential diagnosis in order to determine the most likely cause for the observed lesions. It is unfortu-

nately the case that definitive diagnosis is not always possible. In those cases, the most likely alternatives are explored. Important to the osteobiographic approach, the symptoms of the disease are also included in this discussion, as they are relevant to the experience of the individual who suffered from the disease and to the experience of those who interacted with the individual on a day-to-day basis (cf. Tilley 2015).

One condition that is frequently examined by bioarchaeologists working in the Andes is *cribra orbitalia*, also known as pepper pot lesions on the roof of the orbit. These lesions are produced in response to marrow expansion and vessel proliferation brought on by the body's need for more red blood cells. This marrow expansion is generally believed to be caused by anemia and these lesions have been the focus of a great deal of research in Peruvian samples (see the review in Blom *et al.* 2005). In Peruvian archaeological samples, anemia is generally believed to be caused by an iron deficiency brought on by dietary insufficiency, associated disease, or parasitic infection, as hereditary anemias are restricted to the Old World (e.g. *ibid.*). However, Walker *et al.* (2005) have suggested that hemolytic or megaloblastic anemias are more likely diagnoses of the orbital lesions. These two alternatives have important implications to our interpretations of these lesions, and both will be considered in discussions in the text. Note that when these lesions are seen on the cranial vault, they are described as porotic hyperostosis. Porotic hyperostosis was not recorded here, as it was often clearly associated with pressure from the apparatus used to modify the cranium (see also Allison *et al.* 1981 and Gerstzen 1993).

Activity patterns were assessed by examining musculo-skeletal stress markers (MSMs; or enthesopathies cf. Kennedy 1989 or “enthesal changes” cf. Villotte and Knüssel 2012). MSMs

are marks made where muscles insert onto bone and are a class of “markers of occupational stress” (Kennedy 1989:129) because they are related to the intensity and repetition of stress exerted by the muscle in response to particular activities (Hawkey and Merbs 1995). It is noted that some have criticized the use of MSMs in forensic analyses (see Villotte and Knüssel 2012), but their use has a long history in bioarchaeology, and their interpretation will be viewed here critically.

Trauma can be defined in a variety of ways (see Merbs 1989; Walker 2001). For the purposes of this study, trauma is defined as fractures, crushing injuries, sprains, and dislocations. Other features commonly included in trauma either do not exist at Farfán (e.g. trephination) or are treated in other sections (e.g. cranial modification).

CRANIAL MODIFICATION

The practice of cultural cranial modification (see Figure 2.1 for cranial types) was common throughout Peruvian prehistory and has been the subject of study for more than three centuries (Dingwall 1931). Several major reviews of this practice have been published, including Imbelloni (1925), Dingwall (1931), and most recently Torres-Rouff (2003). There are two major schools of thought regarding the social motivations of cultural cranial modification: that it was a marker of social status (e.g. Las Casas 1967 [1552–1561]:594–595; Sutter 2005) or that it was a marker of ethnic identity (e.g. Blom *et al.* 1998; Cieza de León 1984 [c. 1553]: 191). While one should avoid broad generalizations, as it is very possible that the motivations varied from place to place and time to time (Boston 2012), most bioarchaeologists working in Peru view cranial modification as a cultural or ethnic marker (cf. Lozada 2011), and that appears to be the case in the Jequetepeque Valley.

Before one can consider the modification of the human skull in the Andes, it is worth discussing the basic non-modified cranial form. The basic non-modified human cranium on the Peruvian and Ecuadorian coast has a rounded shape, described in formal terms as brachycranic (Munizaga 1965:227; Newman 1943:34). The term brachycranic refers to the relationship between the length and breadth of the cranium. This relationship is quantified in the cranial index: $(\text{breadth} \times 100) / \text{length}$, and an index of 80–90 is referred to as brachycranic. A number of authors have noted that highland crania tend to be much more long headed, falling into the mesocranic (cranial index of 75–80) or dolichocranic (cranial index of 70–75) categories (e.g. Ericksen 1962; Newman 1943; Ross *et al.* 2008).

There are two generally recognized major types of cranial modification in Peru: fronto-occipital (sometimes divided into fronto-occipital and occipital) and annular (or Aymara) modification (Hrdlicka 1919:191; Imbelloni 1925). Fronto-occipital modification involves modification of the cranium by the use of appliances that produce a reduction in overall length and a compensatory increase in breadth. This modification results in an increase in the cranial index. The various appliances differ in how and where pressures are applied to the frontal and occipital bones. Annular modification is a form of modification achieved by tightly wrapping the cranium of the individual in a manner that produces a long cylindrical or conical form of the cranial vault. Fronto-occipital modification is the predominant form of modification on the Peruvian coast, while annular modification is the predominant form in the Andean highlands (MacCurdy 1923). It is often recognized that each of these types subsumes a number of subtypes, generally differentiated on the basis of the degree of modification and/or the method used (e.g. Dingwall 1931). For instance, Allison *et al.* (1981) illustrated fourteen different forms of

cranial modification and eleven different modification apparatuses.

The Jequetepeque Valley has many sites that include many different forms of cranial modification. Here, we will present a detailed typology of the different forms of cranial modification in the Jequetepeque Valley based on unpublished data and observations gathered by the author over the past eighteen years. This includes crania from Dos Cabezas, San José de Moro, Pacatnamú, and Farfán. The descriptions presented here will emphasize the different appliances used to achieve the different forms of modification (cf. *ibid.*; Dingwall 1931), according to the principle that the appliances chosen represent specific cultural choices made by parents (agency) to mark their offspring for life.

Non-modified Crania—Cranial Form A

Non-modified crania within the Jequetepeque Valley conform to the general outlines of a brachycranic coastal population, as outlined above. Many of the non-modified crania demonstrate a protrusion of the occipital bone that is reminiscent of an “occipital bun”. This observation is relevant to the issue of determining cranial modification, as flattening of the occipital bone will tend to obliterate this protrusion. Non-modified, brachycranic crania have cranial indices ($\text{length} \times 100 / \text{breadth}$) in the mid to high 80s.

Modified Crania—Cranial Form B

Cranial Form B in the Jequetepeque Valley is fronto-occipital with a variable expression in flattening. This form includes slight flattening of the frontal and/or occipital bone. Despite the slight flattening, the result is a shortened and rounded cranium, with a cranial index in the 90s. This form is distinguished from simple occipital-only modification or slight fronto-occipital modification resulting from cradle-

boarding seen commonly at earlier sites in the Jequetepeque Valley (e.g., Verano 1987:64), by the high cranial index and the rounded vault form. The appliance used to create this form likely involved textile bands rather than boards.

Modified Crania—Cranial Form C

The Lambayeque occupation of the Jequetepeque Valley was characterized by a distinctive form of cranial modification, which was the most extreme form of modification practiced on a regular basis in this area (see Nelson, Nelson, Castillo, and Mackey 2000). This kind of modification is a form of fronto-occipital tabular modification that produces a flattening of the occiput that was either erect or slightly oblique to the Frankfurt Horizontal plane with clear flattening of the frontal bone. This practice caused a profound shortening of the cranium, with a compensating lateral expansion of the walls of the cranial vault. Cranial indices for these individuals run in the 90s and as high as the 120s. When viewed from above, the more extreme examples of this form of modification have been described as “heart shaped” or “bilobate”. These terms refer to the great lateral expansion of the posterior part of the parietal bones, which are constricted along the midline of the cranium at the sagittal and lambdoid sutures. The appliance used to produce this form would have involved boards on the occiput and frontal bones with textile bands applying pressure between the boards. The occipital element would have been positioned roughly vertically over the external occipital protuberance and could have been stabilized in a cradle-board.

Modified Crania—Cranial Form D

Two sites in the Jequetepeque Valley have isolated individuals who demonstrate an extreme form of fronto-occipital oblique modification. This form of modification involves the use

of an appliance that has stiff, flat objects held in place over both the frontal and occipital bones. This form is differentiated from Forms B and C by the angle of the flattened area of the frontal and occipital bones, which are both very oblique to the Frankfurt Horizontal (much more so than the slightly oblique individuals included in Form C). This form must be the product of an appliance that combines strapping and flat elements on both the front and back of the cranium, with the occipital element positioned below the level of the external occipital protuberance. The angle at which the occipital board must have been held would likely have precluded the use of a cradle-board. Cranial indices for these individuals lie between 90 and 100. Outside of Farfán, but within the Jequetepeque Valley, this form has only been observed at the early Moche site of Dos Cabezas (Lichtenfeld 2001:114).

Modified Crania—Cranial Form E

Several individuals in the Jequetepeque Valley demonstrate a form of cranial modification that is based on fronto-occipital erect modification, but was produced by the addition of a hard, flat object that flattens the superior part of the cranial vault. This form of modification has been called “trapezoidal” (*ibid.*:114, 118; Nelson, Lichtenfeld, Conlogue, Toyne, and Pool 2000). Individuals with this form of modification have variable cranial indices. This form of modification is rare, but appears to be persistent through time. It has been noted in two Moche individuals (from Dos Cabezas and San José de Moro), one Transitional individual (from San José de Moro), and in a single individual at Farfán. The rarity of this form of modification, and its persistence over time, may suggest that it served a function other than being a marker of ethnic identity.

Modified Crania–Cranial Form F

Several individuals demonstrate a form of cranial modification that superimposes frontal-occipital and/or lateral compression on an already long cranium. The result is a very low cranial index (normally associated with annular modification), but with clear evidence of fronto-occipital modification (normally associated with a high cranial index). The cranial indices for these individuals lie in the high 70s and low 80s. This form of modification has been noted on one Moche individual at San José de Moro and in several from Farfán. Following the general patterning of vault form in the Andes discussed above, it is likely that these are individuals with highland ancestry. This form of modification may represent the plasticity of ethnic identity, with individuals from one lineage taking on the markers of another.

Modified Crania–Cranial Form G

The final form of cranial modification noted in the Jequetepeque Valley is annular or Aymara modification. In the Jequetepeque samples with which this author is familiar, there are two annular modified crania: a cranium that is probably referable to the Moche occupation at Pacatnamú in the Ubbelodhe-Doering collection housed in Munich, and one from Farfán who is a secondary burial from the Huaca Burial Platform. This form of modification produces a very low cranial index in the 60s or low 70s.

It is possible that some readers may see this typology as an unnecessary proliferation of modification forms, based on the essential, non-modified, fronto-occipital and annular modification forms. In a reductionist typology, Forms B to F would all be classified as fronto-occipital (for a discussion of “nesting” modification typologies see Boston 2012:36). However, it is this author’s belief that the different forms would have required different appliances (see

Figure 2.2) and, hence, represent deliberate choices made by the ancient occupants of Farfán. It should also be noted that this typology does not include “occipital only” modification (observed commonly in Moche samples) nor “lambdoid flattening” (*vidi* at Chan Chan), so it does not exhaust the full range of variation in the morphological products of this cultural practice on the Pre-Columbian North Coast.

ISOTOPES

Bone and dental enamel samples were studied for carbon, nitrogen, and oxygen isotopic composition. Carbon and nitrogen isotopic analysis yields important information about diet, and our previous work in the Jequetepeque Valley on hair samples from Moche, Transitional, and Lambayeque individuals from the site of Pacatnamú has allowed us to establish a local food web for this area (White *et al.* 2009). Oxygen isotope analysis yields information about geographic origins and mobility (*e.g.* Knudson and Price 2007; White *et al.* 1998). Oxygen isotopes were recovered from bone phosphate and carbon and nitrogen isotopes were recovered from collagen. Details of the isotopic analysis and the raw data are presented in Appendix 5.

SUMMARY

The data collected on the Farfán skeletal collection and presented here is analyzed with an osteobiographic approach (*cf.* Saul and Saul 1989). Explicit recognition of the difficulties of paleopathological diagnosis and the use of multidisciplinary data sets in a cohesive and complementary manner allows us to address the important considerations of the Osteological Paradox (Wood *et al.* 1992). Finally, an integration of the bioarchaeological and archaeological data sets allows us to create a dynamic picture of life at this very important Pre-Columbian site.

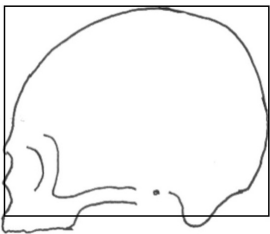
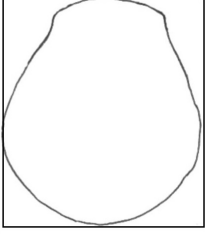
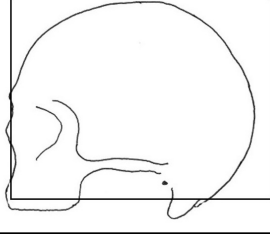
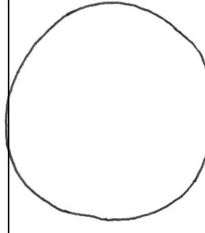
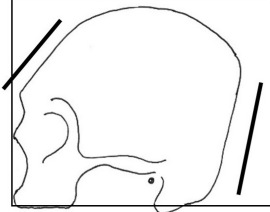
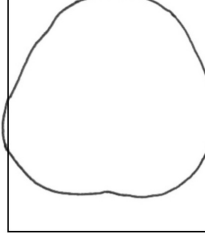
<p>Form A</p> <p>Non-modified. The cranium is brachycranic (broad headed). There is no evidence of artificial flattening.</p> <p>-note: in the rest of the illustrations, the box shows the average dimensions of the Form A unmodified crania.</p> <p>Cranial index: in the 80s</p>	<p>Lateral View</p> 	<p>Vertical View</p> 
<p>Form B</p> <p>Fronto-occipital with variable but small amounts of flattening.</p> <p>the cranium is shorter, lower and rounder relative to the non-modified Form A crania</p> <p>Cranial index: in the 90s</p>		
<p>Form C</p> <p>Fronto-occipital modification that produces a short and broad cranium. Flattening is observed on the frontal and occipital bones. The occiput can be erect or slightly oblique to the Frankfurt Horizontal plane. Cranium generally "heart shaped" when viewed from above.</p> <p>Cranial index: mid 90s to 120s</p>		

Figure 2.1. Cranial modification forms found at Farfán.


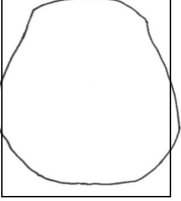
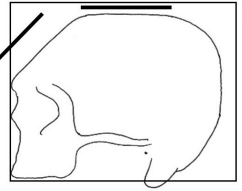
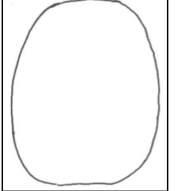
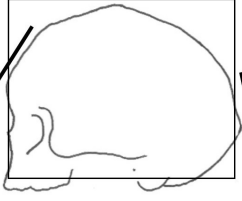
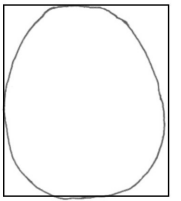
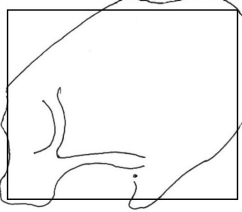
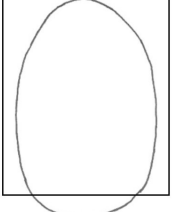
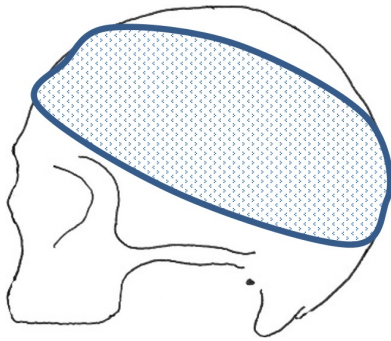
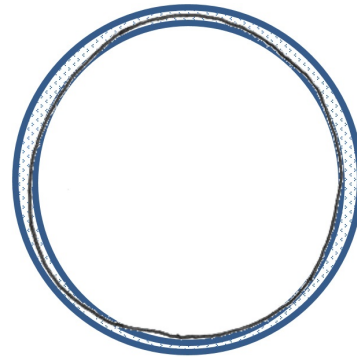
<p>Form D</p> <p>Front-occipital modification that produces a long and broad cranium. Flattening is observed on the frontal and occipital bones. The occiput is oblique to the Frankfurt Horizontal plane.</p> <p>Cranial index: in the 90s</p>	<p>Lateral View</p> 	<p>Vertical View</p> 
<p>Form E</p> <p>A form of fronto-occipital modification called "trapezoidal". The frontal and occipital bones demonstrate flattening, as does a length of the superior part of the vault.</p> <p>Cranial index: in the low 80s</p>		
<p>Form F</p> <p>Fronto-occipital modification involving variable flattening of both frontal and occipital bones of an already long cranium that does not lead to marked shortening of the cranium. This form is often accompanied by lateral compression.</p> <p>Cranial index: in the low 80s</p>		
<p>Form G</p> <p>Annular (circumferential or Aymara) cranial modification. Produced by wrapping the cranium to produce a long, narrow form.</p> <p>Cranial index: in the high 60s and 70s</p>		

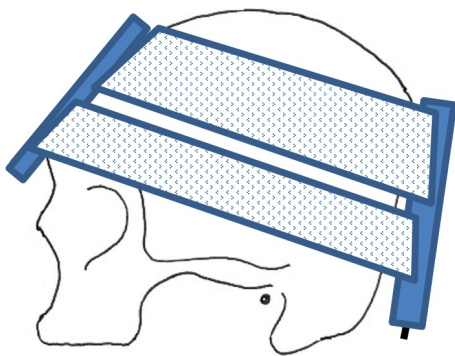
Figure 2.1. Cranial modification forms found at Farfán (cont.).



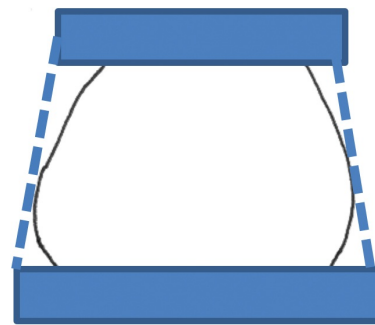
Form B cranial appliance, lateral view.



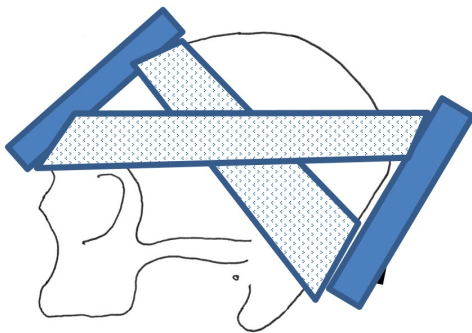
Form B cranial appliance, vertical view.



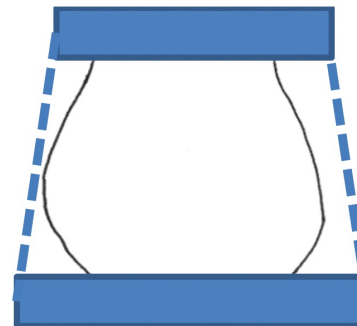
Form C cranial appliance, lateral view.



Form C cranial appliance, lateral view.



Form D cranial appliance, lateral view.



Form D cranial appliance, lateral view.




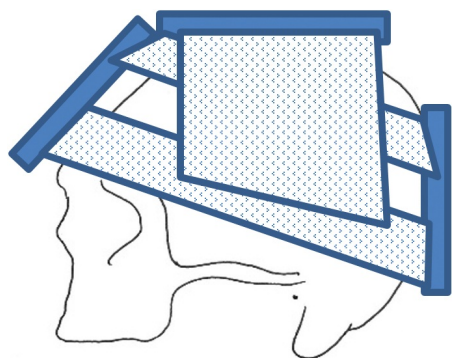
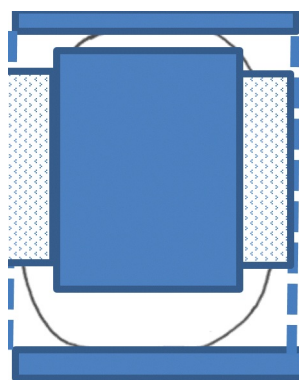
Key :  Cranial appliance, board
 Cranial appliance, textile band
 Cranial appliance, textile band line

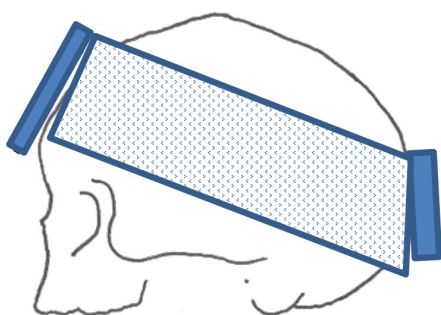
Figure 2.2. Appliances used to create the forms of cranial modification found at Farfán.



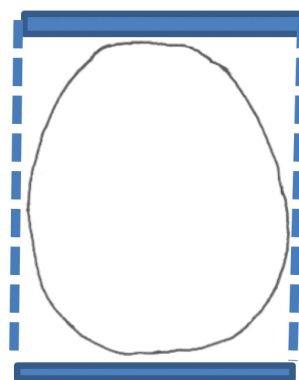
Form E cranial appliance, lateral view.



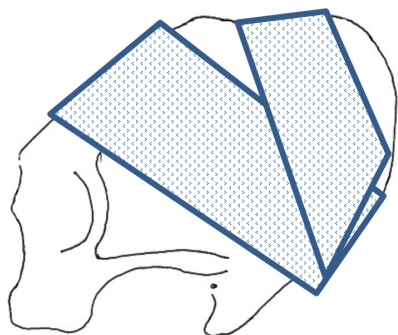
Form E Cranial appliance, vertical view.



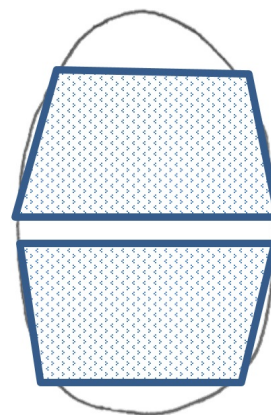
Form F cranial appliance, lateral view.



Form F Cranial appliance, vertical view.



Form G cranial appliance, lateral view.



Form F cranial appliance, vertical view.

Figure 2.2. Appliances used to create the forms of cranial modification found at Farfán (cont.).

CHAPTER 3

THE HUACA BURIAL PLATFORM THE BURIALS OF THE INCA CHOSEN WOMEN

Carol J. Mackey and Andrew J. Nelson

INTRODUCTION

The Inca Huaca Burial Platform at Farfán is one of the most important prehispanic structures on the North Coast because of its political and religious significance. It was a visible symbol of the Inca presence and a focus for ceremonies and mortuary rituals that included residents of Farfán and other communities in the Jequetepeque Valley and surrounding areas. The construction and use of this Huaca was part of the Inca strategy to unite the inhabitants of this newly-conquered territory and to create bonds centered on the deceased, their ancestors, and the descendants of the interred—albeit in a context that was firmly controlled by the Inca empire.

The imposing Huaca contained five mortuary contexts composed of multiple burials of mainly sacrificed females (Figures 3.1, 3.2, Table 3.1). The first part of this chapter will demonstrate that these females were *aqllakona* or members of the Chosen Women, and that the Huaca was constructed to honor this Inca institution. Selected as young girls from high-status families of conquered populations, these women were sequestered and taught the arts of fine weaving, food preparation, and chicha brewing (Gose 2000; Silverblatt 1987:82–85). As such, they played an integral role in economic, political, and religious activities in the empire. The excavated ceramics from the Huaca Burial Platform constitute the majority of ceramics from the site and belong primarily to the Late Horizon Jequetepeque Style (Appendix 6).

Attesting to the importance of the *aqllakona* within the Inca empire, many of them were buried in tombs with high-status artifacts including metalwork, fine textiles, wooden figurines, cinnabar, and llama remains.

The first part of this chapter describes both the location and the context of the Huaca Burial Platform within Farfán. Next, the individual tombs and their contents are described. The burials within the Huaca are compared to one another and are also contrasted with other North Coast *aqllakona* interments. The Huaca sample includes twenty-seven primary and nineteen secondary individuals. Primary burials are those found in their original position in the tomb, while secondary, partial bodies, had been reburied in one of Farfán's cemeteries. The second part of the chapter provides details of the bioarchaeological characteristics of this sample.

CHAPTER 3A TOMBS AND BURIAL GOODS

Carol J. Mackey

The conceptual and spatial organization of the platform

Located at the base of Cerro Faclo, the Huaca lies at almost the exact center of Farfán (Figure 3.1). Two important Inca concepts likely played a role in determining the location of the platform. First, the Inca revered mountains and the spirits or *apus* that dwelt within them. On the arid coast, mountains were seen as nurtur-

ing, because the rivers that flowed from them were a source of water and life (Reinhard and Ceruti 2005). Second, the symbolic notion of “center” was key to Inca religious and political ideology. In Inca cosmology, Cusco was seen as the center of the universe (Reinhard and Ceruti 2010:172; Staller 2008:282, 286–392). The placement of the platform in the center of the site, its proximity to Cerro Faclo, and the high-status burials it contained strongly support the notion that the Inca considered it to be a huaca, a man-made or natural object or place believed to be sacred (Cobo 1979 [1653]:47–84).

The platform is a solid adobe construction comprising four tiers (Figure 3.2). The first tier served as the platform’s base and measures 52 meters north–south and 40 meters east–west. The three smaller tiers, which are enclosed by a surrounding wall, contain the tombs and make up the main portion of the Huaca. This area measures 19.4 meters by 19.6 meters. The surface of the uppermost tier has been damaged by natural and human forces, but the original platform was probably more than 7 meters high (Figure 3.3).

The northern portion of the Huaca’s forecourt, located outside of the three tiers, is an open area defined on three sides by a low wall. Its principal feature is the six large tinajas embedded in the unplastered floor. The tinajas held chicha, as evidenced by the dregs of partially masticated pieces of maize at the bottoms of the vessels. These large jars, each over half a meter tall, were no doubt manufactured at Farfán, because they have the same incised circle design around the rims as others produced in the workshop in the Annex to Compound II (Mackey 2010:241–242, figure 9.15). The northern unpaved forecourt and the adjacent area just outside of the platform may have been where chicha was served to participants during mortuary ceremonies.

Access to the Huaca platform’s interior was via the principal ramp, located along the east side of the forecourt (Figure 3.2). Oriented north–south, the ramp begins at the base of the platform and continues to the walkway that fronts the platform’s north face. The ramp was over eighty centimeters wide, with a perfectly preserved plastered floor of fine clay (Figure 3.4). On the walkway that fronts the north face of the Huaca, embedded in the fine clay plaster, was a flat wooden human figurine, eight centimeters long and 4 centimeters thick (Figure 3.5).

The principal entry to the Huaca’s interior and the three tiers that house the tombs is in the northern face of the surrounding wall. After passing through this principal entry, a left turn (to the east) leads to an ascending ramp (Figure 3.2). Considerable planning and preparation went into the consecration of the Huaca. Forty centimeters from the main entry was an offering of more than fifty small lumps of cinnabar, an ore of mercury (Figure 3.6). A circular depression, located some thirty centimeters up the ramp from the cinnabar offering, contained the fully articulated skeleton of a llama between one and twelve months old and most likely a male (Appendix 3). The ramp then makes a sharp L-shaped turn to the right (to the south) and continues along the eastern part of the Huaca. Another sharp turn to the right (to the west) leads to the top tier of the platform. Alternatively, turning to the right from the principal entrance, one would have entered a corridor encircling the entire inner structure, following the lowest tier and ending at a dead-end on the east side below the ramp (Figure 3.2). Based on its construction and consecration features, the Huaca Burial Platform at Farfán demonstrates many differences from earlier structures used for this same function. A comparison will be made immediately below.

Similarities and differences between the Inca Huaca Platform and the Chimú burial platforms

Farfán's Inca Huaca Burial Platform has both similarities and differences in construction, form, and function to earlier burial platforms built during the Chimú occupation of Farfán (Keatinge and Conrad 1983:268–271, figure 8; Mackey 2009a: 330, figure 18.4) and to burial platforms at the Chimú capital, Chan Chan, in the Moche Valley (Conrad 1982; Keatinge and Conrad 1983; Pozorski 1979). All Chimú burial platforms and the Inca Huaca Burial Platform at Farfán are built entirely of adobe brick,¹ rather than the chamber and fill construction (an outer shell of adobe bricks with rubble fill inside) that is typical for the Lambayeque region farther to the north. The Chimú and Farfán Inca platforms are similar in that they have switch-back ramps, although they differ somewhat in their form.

Despite these similarities, there are significant differences between the Chimú- and Inca-built burial platforms (Figures 3.7a and b). First, the overall plan and form of the Chimú and Inca platforms differ. One of the major morphological differences is the tiers. Although Conrad (1982) notes that Chan Chan's platforms are composed of two to three tiers, they are neither as clearly defined nor as large as those of the Inca Huaca platform at Farfán. Second, Farfán's Inca Huaca is freestanding, while the Chimú platforms at Farfán and the Chimú capital—with the exception of Las Avispas and Squire—are generally part of a palace structure and enclosed by perimeter walls (*ibid.*). Third, and most important, the platforms served different func-

tions. The Chan Chan burial platforms were built as mausoleums for a king and individuals, both women and men, who were sacrificed to accompany the ruler (Nelson and Mackey 2011; Pozorski 1979). The Huaca Burial Platform at Farfán contained the tombs of sacrificed elite females who were members of the Inca institution of *aqllakona*. Although there was the burial of a male in one of the chambers (Looted Chamber 1) of Farfán's burial platform, unlike at Chan Chan or at Túcume, he did not appear to be the principal occupant of this tomb or the reason that the Huaca was built.

The Tombs in the Huaca Burial Platform

Farfán's Inca Huaca Burial Platform contains 46 interments, almost half the burials from the site (N=98), and yielded over half of the intact vessels that were excavated at the site (249 out of a total of 423). The 46 burials comprise 27 primary interments (*i.e.* complete individuals and their grave goods) and 19 partial skeletons (denoted as S) who were likely offerings to accompany the primary burials. Spatially, all of the tombs are located in the center and on the north, east, and west sides of the Huaca (Figure 3.2). We did not encounter any burials on the south side of the Huaca, even though this area was thoroughly tested.

In the center of the Huaca Burial Platform is a deep shaft, measuring 1.70 by 1.70 meters, composed of three distinct parts that were built into the Huaca during its initial construction (Figure 3.8). The center shaft contains two primary multiple interments separated by an offering of spondylus shell. The tombs in the center shaft, C T2 and C T11, as well as N T1 on the northwest side, were part of the Huaca's original construction. The remaining tombs represent separate burial episodes that occurred after the initial construction of the mound, because they were found on different levels and have distinct interior forms. The later place-

¹ The size and shape of the Huaca's adobe bricks conform to bricks associated with the Inca occupation of the Jequetepeque Valley and not to the valleys to the north or south (McClelland 1986; Tsai 2012).

ment of these tombs is further evidenced by the removal and subsequent replacement of the original bricks of the platform. This leaves an unmistakable signature—once the bricks were replaced, they slumped due to settling, leaving uneven courses of adobe bricks. This characteristic was noted in a Moche adobe brick platform at the site of Chotuna (Christopher Donnan, personal communication, 2002).

The first two by two meter excavation unit on the top tier of the Huaca was placed just to the south of the center, because digging exactly in the middle would have destroyed part of the ramp's access to the summit (Figure 3.2). After removing almost a meter of bricks from the top tier, we discovered the uppermost tomb of the center shaft (C T2). This center shaft, when fully excavated, had a depth of over seven meters, as measured from the upper surface of the top tier to the bedrock below (Figure 3.8). As we would learn during excavation, this shaft was part of the original construction of the platform, and the bodies within it were positioned as the platform was constructed around and over them.

Center Tomb 2 (C T2)

The first indication that a burial existed in the center of the Huaca was a face-neck jar in the southwest corner of our initial two by two meter unit (Figure 3.9, see also Figure 3.14). Although we did not know it at the time of discovery, this vessel signaled the presence of the upper multiple burial, C T2. We were also not yet aware that this was the uppermost tomb in the shaft, which included two distinct levels below it.

Center Tomb 2 took up almost the entire area of the shaft. The tomb's interior comprised the four brick walls of the shaft, which were without niches, and a solid, unpaved floor. In the southern part of the tomb, very close to the

wall, was an upright weaving sword of algarroba wood. A bundle of textiles, fifty centimeters long, lay directly under the weaving sword, oriented to the north, and purposely covered with mud (Figures 3.10a and b).

The drawing of the *in situ* interments in C T2 shows the bodies in two rows, one on the east and the other on the west side. The two rows of individuals in C T2 are divided by age: those on the east side (C T2A–C) range from their mid-teens to mid-twenties while those on the west side (C T2D–F) are between five to eight years of age (Figure 3.11b). Although it is difficult to determine the sex of young children, their accompanying artifacts and burial positions suggest that all six individuals were probably female. Before the tomb was sealed, the bodies had been covered with shrouds and placed in these two rows, oriented toward the northwest. They were originally seated with knees apart; however, over time, the bodies collapsed and the chests and heads fell forward. The collapse of the bodies was most likely due to the weight of the bricks above them and the disintegration of the shrouds that held the bodies upright. One body, C T2F, was placed in a slightly different position, oriented towards the east, facing body C T2A (Figure 3.11b).

In addition to differentiation based on age, another marker—cranial modification—distinguishes the females in C T2 from one another. This characteristic reflects intentional manipulation of the skull at an early age and is a trait that is generally consistent within a cultural, ethnic, or kinship group (Torres-Rouff 2003). The females in C T2 show three forms of modification: Forms B, C, and E (see Chapter 2, Figure 2.1). Form B, slightly modified, is the most common type found at Farfán and is observed on individuals C T2A, C T2B, C T2E and C T2F. Form C, the modification found on individuals identified as ethnic Lambayeque, is

displayed by individual C T2C (Figure 3.11b). The Form E modification, found with individual C T2D, is not common at Farfán.

There is some evidence for ritual treatment of the individuals in C T2 prior to their interment. The bodies had been placed in the tomb unclothed, but each was covered with two plain-weave cotton shrouds (Figures 3.11a and b). The shroud closest to the body may have been brown (or turned brown because it was next to the body), while the outer one was white. The shrouds had mostly disintegrated, but fragments of cloth adhered to the body and hair. The four youngest females in the tomb, C T2C, C T2D, C T2E and C T2F, all had traces of cinnabar on their skulls, indicating that this pigment had been rubbed on their faces. Three of the young females may have been exposed to the elements, since there was evidence of post-depositional exposure to water in the form of fine sediments on their crania. It should be noted that the Huaca Burial Platform is next to Cerro Faclo, well known for the dense fog and clouds that cover it for much of the year. The moisture that is present around the mountain, plus the fine sand that constantly blows through the site, may account for the sediments on the crania and could indicate the performance of ongoing burial rites before the tomb was sealed. Alternate explanations are that these individuals may have been transported from another area to be placed in C T2, or their heads may have intentionally been covered in mud as in the tomb below, C T11.

Although there are no cut marks on the bones or obvious signs of the cause of death, it is highly likely that these individuals had been sacrificed. Two lines of evidence support this conclusion. First, all of the bodies rest directly on the floor of the tomb, indicating that they were placed there at the same time. Second, the distribution of ages is not random, as would be expected if this was a normal burial population.

Careful planning is evident in the positioning of the bodies, their cardinal orientations, and the intentional arrangement according to age. This suggests that they were specially selected for sacrifice prior to interment in C T2.

Grave goods and associations

The grave goods that accompanied the bodies in C T2 are of two types: communal offerings and personal grave goods. The communal offering consists of ceramics placed around the two rows of bodies, as well as the textile offering on the tomb's south side. Personal grave goods are associated directly with the individual bodies.

Communal Offerings—Ceramics. Thirty ceramic vessels comprised the communal offering in C T2. The majority of the ceramic forms (N=17) are jars, two of which are identical (Figure 3.12, only one of which is shown). While one of the 17 jars is miniature, 9 centimeters or smaller in height, many of the jars (N=8) are oversize—over 24 centimeters tall. Stirrup spout vessels are also included in the communal offering (N=7).

One of the jars in the communal offering bears an image of the primary deity, often called the Staff God, on either side of the vessel's body and each wears a distinct headdress (Figure 3.13). The figure wearing this type of *tumi* or crescent-shaped headdress is often associated with the Lambayeque culture (Moore and Mackey 2008: figure 39.8a, b). The body of another jar, a Hybrid face-neck, is decorated with pattern burnishing, a typical Late Horizon surface treatment (Figure 3.14). The face on the jar neck depicts a typical Cusco-Inca press-molded face with a protruding lower jaw (see Appendix 6). Tweezers are depicted on a cord around the figure's neck. Most often associated with males, they are generally of copper, and were used in antiquity to pluck facial hair.

A common decorative motif of ceramics in the Huaca Burial Platform tombs is the feline. In the communal offering one stirrup spout vessel displays a three-dimensional molded feline head (Figure 3.15). Another common decorative motif is the three-dimensional monkey head, which is also well represented in the communal offerings (N=11); (not illustrated here, but see Appendix 7). Many of the faces of these monkey heads conform to Levine's types A and D, cross-dating this tomb (C T2) with C T11 and the Compound VI Cemetery (Appendix 4).

In contrast to other tombs in the Huaca Burial Platform, only two plates were placed in tomb C T2, neither of which contained food remains (see Appendix 7 for the entire grave lot).

The Textile Offering. A textile offering was placed along the center of the south wall of C T2 beneath an upright weaving sword, 95 centimeters high and 3.5 centimeters wide, made of algarroba wood (Figure 3.10a, b). The offering measured over a half meter in length and had been purposefully covered with mud. When the mud was removed, a tapestry weave cloth was visible on the bundle's exterior. We identified over 25 small rolled bundles (called rectangles) and fragments within the large bundle. In the Inca Empire, offerings of fine *cumbi* cloth were made to huacas and consisted of both full-size and miniature garments used to clothe statues (Cobo 1990 [1653]:117; see Appendix 1). Although not all of the rectangles included textiles within the bundle, one rectangular bundle, when unrolled, contained a miniature plain-weave loincloth (Figure 3.16).

Personal Grave Goods. All of the females interred in C T2 wore copper rings, which were 1.8 to 2.1 centimeters in diameter. Those still attached to the fingers indicate that the rings were placed on the fourth finger of the left hand, although several of the girls wore rings on

both hands. The rings of the younger girls differed from those of the older females, in that the rings of these individuals had a piece of yarn 3–4 centimeters in length tied to them. Beads of shell or copper were often attached to the yarn (Figure 3.17). It was only the younger girls who had this ring attachment; it may have identified their age group. However, because the rings were made in only one diameter, it is possible that the yarn attachment to the ring was a form of sizing; the very young girls had to wrap something around the ring to make it fit their smaller fingers. Although adult women in other Late Horizon cemeteries at Farfán had rings, these did not have the yarn attachment.

Most of the females in C T2 had beads, either shell or stone, scattered under and around their bodies. These beads could have been from necklaces or bracelets. The only other burial goods consisted of two gourds and a copper needle. The needle was close to the body of the girl in C T2A but it could not be determined which bodies were associated with the undecorated gourd bowls.

The spondylus offering between the two tombs

After removing the burials in Center Tomb 2, we followed the outline of the shaft below the floor of the tomb, where we encountered over a meter of fine sand (Figure 3.8). Buried in the middle of this clean sandy fill, approximately 3.5 meters from the top of the Huaca Burial Platform, were the remains of a basket filled with 10 *Spondylus princeps* bi-valves (Figure 3.18). The shells ranged in size from twelve to sixteen centimeters in length. These shells, often called "spiny oysters" because of the sharp protuberances on their exteriors, are found in the warm waters off coastal Ecuador and northern Peru. The shells, imported throughout the Andes, were a key element of religious ceremonies in prehistory (*ibid.*; Pillsbury 1996). One pair of shells contained 82 grams of dried cochineal

insects, which yield a red pigment commonly used to dye textiles (Figure 3.19; see Figure 3.20 for a depiction in ceramics of spondylus shells within a container). Another shell contained 97 grams of ground spondylus shell, known archaeologically for its ritual use by the Chimú, who sprinkled ground spondylus in the burial platforms of the Chimú kings (Conrad 1982), and by the Inca who used the ground shell mixed with llama blood to sprinkle along the route of the *capacocha* processions² (MacCormack 1991:152). An Inca-period ceramic jar, found outside of Farfán in a cemetery in the Jequetepeque Valley, depicts several spondylus shells in a rounded bowl, strongly resembling the spondylus offering from Farfán's Huaca Burial Platform (Figure 3.20; Mackey 2009b: catalogue number 71, pp. 296–297).

Center Tomb 11 (C T11)

Within the shaft, approximately one meter below the spondylus offering, we encountered a plastered roof with wooden algarroba beams (Figure 3.21). When the roof was removed, we found a chamber filled to the ceiling with 136 ceramic vessels, although only 91 vessels were excavated intact or reconstructed (Appendix 7). Like C T2, this tomb contained a large weaving sword, 95 centimeters long; however, this sword was placed upright in the tomb's southeast corner, rather than on the south wall as in C T2. Seated on bedrock at the bottom of the Huaca were four bodies that had been completely covered by the ceramic offerings. Each body was oriented toward a cardinal direction (Figure 3.22). These females were seated with legs crossed and knees apart on the bedrock floor of the tomb at a depth of over seven meters below the surface of the top tier.

The four females found in C T11 were of different ages than the females in C T2. Three of the women—the woman on the west (C T11A), south (C T11B) and east (C T11D) sides—were over 40 years of age, which is elderly for this time period (see Chapter 3B). The female seated on the north side, C T11C, was an adolescent between 15–20 years of age. As in C T2, the women in C T11 did not wear any clothing, but their bodies and some personal possessions had been covered with two plain-weave cotton shrouds. Fragments of shrouds were found under the bodies, indicating that the women had been totally wrapped. The preserved shrouds around the head of the elderly female on the west side (C T11A) provide insight into an unusual head wrapping. Her head, like the rest of her body, was wrapped in two shrouds. The lower shroud, next to the body, covered the head to the temples and left the face exposed, while the upper shroud covered the entire head. The hair of two other females, C T11C and C T11D, had been covered in mud before they were wrapped in their shrouds.

Textile bundles were not found under the weaving sword, as they were in C T2. Instead, textile bundles were placed in five plastered niches located in the tomb walls. There were two each in the south and east walls of the chamber and one on the west. Pictured in Figure 3.23 is the east niche, with a textile bundle 48 centimeters long by 28 centimeters wide.

This tomb also provides data on different female hairstyles worn at the time. All four women in Center Tomb 11 had well-preserved hair, and each hair style was distinctive. The hair of two of the women was parted in the middle. One had a side part and one had bangs and no part (Figure 3.24). It is most likely that these different hairstyles reflect those of their native villages within the empire. That villages

² *Capacocha* was a very important Inca sacrifice which involved processions and the entombment of beautiful virgin children and/or adolescents, along with rich grave goods, often at very high altitudes.

had distinct hairstyles can be inferred from the Spanish chronicles, where it is noted that when the Inca entered a village, he would change the style of his hair to that worn locally (Betanzos 1996 [1557]:168).

Another line of evidence strengthens the argument that these women came from different regions of the Inca Empire. Isotopic analysis reveals that only one female, the late adolescent C T11C, was born and raised in the Jequetepeque Valley. Two women, C T11A and C T11D, had lived some part of their lives in the highlands and then moved to Farfán later in life. The fourth woman, C T11B, had lived in a coastal valley, but had only recently moved to the Jequetepeque Valley (Chapter 3B).

Given the similarities with C T2, it is likely that the women in C T11 had also been sacrificed. All four women had been carefully arranged on the floor of the tomb at the same time and in the lowest portion of the Huaca. They were seated on bedrock and then the platform was constructed around them.

Grave goods and associations

The women in C T11 were buried with both communal and personal offerings. Communal offerings of both ceramics and textiles were more abundant than in C T2. These women also had more personal possessions than the younger women in the tomb above.

Communal Offerings—Ceramics. The largest communal offering of ceramics found at Farfán is from Center Tomb 11. One hundred and thirty-six individual ceramic vessels were excavated from the tomb; however, only 91 were recovered intact or were able to be reconstructed by our team (Appendix 7). Because the tomb lies at the lowest level of the shaft, the weight of the overburden likely caused the large number of broken vessels. Some vessels, how-

ever, had been broken in antiquity, with only a portion included in the tomb.

Eighteen plates were reconstructed; however, fragments indicated that there had been many more included in the tomb. Although some were single plates, the most common arrangement was to stack them inside one another in sets of two or four. We noted that plates were decorated with press-molded designs, mainly of birds, on the bottom exterior (Figure 3.25). The plates often contained organic remains of foodstuffs, especially guinea pig bones (*Cavia* sp.). This tomb had more stirrup spout vessels than any other tomb at Farfán. The square stirrup, a hallmark of the Late Horizon Jequetepeque Style, often displays press-molded birds (Figure 3.26). Five stirrup spout vessels are oversize (more than 24 centimeters high; Appendix 7).

Jars were also common in C T11 (N=13). The largest jar, which was 30 centimeters tall, is in the shape of a fish (Figure 3.27). One pair of jars is decorated with a spondylus motif depicted using scalloped edges around the upper portion of the jars, similar to a jar found in the East Tomb offering (Figure 3.45). Unlike the jar sample in C T2, there are few examples of jars with three-dimensional monkey heads within the C T11 assemblage. Those present, monkey head Types C and D, cross-date this tomb with other tombs in the Huaca Burial Platform—C T2, Looted Chamber 1, and the East Tomb Ceramic Offering (Appendix 4). The ceramic offering in C T11 is notable for its wide variety of forms and press-molded designs.

Large Textile Bundles. The textile bundles in the niches of C T11 were in a poor state of preservation due to natural and cultural causes. Destruction of the central portion of each bundle had been accelerated when a liquid substance, probably chicha, was poured over the bundles, suggesting that the bundles underwent a ritual before they were placed in a niche. The

disintegration of the central portion of each bundle made it impossible to measure the slit tapestry textile covering the bundle, and made it difficult to analyze the textiles inside. We were, however, able to recover seventeen rolled rectangular bundles similar to those in C T2. As in C T2, these were small rolled bundles within the larger bundle offering (Figure 3.28; Appendix 1). Similar bundles were noted for the Late Chimú Burial Platform in Las Avispas at Chan Chan (Rowe 1984:23).

Personal Grave Goods. Although the objects in the lower tomb were markedly different from the offerings with the young women in the upper tomb C T2, the four women in lower C T11 were similarly interred with personal grave goods: all wore plain or decorated copper rings (Figure 3.29), held a whole spondylus shell (*Spondylus princeps*) in their hands, and all had necklaces of *Nectandra* seeds (Figure 3.30).³ In addition, the fragmentary remains of a small textile bag accompanied each woman. Three of the women also had weaving implements, weavingswords (C T11A and D) and/or baskets (C T11A and B); (Figure 3.22). The baskets were in a poor state of preservation, but wooden spindles with various colored threads and copper spindle whorls and needles could be identified inside the baskets (Appendix 2). It should be noted that it was the older women who had weaving implements, whereas the younger woman (C T11C) had none.

Because the tomb was piled to the ceiling with pottery vessels covering the four bodies, it was difficult to know whether they were associated with a particular woman. We considered any objects placed on the legs or arms as indicative of personal possession. This interpretation

was reinforced by the fact that these items were often included under an individual's shroud. For example, on the north side, individual C T11C had three blackware ollas closely associated with her body (Appendix 7). An upside-down gourd bowl covered the mouth of one of the ollas and another olla contained fragmentary remains of maize kernels. The young woman on the east side, C T11D, had a gourd bowl with the remains of a guinea pig (*Cavia* sp.). The women in this lower tomb contrast with the young females in the upper tomb with regard to age, their weaving implements, their seed necklaces and spondylus shells. Older women were afforded higher status not only in the Huaca Burial Platform, but in Farfán's other cemeteries as well.

The North Tomb (N T1)

The northwest portion of the Huaca Burial Platform is the location of a second burial that, together with the two Center Tombs, was included in the original construction of the Huaca. North Tomb 1 lies directly atop bedrock and incorporates a native rock outcrop, a characteristic of many Inca sites (Hyslop 1990:102–128). N T1 is some 10 meters west of the principal doorway to the upper three tiers and 2.6 meters below it (Figure 3.2). Two secondary burials, comprising partial human and animal remains, flank N T1 to the east (S26A)⁴ and west (S31). Both these offerings rest on bedrock and were placed at the same time as N T1, in the initial stage of the Huaca's construction.

North Tomb 1 contains three individuals who had been placed atop a woven totora reed mat: a 15-year-old adolescent (N T1A), a female over 40 years of age (N T1B,) and a 9-month-old infant (N T1C) held by the elderly woman (Figure 3.31). Facing northwest is the adolescent girl (N T1A), who is seated with her legs crossed and her knees apart. The elderly female, seated

³ This seed was associated with priests and healers in the earlier Moche culture (A.D. 200–800) and may have been imported from the eastern slopes of the Andes (Montoya 2015:238).

⁴ S26B was encountered on a higher level.

in a similar position, faces north (N T1B). The infant (N T1C), oriented east-west, is lying over a ceramic plate. Since the elderly woman (N T1B) is beyond child-bearing years, the infant may have been the young female's, or included in the tomb as an offering. The face of the elderly woman had been rubbed with cinnabar (Figure 3.32). A multi-colored textile was draped tent-like over the bodies, although only small fragments of the textile remained at the edge of the mat (Figure 3.33). The women did not have individual shrouds.

Just outside the textile, partially resting on the totora mat, were three fully-articulated llamas. L1 is approximately 3.5 years old, based on the fusion of the proximal (unfused) and distal (fused) femoral epiphyses. The eruption pattern of the molars supports this age, while the small size of the canines suggests that it was a female (Appendix 3). The approximate age of llama L2 is between 1 and 12 months old, based on the unfused epiphyses and the eruption of the first molar. The sex could not be determined because of the young age. The third llama, L3, is a fetus. The epiphyses are not yet fused and many bones are not fully formed (Appendix 3). That the ages of the llamas parallel those of the humans interred in the same tomb may be viewed as an example of "like with like" (Gaither *et al.* 2008).

The carbon isotope values show a high level of maize consumption for the older woman, while the values for the adolescent girl indicate just the opposite. Both women had oxygen isotope values that suggest they were local to the Jequetepeque Valley (Part B, this chapter). The cranial modification of the two females was the most common type found at Farfán–Form B (subtle modification). These women were most likely sacrificed and, along with the females in Center Tombs 2 and 11, were the first to be put into tombs in the Huaca Burial Platform during its construction. The North Tomb and the

offerings that accompanied the bodies were well planned and arranged.

Grave Goods and Associations

North Tomb 1 was a rich tomb, and following Farfán's burial patterns, it was the elderly woman who had most of the grave goods.

The Communal Offerings–Ceramics. We excavated 32 vessels in North Tomb 1, of which 28 were intact or could be reconstructed (Appendix 7). These vessels were positioned in and around the two women. Other than the plate that held the infant, none of the ceramics touched the bodies.

The ceramic sample in N T1 is similar to that of C T11, as stirrup spouts (N=8) and plates (N=8) are the most prevalent vessel forms. Two stirrup spout vessels, one blackware and the other redware, depict a crustacean (Figures 3.34a and b). Another modeled stirrup spout vessel, with the head of a feline, has an unusual body with large elephantine legs and feet and a long tail. The square stirrup is decorated in the scalloped, spondylus shell motif often seen on Late Horizon stirrup spout vessels and jars (Figure 3.35). The feline motif has deep roots in North Coast iconography going back to Cupisnique culture (c. A.D. 900). Another stirrup spout vessel with a three-dimensional feline head was found in the Huaca Burial Platform CT2 (Figure 3.15). Double-chambered spout and bridge vessels are uncommon in this sample, although one was found in the Compound VI Cemetery (II T1); (Chapter 7A). The one in N T1 (Figure 3.36) has the three-dimensional body of a bird, possibly a parrot, on one chamber, and a bas-relief monkey on the shoulder of the second chamber. Plates from this tomb are all blackware and undecorated on the bottom exteriors (Appendix 7).

Faunal. Faunal offerings, other than the three articulated llamas, were placed near the three bodies. One offering consisted of four llama feet, similar to the offering found with the elderly woman in Mound G (G T11; Chapter 6A). A second consisted of the bones of an unidentified species of bird, and the third offering was the remains of a guinea pig (*Cavia* sp.).

Personal Grave Goods—North Tomb, Female 1A. In addition to two plain copper rings, a very unusual offering had been placed near one hand of the young woman in N T1A, a silver-plated copper rattle (Figure 3.37). Twenty-five centimeters in length and 19.5 centimeters at its widest point, it had been wrapped in a brown, plain-weave textile. This rattle has a hollow, trapezoidal chamber welded onto a solid silver-plated copper handle. Small clay pellets in the chamber rattle when shaken. The trapezoidal top was anthropomorphized by affixing small pieces of textile to indicate two eyes, a nose, and a mouth. This trapezoidal form and face motif are also depicted on the tapestry weave band found with the elderly woman in the East Tomb (E T7; Figure 3.55). These two decorative elements, depicted in different media, link the North and East tombs of the Huaca Burial Platform. The two tombs, however, were put into the Huaca at different times during its 60-year history. The North Tomb rests on bedrock and the Huaca Burial Platform was built up around it, while the East Tomb was placed into the Huaca's eastern upper tier after construction was completed.

North Tomb, Female 1B. The older woman (N T1B) had a rich array of offerings, the majority of which were made of copper and silver-plated copper. She had six rings, all of which were copper bands, and none of which were found on her fingers (Figure 3.38). Also included with her, resting against her left leg, was a silver-plated copper rattle exactly like the one found with the adolescent girl (N T1A). A flattened, crushed silver-plated copper bowl, approximately

14 centimeters in diameter, had been placed next to the body of the elderly woman (Figure 3.39). This bowl was most likely altered in antiquity. A copper *tumi* knife (7.5 centimeters long) similar to the one found with the elderly woman in the East Tomb (E T7; Figure 3.64) was also found with this older woman (Figure 3.40).

The non-metal objects associated with the elderly woman N T1B were just as noteworthy. Scattered between her open crossed legs, as if fallen from the area of her thorax, were 36 shell beads, five of which are shown here (Figure 3.41). Some were still strung with their original thread. The beads depict the body of a bird, most likely a parrot, sitting on a rectangular pedestal. Each bead has two perforations, one through the bill and the other through the pedestal, and each is 2 centimeters high and 3 centimeters wide. Intermixed with the shell beads were 12 pieces of worked quartz (Figure 3.42). These were not perforated but were likely tied to the necklace—remnants of thread could still be seen wrapped around some of the crystals. The quartz pieces vary in size from 2.5 centimeters to 4.3 centimeters long. In addition, fragments of undecorated gourd were found around the legs of the elderly woman.

This is one of the most important tombs in the Huaca Burial Platform because of its orientation to the north and the rich offerings that incorporate whole llamas, as well as silver-plated objects. It is also noteworthy that it has two flanking human offerings, one to the east (S26A) and one to the west (S31; see secondary burials, below).

The East Tomb

The Inca placed a tomb containing multiple burials of *aqllakona* on the southeast side of the Huaca Burial Platform, where it occupied the top tier and cut some 50 centimeters into the second tier beneath it. This tomb was not part of the

original construction, but was placed there after the burials in the central shaft and the North Tomb. Construction of this tomb entailed removing the bricks to create an open space, placing the bodies inside this space, and then re-bricking the area. The entire tomb is 4 meters long, 1.5 meters high and 1.5 meters deep (Figure 3.43).

Inside the newly created space of the East Tomb, the seven *aqllakona* were placed in three levels, similar to burials in Farfán's other cemeteries. The five bodies in the lowest, or third level, were likely interred first, because all are seated on the same hard-packed earthen floor (Figure 3.43; shown in green). The bodies in the lowest level were separated into two groups, with two individuals on the north side and three on the south side of the tomb. Positioned between the two groups was a communal offering consisting of three large textile bundles, placed end to end and covering an area 80 centimeter long. Thirty-two ceramic vessels had been placed atop the textile bundles (Figure 3.43; shown in blue). Earth was then deposited to cover the five individuals in the third level, making a resting place for the body (E T4) in the second level. More earth was then used to create a surface for the individual (E T1) buried in the first level (Figure 3.43; shown in blue).

The two youngest individuals in the East Tomb (E T9 and E T10), estimated to be six to seven years old respectively, flank the ceramic/textile offering. The oldest individual (E T7) was on the north side of the third level. This female was over 40 years of age, and most likely a *mamakona* or instructor of the younger women. Although it is difficult to be certain of the sex of the younger individuals, it is likely that all of the people interred in the East Tomb were females. Their inclusion in the Huaca Burial Platform, in combination with their similar burial treatment and grave goods, supports this suggestion.

All individuals in the East Tomb were seated, although most had leg positions different from those of the females in the two Center Tombs. Only one woman, E T1, had her legs crossed and knees open in the traditional Farfán position. She was found leaning forward, with her face resting on a "pillow" covered in plain-weave cotton and filled with raw cotton (*Gossypium barbadense*). The other females had their knees together and slightly bent, a position similar to Inca burials (Figure 3.43; Julien 1987–89: figure 215, p. 125). The bodies were oriented to face either to the north or south other than one individual, E T4, on the second level, who faced east. None of the individuals in this tomb were oriented to the west. These women may have been covered with shrouds, but we found no evidence of textile fragments adhering to the bodies.

The oxygen isotope values for the women in the East Tomb suggest mobility within the empire. The isotope signatures for burials E T1, E T4, E T7, and E T9 indicate that they came from the North Coast, probably the Jequetepeque Valley, while the remaining three females were non-local. Individuals E T6 and E T10 moved to Farfán from an unspecified region of the coast, while the isotopic analysis of E T5 indicates that this mid-adult female grew up in the highlands and moved to the Jequetepeque Valley later in life. Interestingly, the three non-local females (subadults E T6 and 10 and mid-adult E T5) are grouped on the south side of the tomb, perhaps indicating that they came from valleys south of the Jequetepeque Valley. In addition, three subadults (E T6, E T9, and E T10; Figure 3.43) all appear to have suffered from non-specific systemic infections (Chapter 3B).

Grave Goods and Associations

Like all the multiple tombs in the Huaca Burial Platform, the women in the East Tomb

were buried with both communal and personal grave goods. The richness and variety of the personal goods found with E T7, however, identify her as one of the most important women in the Huaca Burial Platform.

Communal Offerings—Ceramics. The East Tomb ceramic offering consists of 32 ceramic vessels. Jars (N=15) and jars with handles (N=2) display a typical Inca-style face displaying a protruding jaw (Figure 3.44). Eight of the jars are oversize, the largest number of oversize vessels in any one tomb (Appendix 7). Also included are stirrup spout vessels (N=8), complete plates (N=6), and a pedestal plate (N=1), although plate fragments indicate they were more numerous.

Two pairs of ceramic vessels are present in this offering. One consists of undecorated, blackware ovoid jars that share the same form, although one of the jars is smaller. The second pair has nubs protruding from the shoulder of the jar, a motif that is generally interpreted to represent a spondylus shell (Figure 3.45). Several jars depicting three-dimensional monkey heads conform to Levine's Type A and Type C, cross-dating this tomb with the Compound VI Cemetery (Appendix 4). The ceramic offering in the East Tomb did not include any ollas.

Textiles. Beneath the ceramic vessels, we uncovered large bundles separated into three distinct groups, together covering an area 80 centimeters in length. Each textile bundle, like those in Center Tombs T2 and T11, is composed of smaller rolled rectangles. These small rolled offerings were even more deteriorated than those in the other tombs. Since no liquid had been poured over them, their poor condition is most likely the result of the weight of the overlying ceramic vessels and the pressure of the earth that covered the bundles. We opened eleven rolled rectangles. They are similar in color, form, and weave to the rectangle offerings found in the

other two tombs, as can be seen in the small rolled bundle shown in Figure 3.46 (Appendix 1).

Personal Grave Goods. There was no one characteristic adornment that all the women in the East Tomb possessed. However, many of the East Tomb females were interred with their own ceramics. These ceramics, other grave goods, and the burials with which they were associated are described below.

Level 1, East Tomb 1. The adolescent girl in Tomb 1 (E T1) was buried with two vessels, only one of which is shown. On her right side was a Late Horizon Jequetepeque-style vessel with a bird-face on the jar neck attached to a three-dimensional head of a llama. This vessel, shown in Figure 3.47, is similar to one that accompanied the sacrificed *aqllakona* in the multiple tomb excavated at Túcume, in the La Leche Valley to the north. The other vessel in E T1 is a blackware stirrup spout vessel placed close to her left shoulder.

Level 2, East Tomb 4. The orientation of the female in the second level of the East Tomb and the nature of her offerings distinguish her from the occupants of the other tombs. She is leaning against the west wall and is the only individual whose body is oriented to the east (Figure 3.43). Her knees are raised and slightly bent, and her legs are crossed at the ankles. Adobe bricks in front of her legs and on her left side most likely served to hold her in place (Figure 3.48). Ten weaving swords of algarroba wood, ranging between 40–45 centimeters in length, were placed on the bricks in front of her feet. She is one of three women in the East Tomb, along with E T5 and E T7, to have been accompanied by weaving implements. Gourd fragments scattered near her body indicate that she was interred with at least three undecorated gourd bowls.

This young woman (E T4) had the largest personal ceramic offering in the East Tomb, 19 vessels in all, several of which are unusual forms. One vessel, for example, consists of three joined, polished, incurving blackware bowls (Figure 3.49). Two other incurving bowls differ from earlier Chimú examples in that they are taller, deeper and of oxidized redware (Figure 3.50). Her offering also includes an example of a press-molded bird-neck jar (Figure 3.51) and a blackware stirrup spout vessel with a scalloped spondylus motif and press-molded birds on the square stirrup (Figure 3.52).

Buried among the ceramic vessels that covered the body of E T4 was a wooden figurine, 25.5 centimeters in height (Figure 3.53). The female figure is kneeling, with a carved cloth or shawl covering her head and a carved ear of corn. She may be a representation of the mother of maize, *Zaramama* (see MacCormack 1991: 179–180). This finely carved statue is unique, and sets the woman in this burial apart from the others.

Level 3, East Tomb 7. Based on the quantity and quality of her personal offerings, the elderly woman in the lowest level of the East Tomb may have been one of the highest-status individuals interred at Farfán during the Late Horizon. She leans against the tomb's north wall, with her knees drawn upward and bent and her legs uncrossed (Figure 3.43). The majority of her offerings were placed on her chest and stomach, with the remainder found on either side of her body.

A disintegrated cotton and camelid fiber textile bag, similar to those associated with the women in the C T11, had been placed mid-body. Although the bag was poorly preserved, some textile fragments inside the bag were recovered. One split tapestry fragment, combining both cotton and camelid fiber, is one of the finest and most complex examples of this type of weaving

found in the Huaca Burial Platform (the entire fragment measures 55 by 34 centimeters; Appendix 1, Table A1.1, Textile 65). A portion of this fragment measuring 15 by 8 centimeters (Figure 3.54) shows two figures, each with raised arms and wearing a variation of the *tumi* headdress. Their clothing, however, is distinct. The top figure wears a loincloth, while the lower figure is wearing a tunic-like garment (see inset drawing, Figure 3.54). These differences could represent gender or status. Also from within the textile bag we recovered a rolled band of split tapestry that depicts an object mounted on a handle with a triangular top, decorated with a face. The face is similar to the cloth faces found on the silver rattles interred with the women in the Huaca Burial Platform's North Tomb 1, connecting the North and East tombs (Figure 3.55; see also Figure 3.37).

Close to the textile bag, wrapped in a plain-weave cotton textile, was a single ear spool with a diameter of 4.7 centimeters and a depth of 3.4 centimeters. Made of wood, the circular portion of the plug has a shell inlay of a figure (Figure 3.56). On either side of the figure are what appear to be representations of quarter moons. The style of the figure is reminiscent of Lambayeque, especially the necklace often depicted with Lambayeque deities (Mackey 2001:110, figure 1; 115, figure 3; 117, figure 5; 118, figure 6; 225, figure 15b). This ear spool links Farfán's *aqllakona* to the Chosen Women at the site of Túcume to the north, because both locations have similar ear spools (Narváez 1995a in Heyerdahl *et al.* 1995:93, figure 53).

Near the textile bag, we found an unusual artifact: a case made out of animal hide, probably deerskin, which was used to hold sewing needles (Figure 3.57). The case, 13 centimeters in length by 2.2 centimeters in width, held four needles. Three were copper, ranging in length from 9.5 to 10.2 centimeters, and the other, a bone needle, was 8 centimeters long. A needle case similar in

form, but made of reed, was identified in the Cemetery of the Sacrificed Women at Pachacamac excavated by Uhle (Tiballi 2010:195). Scattered near the textile bag were four spindle whorls, one of copper, two of shell, and one of quartz, ranging from 1.1 to 1.4 centimeters in diameter (Figure 3.58).

Many of the personal possessions of the elderly woman in E T7 are of metal and were placed near the thorax. These include three undecorated copper discs wrapped in a plain-weave cotton textile similar to those found with the elderly female in Mound G (G T11). The larger disc measures 5.8 centimeters in diameter, and was perforated at the top, while the two smaller ones ranged in diameter from 2.6 to 3.1 centimeters. Another decorated copper disc, this one 8.1 centimeters in diameter, had a cut-out zoomorphic design (Figure 3.59). Although this elderly woman was not clothed, a 14.5 centimeter long copper *tupu* pin, used to hold a shawl in position, had been placed on her chest (Figure 3.60; see illustration Guaman Poma de Ayala 1980 [c. 1615]:126 [126] p. 104). She was wearing an undecorated silver bracelet two centimeters wide and six centimeters in diameter on her left wrist (Figure 3.61). A similar bracelet was placed near her right side, but was not worn on her wrist. Also on her right side were two bracelets of copper beads, still strung (Figure 3.62; 6.5 centimeters in diameter). Closer to her head was a round, flat-bottomed, conical metal pendant with two perforations at the top (Figure 3.63) that measures seven centimeters in diameter. On the right side of her body was a copper *tumi* 7.5 centimeters in length (Figure 3.64). It had been packed in raw cotton (*Gossypium barbadense*) and wrapped with a plain-weave textile.

The personal ceramics found in East Tomb 7 (N=4) include two miniature jar and handle vessels, an olla, and one standard size blackware jar with a molded bird face on the neck (Figure

3.65). This sort of bird-neck jar in Late Horizon Jequetepeque Style was found in three locations in the East Tomb: with E T1, with E T4 (Figure 3.51) and in the communal ceramic offering (Appendix 7).

Level 3, Other Burials. The other females buried in the lowest level (Level 3) also had personal offerings (Figure 3.43). The adult female, E T5, was interred with a black stirrup spout vessel, a clear association because her hand grasped the vessel (Figure 3.66). Fragments of cloth near her contained the remains of beans (*Phaseolus vulgaris*), thread, and a spindle whorl. The adolescent female (E T6) on the south side had a black stirrup spout vessel and a gourd bowl that held unidentifiable organic remains. The juvenile, E T9, who was seated next to the elderly woman (E T7) on the north side, had a blackware stirrup spout vessel and held a complete spondylus shell (*Spondylus princeps*; Figure 3.43). On the south side of the communal ceramic/textile offering, a child (E T10) was positioned facing the offering, but none of these grave goods could be directly associated with the child. Although the East Tomb was placed in the Huaca after its original construction, some of the *aqllakona* interred within were of high status and their grave goods demonstrate links to other tombs in the Huaca Burial Platform and other Farfán cemeteries.

The Two Looted Burial Chambers

Two burial chambers considered to have contained primary burials and goods were located on the Huaca Burial Platform's west side (Figure 3.2). They were constructed some time after the completion of the Inca-built Huaca. The two chambers are similar, in that they both have niches in the adobe walls and plastered floors; however, they are distinct in other respects. First, the size, floor plan, and positioning differ. Second, the bones in Looted Chamber 1 are commingled and the grave goods are scat-

tered over the floor of the chamber. This supports the notion that the chamber was looted and was not a secondary burial, as the latter has bodies that are carefully positioned with the grave goods around them. Third, Chamber 2 was used for an animal burial and no human remains were found within. It is possible that the chamber was being prepared for an interment that never took place.

Looted Chamber 1. This looted chamber (Figure 3.67) is in the southwestern area of the Huaca Burial Platform, in an almost direct east-west alignment with the Center and East tombs. It was placed within the third tier, almost a half meter below the walkway on the Huaca's west face (Figure 3.2). Excavation revealed that the tomb, approximately a meter and a half in height, had been roofed by two algarroba beams oriented east-west that had fallen across the chamber. The adobe bricks of the original platform tier had been removed to create a square room that measures 1.8 by 1.8 meters. Five niches were built into the room: two on the east, one on the south, and two on the west side (Figure 3.67). The north wall was unmodified, as was seen in the chamber in Center Tomb 11. In the northeast corner of the room, we unearthed an upright, roughly-shaped stone 38 centimeters in height (Figure 3.67). Placement of stones above or beside burial caves is a pattern noted in other Inca sites (Hyslop 1990:110).

The bones of those interred in Looted Chamber 1 were scattered across the chamber's plastered floor. Andrew Nelson estimates that the tomb contained at least seven individuals: a mid-adult male—the second tallest male at Farfán (165.7 centimeters); one mid- and one young adult female; a juvenile; and three children (see Chapter 3B). We uncovered 15 ceramics, including jars and stirrup spout vessels, all of which were located near the western wall of the chamber. A number of the jars (N=8)

had three-dimensional monkey heads (Figure 3.68) which conform to Levine's Types A, B, and E. These vessels cross-date Chamber 1 with others in the Huaca, such as the East Tomb, Secondary Burial S21 and the Compound VI Cemetery to the north of the platform (see Appendix 4). On the body of one of the stirrup spout vessels was an image of the Moon Animal surrounded by full moons (Figure 3.69). This mythic creature has a long history on the North Coast (Bruhns 1976; Mackey and Vogel 2001). The chamber also contained six miniature blackware vessels, ranging in height from 5 to 7.5 centimeters (Figure 3.70; only one is shown in Appendix 6). In addition, fragments of metal and copper discs like those associated with high-status female burials were found, as well as camelid and bird bones.

Looted Chamber 2. Chamber 2 is 7 meters north of Chamber 1, also within the third tier of the Huaca Burial Platform. Like Chamber 1, this room had been built into the existing platform. Although this chamber was also niched, several features distinguish it from Chamber 1. Unlike Looted Chamber 1, its north wall was niched. Roof beams were not present, nor did we note a notch or depression in the wall, such as those found in C T11 and Chamber 1, indicating that a beam had once been in place. This may indicate that the roofing of the chamber is the last task after the bodies and goods were put in place. This chamber, measuring 170 by 130 centimeters, is smaller than Chamber 1. Chamber 2 has more niches, arranged in a different configuration: three on the north and south, two on the east, and one on the west side (Figure 3.71). The niches, which were plastered, contained neatly stacked adobe bricks. Niches are a common architectural feature of coastal Andean burial chambers, having been documented since Moche times (Donnan and Castillo 1994:417–418, figure 13.2, láminas XIII, XIV; Sprague 2005:63, 69). They are sometimes open and empty, or they may contain grave

goods. The presence of adobe bricks in Chamber 2 suggests that the chamber was still being prepared for its future occupant(s).

A fully-articulated adult llama had been buried in a sub-floor pit on the Chamber's west side. Based on the level of attrition of the molar occlusal surfaces, the llama was approximately nine years old, and the size of the canines suggest that it was a male (Appendix 3). Although the tomb had yet to receive an interment, there were pieces of crushed pottery on the floor, suggesting that some grave goods had been placed within. Perhaps the tomb was being prepared for a high-status female, because most of the complete llama burials at Farfán are associated with elderly females.

Secondary Burials in the Huaca Platform

Within the Huaca Burial Platform, there are two types of interments. The primary burials are characterized by having intact physical remains (Sprague 2005:63, 69), grave goods, and interments generally covered with shrouds. In the Huaca Burial Platform individuals buried as primary interments are females, had been sacrificed, and are most likely members of the Inca institution of *aqllakona*. Another type of interment in the Huaca Burial Platform is the secondary burial (Figure 3.72). Secondary burials include individuals who may have either been buried and then exhumed, or warehoused in another location before final interment (*ibid.*: 60–70). The secondary burials consist of disarticulated, partial, or almost whole skeletal remains that were intentionally reburied in the Huaca Burial Platform. The bones of the secondary burials were not commingled, had not been moved since their interments, and were surrounded by their burial goods, which is further evidence that these were intentional rather than looted burials. In addition, the secondary burials were interred at the same time as the primary burials with which they are

associated, most likely as offerings for these interments.

Both primary and secondary burials in the Huaca Burial Platform differ from those described elsewhere in the archaeological literature of the North Coast. The Late Horizon Inca Primary burials in the Huaca Burial Platform are high-status females of differing ranks, sacrificed in what were most likely elaborate ceremonies. In the preceding Moche and Chimú societies, the primary burials (with the exception of the Moche priestesses at San José de Moro; Donnan and Castillo 1994) are generally males with associated sacrificed females (Alva and Donnan 1993; Conrad 1982). At Late Horizon Farfán, the secondary burials mimic the primary burials they accompany in that all are multiple interments and have high-quality grave goods. The skeletal remains included in the secondary burials were intentionally selected for reburial, although there does not appear to be a preference for certain bones, as noted in other cultures. For example, Duncan (2011) found that the Maya chose to rebury mainly skulls and long bones. Nelson presents a description of secondary remains in Chapter 8.

Nelson's study found no preference for specific bones. All ages except neonates are represented in the secondary interments. The adult burials follow the gender profile for Farfán interments, with females more prevalent than males. Three of the four males identified in the Huaca Burial Platform are in this secondary sample. One secondary burial is located on the Huaca Burial Platform's west side directly adjacent to Looted Chamber 2, and three were located on the Huaca's north side.

Secondary burials S21. The secondary burials that comprise S21 are near the east exterior wall of Looted Chamber 2, and consist of the partial remains of four individuals: two young adult females, a juvenile, and an adolescent. One of

the females, represented mainly by the lower half of her body, was placed against the east exterior wall of Looted Chamber 2 (Figure 3.73). The partial remains of the female in Figure 3.73, whose body position is seated with knees apart, and not flexed, as with some burials found in Túcume (Toyne 2002:19), were interred at the same time that Looted Chamber 2 was completed, since they were partially embedded into the exterior east wall of the chamber. The offerings found with the four secondary individuals are some of the finest associated with secondary interments in the Huaca Burial Platform. The grave goods are in their original positions, and had not been moved, as they were covered by the brick construction of the Huaca.

Ceramics. The ceramics in S21 included 11 fired ceramic vessels and 54 small, unfired cups (Figure 3.74; not shown in Appendix 7), often called *crisoles*, *ofrendas*, or *copas* (Costin 1999; Donnan 2006; Donnan and Castillo 1994: 419–420). The unfired cups are not decorated and range in size from 4.5 to 5.5 centimeters high. These unfired vessels, which are common offerings in earlier Moche tombs (Costin 1999; Donnan and Castillo 1994:419–420, figure 13.3) and some Lambayeque burials (Shimada *et al.* 2004:375–376, 378, 386), are rare in the Late Horizon. They may have been used to heat chicha (Narváez 1995b in Heyerdahl *et al.* 1995: 176–177).

The majority of the fired vessels in S21 are blackware jars (N=4) and jar and handle vessels (N=3), while other forms, such as stirrup spout vessels, are represented by single examples (Appendix 7). One of the most unusual vessels is a face-neck jar representing a person—most likely a female—who is wearing ear ornaments, playing a drum, and carrying a smaller person, perhaps a child, on her back (Figure 3.75). The face on the jar neck has a protruding jaw, characteristic of Inca-style jars; however, this vessel is thematically similar to other vessels found in

the Lambayeque region that depict labreted females playing drums (Cordy-Collins 2001). In addition, the jar rim is typical of late Lambayeque-style jars (Tschauner 2001:668, figure A.9; Appendix 6).

Another vessel, an oversize jar (31 centimeters high), is decorated on both sides of the body, with earlier North Coast iconography (Figure 3.76). One side shows a central figure, possibly a deity, holding the hands of two smaller and most likely subordinate individuals, a theme first seen in the Moche culture. The central figure wears a crescent-shaped or *tumi* headdress while the secondary figures wear small caps—all of which are associated with Lambayeque artistic traditions. The individual on the other side of the jar wears a plumed headdress and holds a fringed bag and a scepter with a possible monkey head depicted at its top. All of the figures wear the same type of loincloth. Another vessel consists of two blackware plates that have been joined together by a upper and lower bridges. This is a similar form to the conjoined bowls found in E T4 (Figure 3.49; see Appendix 7).

S21 is the only secondary burial that contained metal offerings. One of the most interesting objects is a copper ornament that was meant to be attached to a headband by two hooks (Figure 3.77). It is 10 centimeters high and 11.2 centimeters at its widest point. Other metal objects included round copper discs, ranging in size from 2.6 centimeters to 3.1 centimeters in diameter and perforated at one end, were found intermingled with the partial bodies in S21.

In S21 we also recovered eight undecorated copper rings. These objects are exactly like those found with the elderly females in East Tomb (E T7) and Mound G (G T11). The final excavated object is a fragment of a shell bead, found next to the body of one of the adult females. The bead depicts a person wearing a

rounded cap and part of a Lambayeque-style necklace (Figure 3.78; Mackey 2001:110, photo 1; 115, photo 3; 117 photo 5; 118, figure 6; 225, figure 15b; Moore and Mackey 2008: figure 39.8a, b). No other shell beads were found.

Secondary burial S26A. Excavation Unit 26 of the Huaca Burial Platform consists of North Tomb 1 and S26A, both of which rest on bedrock and were part of the original construction of the Huaca (Figures 3.72, 3.79, 3.80). In contrast, S26B is 2.5 meters above North Tomb 1 and S26A. This burial, S26A, is most likely an example of a commemorative offering and suggests that the North Tomb's location, as well as its occupants, were remembered by the site's later inhabitants. This skeletal offering consists of the partial remains of at least eight individuals, five of whom were adult women (Chapter 3B). One of the individuals was a mid-adult female whose style of cranial modification—an annular or Aymara form (Form G)—suggests she came from Peru's southern highlands. Andrew Nelson noted that she had dental lesions indicative of coca chewing (Chapter 3B). There were no grave goods with this skeletal offering.

Secondary burial 31. This is the second offering associated with North Tomb 1. It lies atop bedrock directly to the west of North Tomb 1, and consists of both human and animal remains (Figure 3.80). Three individuals were identified in S31. These consist of a child and two adult males, one of whom is middle-aged, and the other elderly (Chapter 3B). The animal remains include a complete llama (*Llama glama*) and a dog (*Canis familiaris*). According to Richter Lagha's analysis (Appendix 3), the llama appears to have been between nine and twelve months old, based on the unfused bones and the eruption and attrition pattern of the teeth. This is the only complete llama not found with a female burial. The unfused epiphyses of the dog's bones indicate a similarly young age, probably younger than four months. The bones

of both the llama and the dog show evidence of burning or scorching localized in the cervical and thoracic vertebrae, forelimbs and hind limbs. The carbonization occurred while the flesh was still on the articulated limbs, affecting the bones beneath because these are the less meaty areas of the animals. In addition, Richter Lagha states that the animals were first cut prior to carbonization with a broad, dull tool, possibly a *tumi*. As no carbon or ash was noted in the burial, the scorching likely occurred elsewhere. This is the only dog that has been identified at Farfán (Appendix 3).

The ceramic offering in S31 consists of eight vessels: five jars and three ollas. Four of the five jars are oversize, making this one of the burials in the Huaca Platform to include them, along with Center Tombs 2 and 11 and the East Tomb Offering. One of the jars (Figure 3.81) has animal figures modeled on either side of the broken jar neck. The small animals at the jar neck and the form of the jar are similar to another found in Mound G T11 which links this burial to that tomb. A jar with a three-dimensional monkey head (Figure 3.82), Type A in Levine's typology, cross-dates this secondary burial with C T2 and the East Tomb Offering (Appendix 3).

Secondary burial 26B. The burials in excavation Unit 26 consist of North Tomb 1, S26A, and S26B (Figure 3.72). Burial S26B appears to have been commemorative in nature, because it lies 2.5 meters above North Tomb 1 and S26A, which were installed during the original building of the Huaca. This suggests that the North Tomb's location, as well as its occupants, were remembered by the site's later inhabitants.

These secondary burial offerings were placed in a shallow pit in the Huaca's interior north walkway (Figure 3.72). The burial consists of the partial remains of four individuals: an elderly female, an adult male, a juvenile, and a child.

The female was one of the tallest individuals at Farfán (152.2 centimeters) and exhibited Form A cranial type (unmodified; Chapter 3B). Six ceramic vessels accompanied this burial, including jars, stirrup spout vessels, and a plate (Appendix 7). Burial S26B included a ceramic form not seen before, one of the most unusual found at Farfán. This composite Hybrid vessel consisted of an inverted plate that forms the base for a jar neck with press-molded, Janus-style Inca faces that may represent a male and a female (Figure 3.83). It is painted with black geometric designs on a redware vessel body. The inside of the jar neck has a seal with six small holes that may have acted as a strainer, perhaps to filter the partially-chewed corn in the chicha liquid.

Taken together, these secondary burials are of great interest, as they reflect the status of the primary burials and of the Huaca Burial Platform more generally. The four secondary burials are all multiple interments and they are in turn associated with multiple primary burials. Many contain prestige objects and iconography that reflect Lambayeque cultural affiliations. In all cases the accompanying grave goods are of high quality.

DISCUSSION AND CONCLUSION

Most scholars agree that there were three main goals in the Inca conquest: firstly “to dominate the peoples and resources of the Andes so that they could be exploited to the benefit of the overarching polity and its institutions”; secondly, “to enhance their holdings, both to venerate their ancestors and to enjoy a life of privileged wealth and status”; and thirdly to position themselves “as the legitimate and irreplaceable intermediaries between humans and the world around them” (D’Altroy 2018:206). The most visible religious symbol of the Inca occupation of Farfán, the Huaca Burial Platform, probably played a key role in disseminating the state religion and ideology.

The monumental Huaca Burial Platform, a seven-meter-high, three-tiered structure, was built to contain sacrificed female members of an important Inca state institution—the *aqllakona*. Our evidence has shown that the building of the Huaca Burial Platform was part of an Inca strategy to create a venue likely used for multi-valley gatherings for funerary rituals and other ceremonies.

The 46 burials in the Huaca Burial Platform can be divided into primary and secondary interments. The primary burials (N=27) include the complete burials of women who were members of the *aqllakona*, and a single male primary interment, all of whom were originally buried in the Huaca; the secondary burials (N=19) are partial remains of individuals who were reburied in the Huaca, most likely as offerings for the *aqllakona*.

The interments in Farfán’s Huaca Burial Platform differ from those in other burial platforms on the North Coast. For example, the Chimu burial platforms, at their capital Chan Chan (A.D. 1000–1470), and earlier structures, such as the Moche platform from Sipán (c. A.D. 600), contain primary burial(s) of high-status males. These primary burials were generally accompanied by sacrificed individuals, who were most often women (Alva and Donnan 1993; Conrad 1982; for another opinion see Nelson and Mackey 2011). The exception to this pattern is the Moche priestess, who was a primary burial accompanied by sacrificed females (Donnan and Castillo 1994). Farfán’s Inca Huaca Burial Platform stands apart because its primary burials were high-status, sacrificed women, members of the Inca institution of the *aqllakona*, who were accompanied by secondary partial human offerings, both male and female. Demographically, most age categories were represented among the *aqllakona* with the exception of neonates and children. The burials

included five elderly women (40+ years) who stood apart from other females in their body treatment and their accompanying offerings. The elderly women had their faces rubbed with cinnabar (Table 3.1), a symbol of high status dating to early Moche culture. Elderly women may have been accorded more respect because they were often the *mamakona* or instructors of the younger *aqllakona* (see Guaman Poma de Ayala 1980 [c. 1615]:298 [300] p. 273).

Paraphernalia associated with textile production provided the likely location of the domicile of the *aqllakona*. An *aqllawasi* or House of the Chosen Women was probably located in Compound IV (Figure 3.1). Although the compound itself has been almost completely destroyed, the architectural remains contained Farfán's highest concentration of weaving equipment, the majority of which was recovered from small adobe bins attached to the western perimeter wall of the compound. The storage of tools associated with a particular craft appears to have been an organizing principle during the Inca occupation as well as in the earlier Chimú culture. This is the only compound at Farfán with storage space devoted to weaving implements. Other small bins, such as those in the Annex to Compound II, contained tools for pottery production, and were located near the firing area for the large jars or tinajas used to store and serve chicha (Mackey 2010:241–242).

Characteristics of the Primary Interments in the Huaca Burial Platform

The preparation of the women for interment in the Huaca Burial Platform demonstrated care, planning, and ritual. Just as the women were prepared for burial within the Huaca, the platform itself was ritually consecrated in preparation for the interments. The ramp, leading to the three tiers that held the tombs, contained the burial of a whole sacrificed llama and the ramp's plastered floor had an offering of cinna-

bar. Analysis of the female burials highlighted several characteristics: burial position, shrouds, body treatment, and personal adornment.

Most of the burials in the Huaca Burial Platform were multiple interments with the exception of the East Tomb. In this tomb are two burials of adolescent females (E T1 and E T4) who were single interments, each with her own personal grave goods. The majority of the *aqllakona* were placed in a seated, flexed position with knees apart. Only females in the lower level of the East Tomb had a different position—legs together and slightly bent. This position may have been an approximation of the Inca burial position (knees together and flexed toward the chin) or perhaps an accommodation to fit the individuals into this lower level (Figure 3.43). There appears to have been some variation in the shrouds provided for the *aqllakona*. None of them had the thick layers of cloth associated with Inca *fardos* (mummy bundles)—most were covered with one or two plain-weave cloths of cotton and camelid fiber. In one instance, in North Tomb 1, the elderly woman, adolescent girl, and an infant had a multi-stripped cloth (cotton and camelid fiber) pulled over them in a tent-like manner, rather than individual shrouds.

Unlike the women in Farfán's other cemeteries, many of these women had some personal adornment. Necklaces varied in their material from *nectandra* seeds to the elaborate necklace depicting seabirds worn by the woman in North Tomb 1 (N T1B). It is of interest that this exact bird was found with the *aqllakona* at Pachacamac (Tiballi 2010:156, figure 15). Also found were necklaces of shell beads (see Center Tomb T2) and rings. The latter may have been reserved for *aqllakona* and acted as an identification of these women. Rings are found in other cemeteries with elderly women (see for example Cemetery VI, Mound G).

Grave goods in the Huaca Burial Platform are the most varied of those found at Farfán, and although some women have their own personal objects, most tombs also have communal offerings of ceramics and/or textiles. Many objects associated with the *aqllakona* have direct Inca antecedents. These include a *tupu* that was associated with the elderly woman in the East Tomb (T7): one of the most unusual objects excavated in the East Tomb with the adolescent female (E T4) was the wooden statue of a kneeling woman holding an ear of corn that may represent *Zaramama*. The importance of corn as an agricultural crop and as the fundamental ingredient for the ritually and politically important beverage of chicha was highlighted during the Inca occupation of Farfán. Various objects of metal were found with several of the *aqllakona*, such as copper *tumis*, beads, and discs. The most noteworthy of the metal objects are two silver-plated rattles, one of each found with the adolescent female and elderly woman in North Tomb 1.

Characteristics that Identify these Women as *Aqllakona*

Many of the traits exhibited by the women in the Huaca Burial Platform correspond to the characteristics described for the *aqllakona* in the Spanish chronicles. These include their geographical and ethnic origins, age, and activities (also see Chapter 8). One of the most common themes in the chronicles focused on their geographic and ethnic origins (e.g. Cobo 1979 [1653]:235–236). At Farfán, *aqlla* were drawn from all parts of the Inca Empire; the results of the isotopic data from the Huaca Burial Platform show a majority of Farfán's *aqllakona* came from the Jequetepeque and other coastal valleys, with very few from the highlands (Appendix 5). This evidence, confirms that Farfán, in addition to its other activities, also contained an *aqllawasi*, as did other important Inca centers such as Huánuco Pampa (Morris 2004).

Another line of evidence indicating dispersed origin is the distinctive hair styles worn by the women in Center Tomb 11. It has been noted above that villages within the Inca Empire had unique hair styles and that the Sapa Inca, or ruler, changed his hair to conform to that of the village he was visiting (Betanzos 1996 [1557]:168). Thus, the different hair styles of the elderly women and the adolescent girl in C T11 may correspond to each female's village or place of origin.

A recurring theme in the chronicles focused on age; however, there was not complete agreement regarding the age that girls were inducted into the *aqllakona*. The ages most often mentioned were between eight to nine years old (Cobo 1979 [1553]:236;⁵ Polo [de Ondegardo] 1873 [c.1572]:165), while the appropriate age for sacrifice was reported to be 13 or 14 or older (Polo [de Ondegardo] 1873 [c. 1572]:166). However, data from the Huaca Burial Platform clearly show children from the age of six being sacrificed (Chapter 3B).

Our data also indicate the presence of age sets. This characteristic is emphasized in the Central shaft tombs where there is a distinct grouping by age (C T2 and C T11). Center Tomb 2 shows girls from six to twelve years of age on the west side, while those between 15 to 22 years of age were positioned on the tomb's east side. A more general distinction is that the top tomb (C T2) contains younger girls, while older women, most likely the *mamakona* who instructed them, were interred in the lowest tomb (C T11).

The main duties of the *aqllakona* were the weaving of fine cloth and the preparation of food and chicha (Gose 2000). Both finished

⁵ Note, however, that elsewhere Cobo says that girls were chosen between the ages of ten to twelve (Cobo 1990 [1653]:173).

textiles and weaving implements are clearly associated with the women's tombs. This evidence includes the elaborate bundles of fine cloth interred with them as communal offerings, as well as weaving baskets and implements associated with particular individuals (Appendix 2). Cloth was an important medium of exchange in the Inca Empire and was given as gifts to local lords (Murra 1962). Cloth also served as an offering at temples and miniatures were used to dress wooden statues (Cobo 1990 [1653]:117). In light of this latter statement, it is of interest that the majority of textiles associated with Farfán's *aqllakona* are miniature garments (Appendix 1). There is also ample evidence of chicha production throughout Farfán, as demonstrated by the warming ovens for the small jars of chicha (*crisoles*) found in various tombs, as well as the large vessels (*tinajas*) found in the feasting areas of the cemeteries that still contain dregs. It is probable that women of all ages took part in the preparation process, because the brewing of chicha and preparing the food for ceremonies required a large number of women (Gose 2000).

Though there is general agreement that becoming member of an *aqllawasi* raised the status of a girl and her family, the means of honoring the women in the Huaca with funerary offerings differed. First, each of the tombs in the Huaca Burial Platform contained communal grave goods that consisted of fine ceramic vessels and textiles most likely woven by the women themselves. Since the women lived a communal existence in the *aqllawasi*, this type of offering may reflect the nature of the institution. Second, it was most often the elderly females, the *mamakona*, who had their own personal burial offerings. These objects showed the greatest variety and were of the highest quality, likely in recognition of their eminent position. Most notable were the items in metal, especially those of silver or silver-plated copper. There were also abundant objects of copper, such as

tumis, rings, and discs, as well as shell bead necklaces. Additionally, sacrificed llamas were found with the *mamakona* as well as with elderly women outside the Huaca Burial Platform in Mound G and Tomb JO.

As part of their duties to the Sapa Inca and to the state religion, some *aqllakona* were chosen to be sacrificed and buried in the Huaca Burial Platform—a structure specifically constructed for their entombment. Sacrifice in the Inca Empire was performed under certain circumstances, such as the poor health or death of the Sapa Inca, or during warfare. As Cobo notes, a considerable number of girls were sacrificed quite frequently (Cobo 1979 [1653]:237).

Looted Chamber 1, on the Huaca's west side, was not one of the principal tombs built when the Huaca was constructed, like the Center and North Tombs; instead, it was added after its completion. The chamber contained the burial of six probable females who appear to be *aqllakona* based the grave offerings in the tomb, such as fine ceramics, scattered fragments of bird bones, and round copper discs similar to those found with other *aqlla* members.

The chamber also included the burial of a middle-aged male (CH 1A) interred with the *aqllakona*. There are several possible explanations for the inclusion of this male in the chamber. As Andrew Nelson notes, his above average height indicates that he was probably a high-status male (Chapter 8). Because he was interred in a platform devoted to female weavers, he may have had some position or activity in textile productions, such as being a member of the *qumpikamayuc* or male weavers (Morris and von Hagen 2011:98), or he may have been an attendant or guard of the *aqllakona* to ensure their virginal purity (LeVine 1987:23).

Although the male buried with the *aqllakona* in Looted Chamber 1 was most likely of high

status, his burial was unlike that of the three male administrators excavated in Room 1 of the Stone Structure at the Inca site of Túcume. These males, each a *fardo* burial composed of multiple layers of fine cloth in addition to the corpses, were buried in a room adjacent to the nineteen *aqllakona* whom the authors suggest were sacrificed to accompany these high-status males (Narváez 1995a in Heyerdahl *et al.* 1995:93–95). Unlike at Túcume, the Huaca Burial Platform at Farfán was constructed to honor the *aqllakona*, many of whom were buried in the most elaborate tombs at the site.

Local Characteristics

Though this chapter focused on the Inca characteristics it is important to highlight the local origins for many of the grave goods. The ceramic vessels entombed in the Huaca (N=249) comprise over half of the total ceramic sample from Farfán (N=423). Though they may appear to be a continuation of the Chimu ceramic tradition, analysis has shown that every vessel form, from utilitarian *ollas* to fineware stirrup spout vessels, underwent changes and constitute a new local style called Late Horizon Jequetepeque (see Appendix 6). The same is true for the motifs used on the pottery and textiles. The motifs that the Inca retained from the Chimu repertoire were intentionally-selected, pan-coastal themes of deep antiquity. Many forms and concepts from the earlier Moche culture are also present. The two women in North Tomb 1 each have silver-plated copper rattles, an object that has North Coast roots in Moche culture (see Alva and Donnan 1993:181). These rattles are similar in form to their Moche antecedents, but differ in that they had faces, represented in textiles pasted onto the upper triangular portion of the rattle.

Characteristics of the Secondary Burials

The nineteen secondary burials in the Huaca Burial Platform consist of remains that were either warehoused or buried elsewhere, and then exhumed to be reburied as offerings in the platform. The secondary burials mimic the primary ones, as they are all multiple interments and may contain fine ceramics, metal, and animal remains. Many of the variables used to discuss the primary burials, such as body position or orientation, do not apply to the secondary interments because they were disarticulated. Furthermore, none of the secondary burials was covered with cloth shrouds. It is also interesting to note that three of the four male burials from the Huaca are represented in this sample. Though crania are not frequent in the secondary burials, the skull of a middle-adult female (S26A) was notable because it displayed an annular or Aymara cranial modification (Form G) indicating that she came from the highlands of southern Peru.

One of the secondary tombs (S26B) is an example of a commemorative burial. The partial remains of four individuals were interred in a shallow grave on the Huaca's northern walkway, 2.5 meters above North Tomb 1 (Figure 3.72). The grave's location suggests that these remains were deliberately placed above North Tomb 1 as a post-interment offering.

Conclusion

As of this date, there are four known *aqllawasi* in Inca administrative centers on the Central and North Coast: Pachacamac on the Central Coast (Tiballi 2010; Uhle 1991 [1903]); and Farfán (Mackey 2010:257); Túcume (Toyne 2002; Narváez 1995a in Heyerdahl *et al.* 1995:93), and Tumbes (Cieza 1984 [c. 1553]; Chapter LIII) on the North Coast. Of the excavated Inca centers on the coast that contain cemeteries of *aqlla*, Farfán stands apart, because

it has the most complete data on both skeletal remains and grave goods. The existence of these four *aqllawasi* underscores the importance of these women in the Inca Empire and the role they had in newly-conquered territories. They wove the cloth used as gifts in various rituals and were responsible for the food, drink and, often, the entertainment at the many ceremonial occasions hosted by the Inca. The *aqlla* represents a revered Inca institution and the sacrifice of these women and girls was considered a gift to the gods. These females served the Inca state during their lives. In death, they continued to serve the state by unifying the people of the Jequetepeque Valley in shared ritual experiences.

CHAPTER 3B BIOARCHAEOLOGY OF THE HUACA BURIAL PLATFORM Andrew J. Nelson

As discussed in Chapter 3A, the Huaca Burial Platform contained the remains of the members of an *aqllakona*, the Chosen Women (Chapter 3A, Figure 3.2). This is a rare and important opportunity to use the bioarchaeological, osteobiographic approach to shed new light on the conditions of daily life and ritual choices of these individuals, as the Spanish chronicles can only offer, at best, second-hand accounts of the goings on within this female institution. To date only two other *aqllakona* cemeteries have been excavated: Pachacamac (Tiballi 2010; Uhle 1901 [1903]) and Túcume (Narváez 1995a in Heyerdahl *et al.* 1995:93; Toyne 2002).

The objective of this chapter is to outline the key osteobiographic features of the individuals buried in the Huaca Burial Platform, and to examine patterns of variability in the traits observed in these skeletons. The Huaca Burial Platform comprises primary burials, secondary burials, and two looted burial chambers. Primary burials are found in Center Tomb 2, Center Tomb 11, North Tomb 1, the East Tomb, and Looted Chamber 1. A number of secondary burials yielded partial skeletons, probably as offerings accompanying the primary interments. The individual contexts will be addressed in sequence, and for each tomb, I will discuss the demographic composition, adult stature, patterns of health and disease, activity patterns, cranial modification, and information regarding diet and residential mobility as assessed by carbon, nitrogen, and oxygen isotopes. These data shed light on patterns of underlying relationships among the individuals, as well as patterns of cultural decisions and/or activities that affected their lives.

There are a number of subadult individuals in this sample who cannot be confidently sexed according to their skeletal characteristics. However, as Mackey (Chapter 3A) points out, the association with an abundance of weaving artifacts, and the fact that this is a burial platform of *aqllakona*, makes it very likely that these individuals are young females.

Osteological information is summarized in tabular form for each tomb in Tables 3.1 to 3.8. The comparison between subgroups within each cemetery was done qualitatively. While there is a large number of individuals in the Burial Platform, the number of tomb groupings atomizes the sample enough to make statistical analysis impossible.

Center Tomb 2

The skeletal sample in Center Tomb 2 consists of a young adult female (C T2A), a late adolescent female (C T2B), an unsexable young adolescent (C T2C), and three unsexable juveniles (C T2D, C T2E, and C T2F; Table 3.2). There are no recognizable males in the sample, no mid- or old adult females (30+ years), and no children, infants, or neonates (*i.e.* no one less than six years of age).

There is no evidence for infectious disease in this sample. The young adolescent (C T2C), however, does not demonstrate the foramina in the head of the femora that typically transmit the femoral artery. This artery is the primary blood supply for the femoral head, or in this case, for the femoral proximal epiphysis, since her femur was still growing when she died. There is a great deal of variability in the blood supply around the proximal femur, but the elimination of the primary blood supply to the proximal epiphysis would predispose this individual to avascular necrosis of this hip (Lavernia *et al.* 1999; Travan *et al.* 2007). This condition is generally not expressed in young individuals, but was also observed in an individual from the

Platform's East Tomb, E T5, a mid-adult female. This may indicate that a genetic vascular formation error underlies this otherwise idiopathic condition.

There are no degenerative changes demonstrated in the spines of the individuals in Center Tomb 2. However, the young adolescent (C T2C) does demonstrate a forward angulation, or kyphosis, of the spine, with the apex at her 6th thoracic vertebra. This vertebra displays a formation error formally referred to as a mid-sagittal cleft, more commonly called a "butterfly" vertebra (Figure 3.84). The anterior portion of the vertebral body is incomplete, leading to the kyphosis. This vertebra is also concave in cross-section, and the vertebrae above and below demonstrate convexities to accommodate this change in morphology. This condition may have caused this individual some pain, as well as affecting her mobility. A more subtle cleft is also visible in the second and third cervical vertebrae. This likely genetic condition may also be a populational trait.

The overall expression of dental health in this sample varies from good to poor. The two youngest individuals, C T2E and C T2F, have good or good-to-moderate dental health, with the latter demonstrating one carious lesion and several enamel chips. The other juvenile, C T2D, demonstrates poor dental health, including slight calculus, heavy wear, and the presence of four carious lesions, one of which has destroyed a molar crown. Such poor dental health in an individual this young is worthy of note, but is a condition shared with several other young individuals from Farfán, including J26 T1B and J26 T3 from Cemetery J (Chapter 4B) and E T9 and E T10 from the East Tomb. The two adolescents (C T2B and C T2C) demonstrate good dental health, showing only some enamel chips. The young adult female (C T2A) has moderate to poor dental health.

All of the crania in this tomb demonstrate some sort of cultural modification. The majority—C T2A, C T2B, C T2E and C T2F—demonstrate the Form B fronto-occipital modification that is common at Farfán. One adolescent (C T2C) displays the Form C fronto-occipital tabular modification style typically associated with the Lambayeque ethnic group. The juvenile C T2D is the only individual at the site to demonstrate Form E, a trapezoidal form of modification. Trapezoidal modification has been described by Nelson, Lichtenfeld, Conlogue, Toyne, and Pool (2000) and Lichtenfeld (2001: 44) in individuals from San José de Moro, a nearby site in the Jequetepeque Valley. Form E first appears in the Transitional (post-Moche) Period, and is very rare.

Although the state of preservation of these individuals did not allow the recovery of oxygen isotopes, all of the individuals from Center Tomb 2 were subjected to analysis for carbon and nitrogen isotopes (Appendix 5, Table A5.1). C T2A, C T2D, C T2E, and C T2F did not yield sufficient collagen to obtain valid results. This suggests that the collagenous proteins required for the isotopic analysis had become degraded, most likely by water leaching. The individuals C T2D, C T2E, and C T2F demonstrated evidence of post-interment exposure to water in the form of the deposition of fine sediment on the cranium and desiccation cracks on the cranial bones.

Individuals C T2B and C T2C did give adequate collagen yields, allowing the determination of carbon and nitrogen isotope values. The older adolescent female (C T2B) had values of $\delta^{13}\text{C} = -10.1$, $\delta^{15}\text{N} = 13.6$ and the younger adolescent (C T2C) had values of $\delta^{13}\text{C} = -10.1$, $\delta^{15}\text{N} = 12.0$. These values put them slightly above the site mean for carbon ($\delta^{13}\text{C} = -10.8$), suggesting a diet relatively high in maize, while the nitrogen values were much higher than the average ($\delta^{15}\text{N} = 10.7$). In particular, the $\delta^{15}\text{N}$ value of 13.6 for the

older adolescent female (C T2B) is the highest nitrogen value at the site, and the younger adolescent's (C T2C) value of 12.0 is the fifth highest. This suggests that these individuals had relatively high levels of protein consumption, most likely of marine origin.

Center Tomb 11

The skeletal sample in Center Tomb 11 consists of three old adult females (C T11A, C T11B, and C T11D) and a late adolescent female (C T11C); (Table 3.3). All three adult females are assigned to the category "old adult", but they can be sequenced from youngest to oldest as C T11A, C T11B, and C T11D.

There is no evidence for infectious disease in the Center Tomb 11 sample. The adolescent female (C T11C), however, demonstrates distortion of her fibulae. Both fibulae are bowed: the right fibula bows outward from its associated tibia, and the left bows inward to its associated tibia. The tibiae appear to be normal. This presentation does not fit what one would expect in rickets, because this vitamin D deficiency normally causes bowing of the tibia as well, and a characteristic cupping of the end of the metaphyses (Ortner and Putschar 1985: 279). Bones such as the fibula and radius can demonstrate bowing in response to traumatic fracture of their paired bone, the tibia or ulna (Stuart-Macadam *et al.* 1998; Teitz *et al.* 1980), but there is no evidence that anything was wrong with this individual's tibiae. Other possible diagnoses include a variety of skeletal dysplasias (Stuart-Macadam *et al.* 1998). It is also possible that this condition did not have a pathological etiology, and was simply a congenital condition (Formicola and Buzhilova 2004). Unfortunately, we cannot make a definitive diagnosis in this case. This kind of bowing likely

led to pain in the ankle joint and can be accompanied by osteophyte formation in older individuals (Teitz *et al.* 1980). Thus, this condition may have led to a reduction in lower limb mobility in this adolescent female.

The pattern of expression of spinal degeneration is quite interesting in the sample found in Center Tomb 11. The youngest individual, the adolescent female, (C T11C) demonstrates collapse of two lower thoracic vertebrae T11 and T12, leading to both a scoliosis and an angular kyphosis (Figure 3.85). This expression is consistent with a condition identified in other individuals from Farfán as Scheuermann's Kyphosis (see Jaagumagi 2011:iii). Scheuermann's Kyphosis is a condition that starts in adolescence (Damborg *et al.* 2006; Halal *et al.* 1978; Wegner and Frick 1999) wherein the anterior portion of several vertebral bodies collapse, leading to a forward angulation of the spine (the kyphosis; Chapter 4B). The ultimate cause is not clear, but there may be both mechanical (compressive) and genetic components (Damborg *et al.* 2006; Halal *et al.* 1978; Wegner and Frick 1999). Two of the elderly adult females, C T11A and C T11B, demonstrate degenerative changes of the spine that are consistent with age-related osteoporosis. However, individual C T11D, probably the oldest of the three elderly females, has a spine that is in an extremely good state of health. In fact, given the high prevalence of spinal degeneration in adults of all ages at this site, it is quite striking to have someone this old with no degenerative changes at all. She does demonstrate some degeneration of the joints around her sternum, but that is probably due to wear and tear caused by strenuous arm movements, an assessment supported by the rugosity of her muscle markings, rather than osteoporosis.

The dental health of the individuals in Center Tomb 11 appears to vary with age. The adolescent individual (C T11C) demonstrates quite good dental health. She has two carious lesions and slight wear on her teeth. The three older females suffered from quite poor dental health, most likely related to their advanced age. The elderly female (C T11B) had an unusual wear pattern on her lower central incisors, indicating that she probably used her front teeth to hold something. This gradually wore down the anterior-superior face of the tooth crowns. In addition, she demonstrated degeneration of her temporomandibular joint (TMJ), where the jaw articulates with the cranium. This would have caused pain in the mandibular joint while chewing. These two observations may well be related to each other, as the use of the front teeth as tools would have placed considerable pressure on the TMJ. Two of the elderly females, C T11A and C T11B, had several chips in their tooth enamel, while the adolescent (C T11C) did not. All three of the older individuals had extensive wear, tooth loss, draining abscesses, and periodontal disease. These conditions would all have contributed to a considerable amount of dental pain. Untreated dental abscesses can lead to systemic septicemia (blood-borne infection throughout the body), which can, in turn, result in abscesses elsewhere, osteomyelitis, pneumonia, and possibly death (Walsh 1997).

Only one individual in Center Tomb 11, the adolescent female (C T11C), demonstrates cranial modification. She shows the rounded, Form B modification style. One of the elderly females (C T11D) did not demonstrate any of the morphological characteristics of modification, but did yield, at 90, a very high cranial index (the maximum width of the crania divided by the maximum length of the crania and multiplied by 100). This

index is indicative of a skull that was quite broad, and she has the highest index among the non-modified, Form A, individuals at the site.

All values for carbon and nitrogen isotopes fall within the central part of the range of variation for Farfán, suggesting a diet that contained both maize and marine protein (see White *et al.* 2006: appendix 5, table 2). The carbon isotope values range from $\delta^{13}\text{C}$ -11.0 (for one elderly female, C T11B) to -11.8 (for another elderly female, C T11A) and are slightly below the overall site mean of $\delta^{13}\text{C}$ -10.8. The nitrogen isotope values range from $\delta^{15}\text{N}$ 10.0 (for elderly female, C T11A) to 11.0 (for the adolescent female, C T11C) and are distributed around the overall site mean of $\delta^{15}\text{N}$ 10.7.

The picture painted by the oxygen isotopes is somewhat more variable than that seen from the carbon and nitrogen values. The proposed local coastal range of isotopic values is $\delta^{18}\text{O}$ 15–17. The only individual with a local oxygen signature in the teeth, suggesting a childhood spent on the coast, is the adolescent (C T11C; $\delta^{18}\text{O}$ for M3=16.3). The bone isotopic signature of this individual, who was an adolescent at the time of death, is a very similar $\delta^{18}\text{O}$ 15.9. This individual's second incisor did not yield sufficient product to derive an oxygen isotope signature, so we cannot be sure of her very early years, but she appears to have lived on the coast from at least the time that she was about 10 years of age (according to crown formation timing; see Moorees *et al.* 1963) until the time she died.

By contrast, one of the elderly females (C T11A) had oxygen signatures that were lower than the proposed coastal range for both her first incisor ($\delta^{18}\text{O}$ =14.3) and for her third molar ($\delta^{18}\text{O}$ =14.1). Values below the coastal range are believed to be from the

highlands (*cf.* Knudson and Price 2007). However, her bone isotope value is within the local coastal range ($\delta^{18}\text{O}$ =15.2). Thus, this elderly female (C T11A) probably grew up in the highlands and moved to the coast some time within the last 10 years of her life. Another elderly female (C T11B) has the opposite pattern. She has a very high dental isotopic signature ($\delta^{18}\text{O}$ =18.3) and a bone value ($\delta^{18}\text{O}$ =15.5) that is within the local coastal range. We currently do not know from where the values that exceed $\delta^{18}\text{O}$ =17 derive, but they are certainly not from the highlands and are likely from a non-local coastal area. Thus, this individual grew up somewhere other than the highlands or the Jequetepeque Valley, but came to the Jequetepeque in time for her bone signature to take on local values, which would have taken a decade or more.

The third elderly female (C T11D) presents the most complicated sequence of oxygen isotope values in this series. Like C T11B, she has a high dental isotopic signature ($\delta^{18}\text{O}$ =19.7), but she (C T11D) has a bone signature that indicates residency in the highlands ($\delta^{18}\text{O}$ =11.4). This is the lowest oxygen isotope value at Farfán. Nonetheless, the elderly female (C T11D) is buried at Farfán. She must have lived somewhere that was neither the highlands nor the local coastal area while her teeth formed, then moved to the highlands for enough time for her bones to take on the highland signature. She then moved to the Jequetepeque area sometime within the last few years before her death, which occurred before her bones had the time to remodel enough to erase the highland signature.

North Tomb 1

The skeletal sample in North Tomb 1 consists of one adolescent female (N T1A), one old adult female (N T1B), and one

infant (N T1C; Table 3.4). The bones of all three individuals present evidence suggestive of infectious disease, ranging from very minor lesions to much more extensive patterns of bone destruction. The adolescent female (N T1A) has a small erosive lesion on her distal humerus. This lesion may have been the result of joint degeneration or a localized focus of infection. Given her young age, the latter is a more likely diagnosis. The infant (N T1C) has a number of isolated patches of periostitis distributed on the anterior-superior aspect of both humeri and in the gluteal muscle attachment region of the right femur. These lesions likely represent foci of blood-borne infection.

The old adult female (N T1B) shows extensive destruction of her first and second lumbar vertebrae. There are additionally a number of large (3–8 mm) sclerotically bounded (*i.e.* surrounded by dense bone), roughly circular lesions from her ninth thoracic to her third lumbar vertebrae (Figure 3.86). This is the classic presentation of “Pott’s Spine” or spinal tuberculosis (Ortner and Putschar 1985:145; Steinbock 1976:176), where the tuberculous bacilli track down the psoas muscle of the back to infect the vertebrae along its attachment sites in the lower thoracic and lumbar spine. N T1B also has erosive lesions of the pubic symphysis, which is a rare secondary skeletal infection site for tuberculosis (LaFond 1958; Ortner and Putschar 1985:150).

Tuberculosis has been documented in other Pre-Columbian Andean samples, including a Nazca example (Allison *et al.* 1973) and one from Chile (Arriaza *et al.* 1995). Klaus *et al.* (2010) reported several cases from the late-Prehispanic and early Colonial periods of the Lambayeque Valley. Tuberculosis is generally associated with high population densities and sedentary populations (Larsen 2015 [2003]:104) and

suggests the presence of an animal reservoir (Roberts and Buikstra 2003), likely a pinniped (Bos *et al.* 2014). Larsen (2015 [2003]:108) suggests that tuberculosis is occasionally associated with mycotic diseases.

Spinal health in the North Tomb 1 sample was closely related to age. The adolescent female (N T1A) does not display any degenerative changes of her spine. She does, however, demonstrate spondylolysis, or separation of the vertebral body and arch, of her fifth lumbar vertebra (Figure 3.87). In addition to the pathological changes related to the tuberculosis, the old adult individual (N T1B) also demonstrates degenerative changes throughout her spine. These are consistent with age-related wear and tear on the back, and may have been exacerbated by the changes to the spine that accompanied the vertebral collapse from tuberculosis.

Both adult individuals in this tomb demonstrate moderate dental health. The adolescent has five small carious lesions, two enamel chips, and slight calculus. The old adult has one carious lesion, slight degeneration of the temporomandibular joint (TMJ), slight calculus, a few enamel chips, and flat wear along her molars. Although she does demonstrate a few markers of reduced dental health, she had maintained all of her teeth and was actually doing quite well in comparison with most of the old individuals from Farfán.

The adolescent female (N T1A) and the elderly female (N T1B) both demonstrate Form B globular cranial modification. The cranium of the adolescent individual has a very rounded profile and a high cranial index of 93.7. The elderly female demonstrates some evidence of slight flattening of the occiput, but also a globular form with a cranial index of 87.9. The cranium of the

infant (N T1C) was too fragmentary to allow reconstruction of the cranial form.

Carbon and nitrogen isotope assays were run on the adolescent and elderly female (see White *et al.* this volume, Appendix 5, Table A5.3). All three individuals from this tomb were analyzed for oxygen isotope values. The adolescent female (N T1A) has a carbon isotope value that is very close to the site average ($\delta^{13}\text{C}$ -10.9, site average=-10.8), but she has quite a high nitrogen value ($\delta^{15}\text{N}$ 12.4, site average=10.7, highest value=13.6). This indicates that her diet contained abundant maize, but was also quite high in protein, probably from marine sources. The elderly female (N T1B), however, has the highest absolute value for carbon at the site ($\delta^{13}\text{C}$ -9.6), indicating a relative enrichment in maize, as well as a fairly high protein value ($\delta^{15}\text{N}$ 12.7).

The results of the oxygen isotope analysis suggest that all three individuals had a local oxygen signature ($\delta^{18}\text{O}$ 16.7, 15.4 and 16.9 for N T1A, N T1B and N T1C respectively). Bone-tooth spacing in the adolescent (N T1A) and elderly female (N T1B) suggest that they had occupied the local area for quite some time before their deaths ($\delta^{18}\text{O}$ 16.1 and 15.1 on molars for the adolescent and elderly female, respectively).

East Tomb

The East Tomb sample consists of two adult females, one elderly (E T7) and one middle-aged (E T5), two adolescent females (E T1 and E T4) and three juveniles (E T6, E T9 and E T10); (Table 3.5). However, based on dental maturation, the adolescent E T6 is of an age (c. 12 years) that should be in the adolescent category, but none of the long bones had begun to fuse, indicating that the individual was not yet approaching puberty. Thus, E T6 was placed in the juvenile category. Most notably, this sample is

missing identifiable males, and neonates, infants, children, and young adults are also absent.

A mid-adult female (E T5) demonstrates pathological remodeling of her left femoral head and neck (Figure 3.88). The femoral neck is shortened, the head has a mushroom-shaped appearance on the shortened neck, and the greater trochanter is elevated relative to the femoral head. There are two likely causes for this presentation: avascular necrosis of the femoral neck or a slipped femoral epiphysis (Travan *et al.* 2007). Although non-traumatic causes are also recognized, the former condition is commonly caused by trauma to the hip that interrupts the blood supply to the femoral head, subsequently affecting the bone remodeling process (Assouline-Dayana *et al.* 2002). The latter condition is a fracture of the growth plate of the proximal end of the femur, which generally occurs in adolescence. The condition is frequently idiopathic (Travan *et al.* 2007). The differential diagnosis between these two conditions is best done early in the disease process, and is extremely difficult when the condition has lasted for an extended period of time, as it appears to have done in this case. Thus, we cannot provide a definitive diagnosis for the mid-adult female (E T5), but the condition of the left hip clearly indicates that this individual would have experienced moderate pain when bearing weight and she would have had substantially reduced mobility (Greenspan 2015:1076).

The three young subadults in the East Tomb, E T6, E T9, and E T10, all demonstrate a pattern of periostitis throughout the skeleton, often associated with muscle attachment areas, and increased vascular porosity on the mandible and on the sphenoid bone of the cranium (Figure 3.89). This presentation is very similar to that of the adult female, I19 S1A, from Cemetery I, who demonstrates periostitis on the shafts of her right humerus, on the shafts of both tibiae, and on the pubis (but not on the cranial elements). Periostitis can sometimes be associ-

ated with direct bone trauma or bacterial infection, but it is often difficult to say more than that it represents a wide-spread, non-specific infectious disease (Larsen 2002:126). One of the juveniles (E T10) also has a bowed left fibula. The cause of this presentation is unclear. The fact that there are three individuals in the same tomb suffering from non-specific diseases with very similar presentation is quite striking and suggests a common underlying pathological condition.

Another possible diagnosis is suggested by the presence of porosity on the sphenoid bones of these three individuals. Ortner and Erickson (1997) have proposed that sphenoid porosity is diagnostic for scurvy when observed in subadult individuals. Ortner has applied his diagnostic criteria to material from Peru (Ortner *et al.* 1999) and North America (Ortner *et al.* 2001) and has elaborated the diagnosis as being particularly likely when the sphenoid porosity is accompanied by cribra orbitalia and periostotic lesions in the postcranium. His evaluation of material from Peru included samples from the Central Coast and highlands and North Coast, and identified 38 out of 363 individuals as probable cases of scurvy (Ortner *et al.* 1999: 321). Scurvy is caused by a deficiency in vitamin C, which is found in numerous fruits and vegetables that should have been readily available to the occupants of Farfán. Vitamin C is important in the production of collagen and other connective tissues. Deficits in the production of these tissues can lead to increased susceptibility to bleeding between tissue layers, bleeding gums and tooth loss, lethargy and weakness (Bown 2003:40–41; Ortner and Erickson 1997). It is best known for devastating the navies of the “Age of Sail,” when European sailors subsisted on a diet of salt pork and beef, dried or pickled vegetables, and biscuits for months and years at a time (Bown 2003:17). It is worthy of note that Klaus (2014) has reported several individuals that he diagnosed as having scurvy in a late pre-

Hispanic and early Colonial sample from the Lambayeque Valley.

The introduction of fresh fruit and vegetables rich in vitamin C can produce a very rapid recovery from the symptoms of scurvy. If these three subadults did indeed suffer from scurvy, they must have had a very monotonous diet that was free of any sources of vitamin C. Maize does contain vitamin C, so if they both had scurvy and were consuming maize, then the preparation process for maize foods must have eliminated the constituent vitamin C, which is water soluble. Isotopic data seems to support the suggestion that maize consumption in several of these individuals was comparatively limited. One adolescent (E T6) has a very low isotope value for carbon and the lowest value for nitrogen at the site, indicating that this individual had a diet relatively low in both maize and protein (Appendix 5: Table A5.4, see this volume and discussion below for values). One juvenile (E T9) also has a low nitrogen value, but an average carbon value, and the other juvenile (E T10) has average values for both carbon and nitrogen isotopes. These data indicate that the dietary pattern, as represented by carbon and nitrogen isotopes, is not consistent among the three. Furthermore, the presentation of dental health is quite different in the three individuals. As described above, one characteristic features of scurvy is swollen gums and tooth loss. That description certainly characterizes one juvenile (E T9; see below), but does not fit well with the other juvenile (E T10) and not at all with the adolescent (E T6). The absence of a common pattern of isotopic signatures and tooth loss does not appear to support a diagnosis of scurvy.

In light of these inconsistencies, it is worthy of note that Melikian and Waldron (2003:211) have suggested that Ortner’s model of scurvy diagnosis may not be completely reliable, particularly on the basis of differences between the patterning of the cranial lesions on archaeologi-

cal material as compared to documented clinical cases. Furthermore, White *et al.* (2006:40) have rejected a diagnosis of scurvy on a sample of Maya subadult individuals with lesions that are very similar to those described here, on the basis of the richness of vitamin C resources in the Maya region. They concluded that infection, possibly parasitic in origin, is a more likely cause.

While the ultimate causes and pathological mechanisms are different in these two diagnoses—scurvy or systemic non-specific infection—the outcomes for the affected subadults are quite similar. If they had suffered from scurvy, they would have been subjected to a very restricted diet free of vitamin C, which should have been abundant in their environment. They would have experienced pain and bleeding, and the disease could ultimately have contributed to their death. If these individuals had suffered from a systemic infection that caused the similar pattern of lesions observed throughout the skeleton, they would also have experienced pain and bleeding, and the disease may have led to their deaths. However, the implications of the choice between diagnoses with regard to the treatment of these children before their deaths are quite different. On the balance, the more conservative diagnosis of a non-specific (possibly parasitic) systemic infection is probably more parsimonious.

In comparison to other cemeteries from Farfán, the individuals in the East Tomb sample enjoyed relatively good spinal health. One exception was an adolescent female (E T1), who demonstrates wedging of five vertebrae, running from the tenth thoracic to the second lumbar vertebrae. She also had separate foci of degenerative changes from the seventh cervical to the second thoracic vertebrae. This presentation is similar to several individuals from Cemetery J (Chapter 4B) and in other contexts in the Huaca Burial Platform, where vertebral collapse was seen at a relatively young age. The diagnosis

of this condition is likely to be Scheuermann's Kyphosis (see also Center Tomb 11 above).

The mid-adult female (E T5) demonstrates a sequence of Schmorl's nodes from her sixth to tenth thoracic vertebrae, accompanied by small bone outgrowths, or osteophytes, that served to stabilize the bone. Schmorl's nodes are defects in the upper and/or lower surfaces of vertebrae caused by protrusion of the intervertebral disk into the vertebral body, and are generally associated with compressive trauma (Faccia and Williams 2008). This case is quite striking due to the large number of vertebrae involved, and this individual would certainly have experienced pain and perhaps associated neurological symptoms (Murray *et al.* 1993; Wegner and Frick 1999). The old adult female (E T7) demonstrates a few degenerative changes of the mid/lower thoracic spine and of the sacroiliac joint, but these changes are quite minor in comparison to many of the old adult individuals at Farfán. One adolescent (E T6) has auditory exostoses, which suggest that this subadult spent a considerable amount of time in the chilly coastal waters (*cf.* Kennedy 1986; Okumura *et al.* 2007). This is the only individual from the site of Farfán to present this trait.

The dental health of individuals from this tomb is highly variable. The oldest female (E T7) and the two juveniles (E T9 and E T10) demonstrate the poorest dental health. The old adult individual has heavy wear, carious lesions, one abscess, and slight periodontal disease. The two juveniles are in extremely poor health. One juvenile (E T10) has abundant calculus, two carious lesions, and numerous enamel chips. The other (E T9) has three carious lesions, two abscesses, heavy wear, and severe periodontal disease. These conditions have led to the destruction of four deciduous tooth crowns and to the formation of a large calcified mass on the upper right canine and first and second deciduous molars (Figure 3.90).

The calcified mass exhibited by one juvenile (E T9) is unique in the experience of this analyst, and of anyone consulted in this research. It is approximately 25 millimeters wide, 10 millimeters high and 2 millimeters thick. Observation through a microscope at low magnification demonstrates that it has a layered structure and is composed of amorphous material, including unidentifiable plant matter and bacteria, as well as crystalline minerals. It is positioned opposite from where the parotid duct, one of the salivary glands, would have drained into the oral cavity. While this particular presentation appears to be unique, it may be related to a condition referred to as sialolithiasis, or salivary duct stones. In this condition, stones are formed within the salivary glands—generally the submandibular gland, but occasionally the parotid gland—from a variety of mineral compounds present in the saliva (Burstein *et al.* 1979; Karengera *et al.* 2000). If untreated, the stones can cause blockage of the duct, leading to infection, fever, and glandular discomfort. If this mass is related to sialolithiasis, then the formation of the mineralized plaque would be similar to the formation of the glandular stone, and may have been accompanied by similar symptoms. Suffice to say, this juvenile would have experienced serious dental discomfort, and septicemia from a dental infection may well have contributed to this individual's death.

Three of the individuals in the East Tomb have an unmodified Form A cranium: an adolescent female (E T1), the mid-adult female (E T5), and the elderly female (E T7). The cranial index for the adolescent female (89.6) is quite high for a non-modified cranium, and may reflect the presence of a prematurely-fused cranial suture (see below). Three individuals demonstrate Form B frontal occipital modification (adolescent female E T4, another adolescent E T6, and a juvenile E T10) and another juvenile (E T9) demonstrates Form C frontal occipital tabular modification.

In the East Tomb sample, the adolescent females (E T1 and E T4) have slightly elevated carbon values ($\delta^{13}\text{C}$ -11.5 and -11.2 respectively) but average nitrogen values ($\delta^{15}\text{N}$ 10.5 and 10.5; Appendix 5: Table A5.4). E T7 has a high carbon value ($\delta^{13}\text{C}$ -9.7, site maximum = -9.6) and a fairly high nitrogen value ($\delta^{15}\text{N}$ 12.3), indicating relatively high maize and protein consumption. The mid-adult female (E T5) has average values for both isotopes. The overall picture is one of considerable variability in dietary composition.

Isotopic analysis can shed some light on the pathological state of some of the subadults in this sample. The adolescent E T6 demonstrates growth faltering and a systemic disease, has the lowest value for nitrogen ($\delta^{15}\text{N}$ 8.2), and has the second lowest value for carbon ($\delta^{13}\text{C}$ -12.2) of all of the individuals tested from Farfán. This indicates relatively low protein and maize intake. If this individual was indeed diving for marine resources, as suggested by the auditory exostoses, then she was giving them up rather than consuming them. One juvenile (E T9) also has a relatively low nitrogen value ($\delta^{15}\text{N}$ 9.2, site average = 10.7), indicating low protein intake, but an average carbon value ($\delta^{13}\text{C}$ -10.5, site average = -10.8). The other juvenile (E T10) demonstrates average values for both isotopic signatures ($\delta^{13}\text{C}$ -10.4 and $\delta^{15}\text{N}$ 10.6).

The oxygen isotope values from bone for all of the individuals in the East Tomb lie well within the local coastal range. The proposed local coastal range is $\delta^{18}\text{O}$ 15–17, while the range for this tomb runs from $\delta^{18}\text{O}$ 15.1 to 16.3. However, the values for the teeth are more variable. Two of the adolescents and the old adult female (E T1, E T4, and E T7) have enamel values in the local coastal range, consistent with the bone levels. By contrast, the mid-adult female (E T5) has enamel values that indicate she grew up in the highlands ($\delta^{18}\text{O}$ 14.5 for a first incisor and 13.4 for third molar) and moved to the coast some time after early adoles-

cence. The adolescent (E T6) and one juvenile (E T10) have elevated signatures for their enamel ($\delta^{18}\text{O}$ 19.1 and 18.4 for E T6, and $\delta^{18}\text{O}$ 17.5 for E T10). We have not yet determined the source of these elevated signatures, but they are certainly not from the highlands, and likely represent a non-local coastal region. We did not obtain an oxygen isotope signature on dental enamel from the other juvenile (E T9).

In adults, we can use ten years as a rule of thumb to differentiate enamel and bone figures for oxygen isotope signatures, as that is how long it takes for cortical bone to remodel. In a subadult individual, remodeling takes place at a much faster rate. In this case, the incisors would have completed crown formation by approximately four years of age, while the second molar of the adolescent (E T6) would have completed formation by approximately six or seven years of age (Ubelaker 1984:47). Thus, the young juvenile (E T10) must have moved to Farfán between the ages of four and six years, while the adolescent (E T6) must have moved to the Jequetepeque Valley between six and 12 years of age.

Looted Chamber 1

The primary burials in Looted Chamber 1 contained the commingled remains of seven individuals (Table 3.6). This sample includes one mid-adult male (CH 1A), a young adult female (CH 1B), one mid-adult female (CH 1C), three children (CH 1D, CH 1E, and CH 1F), and one juvenile (CH 1G).

There is no obvious evidence of infectious diseases in the individuals interred in Chamber 1. However, a large-bodied adult male (CH 1A) demonstrates generalized osteoporosis in the form of cortical thinning on all of his preserved skeletal elements. The cortical thinning undoubtedly contributed to the fracture of the distal left radius and ulna (Figure 3.91). The large stature and osteoporosis is reminiscent of

the Dos Cabezas “giant” individuals (Donnan 2001:58; Merbs and Cordy-Collins 2011); however, the expression is less extreme, and this individual is not as tall as those found at Dos Cabezas. This osteoporosis was probably also a contributing factor to the collapse of the fifth lumbar vertebra, an event that is rare in individuals of this age. Merbs and Cordy-Collins (*ibid.*) have recently suggested that the Dos Cabezas individuals may have been eunuchs. Pre-pubertal castration is known to cause increased long bone growth and osteoporosis, and has been documented in at least one other skeleton, the 18th century Italian singer Farinelli (Belcastro *et al.* 2011). The spinal column of the young adult female (CH 1B) is not well enough preserved to make any relevant observations. The spine of the mid-adult female (CH 1C) appears to be in good overall health.

The only dentition preserved for the mid-adult male, CH 1A, is in the mandible. These teeth are in good overall health: he demonstrates mild calculus, two enamel chips, and moderate wear. The young adult female (CH 1B) demonstrates moderate dental health. She also has mild calculus and a few enamel chips, but, in addition, she has two carious lesions, periodontal disease, and impacted lower third molars. The mid-adult female (CH 1C) demonstrates poor dental health. She has five open abscesses, and has lost many teeth. There is heavy wear on the remaining dentition, which also displays evidence of periodontal disease. Finally, the juvenile (CH 1G) demonstrates good dental health, although this individual does have moderate wear.

Only one individual from Looted Chamber Tomb 1 was subjected to isotopic analysis. This mid-adult male (CH 1A) produced oxygen, carbon and nitrogen results. His oxygen value, $\delta^{18}\text{O}$ 16.9, indicates probable local residency, although it is at the upper end of the likely local range. CH 1A's carbon and nitrogen isotopic results are, however, quite different from the

remainder of the sample. He demonstrates both a very low (second lowest) $\delta^{13}\text{C}$ value (-12.0) and a very high (second highest) $\delta^{15}\text{N}$ value (13.3). Thus, he was eating less maize than the others, and more protein.

Secondary Burials

Nineteen secondary burials were recovered in the Huaca Burial Platform, and the skeletal elements that comprise each interment are presented in Table 3.7. This sample includes twelve adults, five subadults, and two infants (Table 3.8). The total sample comprises two infants (S26A3 and S26A4), two children (S26B3 and S31C), two juveniles (S21C and S26B4), one adolescent (S21D), two young adults (S21A and S21B), two mid-adults (S26A2 and S31A), and four old adults (S26A1, S26B1, S26B2, and S31B). Four individuals could not be assigned to a category beyond the fact that they are “adults” (S26A5, S26A6, S26A7, and S26A8). Besides the fact that the only age category not represented among the secondary burials is “neonate”, the sample does not appear to have been chosen with regard to a particular age or sex. This sample includes three male secondary interments, in contrast to the single male (CH 1A) in the primary burials of the Huaca Burial Platform.

Analysis indicates that, on the whole, individuals interred in the Huaca Burial Platform secondary burials were relatively healthy. A young adult female (S21A) and an old adult male (S26B2) demonstrate small erosive lesions of the elbow. It is most likely that these lesions are indicative of arthritic changes around the joint, although this was occurring at a young age in S21A. Mild age-related degenerative changes are also visible in the vertebral columns of several individuals, including an unaged adult female (S26A6), a mid-adult male (S31A), an old adult female (S26B1), and S26B2 and S31B, both old adult males. One of the infants (S26A4) demonstrates a sagittal cleft “butterfly”

vertebra in the mid-thoracic region (Figure 3.92).

The young adult female mentioned above, S21A, demonstrates spinal collapse of T11 and the fusion of T6 and T7 vertebrae. Like the degeneration of her elbow, this occurred at an early age for this individual. This condition, diagnosed here as Scheuermann’s Kyphosis (see discussion of the East Tomb above), is not uncommon at Farfán. This individual also demonstrates a segmentation error that left the arches of her second to fourth thoracic vertebrae improperly separated. The right half of the arches of the second and third and the third and fourth vertebrae are fused, while the left half of the arches are not. Between the vertebral collapse and fusion, this individual would not have been very mobile, and probably experienced considerable back pain.

One of the infants (S26B4) demonstrates a sagittal cleft “butterfly” vertebra in the mid-thoracic region (Figure 3.92). The age of this individual is still very young, and this malformation had not yet led to vertebral collapse. This condition may be a populational trait. However, this infant did demonstrate a series of round to square, focally destructive lesions on the posterior edge of all preserved vertebral bodies. This kind of lesion might be produced by tuberculosis, but the large number of affected vertebrae rules out that diagnosis. Differential diagnoses presented in Buikstra (*cf.* 1976:360) and Ortner and Putschar (1985:224) suggest that the most likely cause of these lesions is a fungal infection, such as coccidioidomycosis, which leads to bony involvement of the spine and can be very aggressive (Lewicky *et al.* 2004). Coccidioidomycosis, and related fungal infections, are caused by fungi which occur in alkaline soils and are reported from the North American Southwest, and Central and South America. Individuals with similar lesions, probably related to fungal infections, are found in two other cemeteries at Farfán: Cemetery J (J26 T1B) and Cemetery I (I16 S3; Chap-

ters 4B and 5B). The two focal lesions on S26A4's right fibula may be related to this infection (cf. Buikstra 1976:360), although involvement of this bone is rare (Bried and Galgiani 1986; HersHKovitz *et al.* 1998).

One of the two children (S31C) demonstrates patches of periostitis around the metaphysis, the deltoid tuberosity of the right humerus, and on the radial tuberosity of the right radius. Unfortunately, these are the only two bones preserved for this skeleton, but the pattern and severity of the periostitis is reminiscent of the three juveniles from the East Tomb, E T6, E T9, and E T10 (see above). The diagnoses presented for those juveniles in the East Tomb included possible scurvy and a widespread, non-specific infection. In the absence of more material from this child's skeleton (S31C), it is impossible to be more specific, but either diagnosis would indicate a compromised immune system and quite serious illness.

Only seven individuals in this sample have teeth or tooth enamel sufficient to allow for an assessment of dental health. The dental health appeared to be good in the two infants (S26A3 and S26AB4) and one unaged adult female (S26A8), and was good to moderate in one old adult female (S26BA1). This observation is worthy of note, considering the high frequency of very poor dental health in the whole adult population at Farfán. The two mid-adults (female S26A2 and male S31A) and one old adult female (S26A1) demonstrate the poor overall dental health that is more common among the Farfán adults. Two female individuals, one mid-adult (S26A2), and one elderly (S26B1), present the buccal carious lesions that have been associated with coca chewing (see Figure 3.93; Indriati and Buikstra 2001).

Only four of the secondary burials preserve crania that can be assessed for cranial modification. S26A1 (an adult female) had a non-modified (Form A) cranium and S26B1 (an old adult

female) and S26B3 (an infant) demonstrated the rounded Form B modification (cranial indices of 82.9 and 92.3 respectively). S26B2 (a middle adult female), who was only represented by the cranium, mandible, and four cervical vertebrae, is the only individual at the site who demonstrated the annular "Aymara", Form G, modification (cranial index of 69.0; see Figure 3.93). The only other cranium known to the author with this form of modification from the Jequetepeque Valley is part of the Ubbehlode-Doering Collection from the site of Pacatnamú, which is housed in the State Collection of Anthropology and Palaeoanatomy, in Munich, Germany. It is also an isolated specimen, and its context and date are not secure.

Only three secondary burials, the young adult female (S21A) and two elderly females (S26A1 and S26B1), were assessed for their isotopic composition (Appendix 5: Table A5.1). All oxygen isotopic values indicate local residency. One of the elderly female's (S26A1) values on bone indicate long-term residence, while the other elderly female's (S26B1) values on bone and a third molar indicate long-term residence since at least their early teens. The young adult female's (S21A) values on bone, first molar, and first incisor indicate long-term residence since at least childhood. Only one of the elderly females (S26A1) yielded carbon and nitrogen isotopic results, placing her right at the sample mean for both values.

Context Comparisons

As a whole, the demographic structure of the Huaca Burial Platform is quite striking: first, there are no neonates, and second, there is only one male among the primary burials, but three males among the secondary burials. It is clear that neonates were specifically excluded, and female individuals were preferentially included, in the platform as a whole.

Generally, it does not appear as if a deliberate attempt was made to select individuals of particular ages for particular tombs. However, Center Tombs 2 and 11 do appear to complement each other, as Center Tomb 2 contains three juveniles, two adolescents, and one young adult, and Center Tomb 11 contains one adolescent and three old adult individuals.

The assessment of stature by tomb grouping (females only) shows that low-statured individuals are found in the North Tomb and Center Tomb 11, while higher-statured individuals are found in the East Tomb and Looted Chamber 1 (Figure 3.94). There is a very wide range of statures in the secondary burials. Among the males, the single individual from CH1A is very tall, while the three male individuals among the secondary burials are medium (S31B and S26B2) and tall (S31A) statured, showing a wide range of variation.

Many lesions indicative of the presence of infectious disease were noted in the East Tomb, the North Tomb, and in the secondary burials, while there was a complete absence of infectious lesions in Looted Chamber 1 and Center Tombs 2 and 11. An additional observation of note is that all of the young subadult individuals (younger than adolescence) in the East Tomb were in extremely poor health (E T6, E T9, and E T10). Vertebral degeneration, including the collapse of vertebral bodies, was common throughout the Burial Platform, with fifty percent of observable individuals demonstrating some degree of this condition. In summary, all tombs demonstrated high rates of spinal degeneration, and the East Tomb, North Tomb, and secondary burials had high frequencies of lesions indicative of infectious disease.

All tombs contained individuals in good, moderate, and poor dental health. While there are notable exceptions (e.g. the juveniles from East Tomb T9 and E T10 and Center Tomb 2D,

who all experienced poor dental health), dental health essentially follows age.

Activity patterns were assessed by examining musculo-skeletal stress markers (MSMs) and other morphological indicators, as well as indicators of trauma. For the purposes of this analysis, the MSMs were grouped by major anatomical location: upper arm, forearm, hand, hip, and calf. Only three individuals demonstrate prominent MSM markers on their hands: an elderly female in North Tomb T1B, a mid-adult female in East Tomb T5, and an elderly female in East Tomb T7. The absence of the trait elsewhere highlights these three individuals. None of these individuals, however, demonstrate the combination of MSMs that have been suggested to represent intensive spinning (Nelson, Nelson, Castillo, and Mackey 2000).

Upper and lower arm MSMs are present in low prevalences in all tomb groups, as are hip MSMs, with the exception of Looted Chamber 1. Like the hand MSMs, calf MSMs are observed in only two individuals: Center Tomb 2C and secondary burial S31B. Five individuals have morphological traits that indicate habitual squatting or kneeling: three secondary burials (S26A6, S26B2, and S26B2) and two primary burials (Center Tomb 2C and East Tomb T9).

Evidence for trauma is present at low prevalence on the Huaca Burial Platform (N=4) and does not appear to be clustered in any single tomb group. Those include two examples of cranial trauma (East Tomb T10 and secondary burial S26A1; Figure 3.95) and two examples of rib fractures, both in Center Tomb 11 (see C T11A and C T11C). These traumatic lesions likely represent low-level interpersonal violence, and are not suggestive of wounds received in battle.

Comparisons of Isotopes

Isotopes of carbon and nitrogen indicate dietary preferences. Higher levels of $\delta^{13}\text{C}$ (closer to zero) indicate a greater proportion of maize in the diet. Higher levels of $\delta^{15}\text{N}$ indicate higher levels of protein in the diet (Keegan 1989). There are only single values from the secondary tombs and from Looted Chamber 1. The East Tomb has the largest range of variation (2.5 units), but it also has the most individuals with $\delta^{13}\text{C}$ values. Thus, there does not appear to be any obvious patterning of the $\delta^{13}\text{C}$ values among the tombs (Figure 3.96).

There may be differences between the tomb groupings in terms of the $\delta^{15}\text{N}$ values (Figure 3.97). In this case, the East Tomb, Center Tomb 11, and the secondary burials have low values, indicative of low levels of protein consumption. Center Tomb 2, the North Tomb, and Chamber 1 have high values. Again, the East Tomb has the most individuals with $\delta^{15}\text{N}$ and the largest range of variation. In this case the range of variation is enhanced by two outliers: an adolescent in East Tomb T6 with a very low value ($\delta^{15}\text{N}=8.2$) and an elderly female in East Tomb T7 with a very high value ($\delta^{15}\text{N}=12.3$). The other East Tomb individuals are very tightly clustered around the median value of $\delta^{15}\text{N}=10.5$. The mid-adult male (CH1A) stands out from the rest of the Farfán sample with both a low $\delta^{13}\text{C}$ value (-12.0) and a high $\delta^{15}\text{N}$ value (13.3). This isotopic signature suggests that he had a diet that was both low in maize and high in protein. This diet is perhaps consistent with his unusually tall stature and his presence as the only primary male in the Huaca Burial Platform.

Oxygen isotope values shed light on geographic origins and/or the movement of individuals throughout their lives (White *et al.* 1998). Some skeletal features, such as the dentition, absorb oxygen isotopes during their formation and are not subsequently remodeled, and so reflect residence during early childhood and

adolescence. Other isotope reservoirs, such as bone, incorporate oxygen isotopes from the ambient environment as the bone remodels throughout the life history of an individual. In this way, the analysis of anterior dentition yields information about residence during childhood, while posterior dentition yields information about residence during adolescence, and the whole bone gives an averaged level indicating residence over approximately the last ten years of an individual's life. Thus, a comparison of oxygen isotopes should shed light on whether geographic origin was a factor in determining membership in a tomb group.

Analysis of the oxygen isotope data shows that origin and subsequent residence were not obviously determining factors for inclusion in a particular tomb (Figure 3.98), as all tombs were dominated by local individuals. While the median values for each tomb group do not appear to differ significantly among tombs, the range of variation does.

Analysis of the oxygen isotope data shows that the origin and subsequent residence were not obviously determining factors for inclusion in a particular tomb (see Figure 3.98 for the data on bone), as all tombs were dominated by local individuals. While the median values for each tomb group do not appear to differ significantly among tombs, the range of variation does. Center Tomb 11 has the largest range of variation, particularly in the signatures for the posterior dentition and bone (Table 3.3), suggesting considerable variability in adolescent and adult residence. However, the East Tomb has the largest range of variation for dentition levels (Table 3.5). This indicates that the occupants had lived in a wider variety of places as children, but their bone signatures (Figure 3.98) indicate that they were quite stable as local residents during adulthood. Thus, it is possible that there may have been different residential histories for the individuals in these two tombs.

SUMMARY

A review of the features outlined above indicates that there are very few physical characteristics of the individuals interred in the Huaca Burial Platform that can be seen to cluster within particular tomb groupings. One exception is the presence/absence of lesions indicating infectious disease, which did appear to differ significantly among the tombs. High frequencies of these lesions linked the East Tomb, North Tomb, and the secondary burials. Nitrogen isotope values did appear to differ by tomb, with Center Tomb 2, the North Tomb, and Looted Chamber 1 having high levels of marine protein consumption. Thus, even when patterns are apparent, they are not consistent. Therefore, it would seem that observable traits of the skeleton—including factors such as stature, age, activity pattern, form of cranial modification, or geographic origins—were not factors that determined membership in these tomb groupings. Alternately, it could be said that whatever the factors were that did determine membership in these tomb groupings, they did not affect the chances of exposure to pathological conditions of the spine, dental health, or access to maize.

Several osteological traits should be highlighted as characterizing the burials from the Huaca Burial Platform as a group. These include the preponderance of females; the absence of neonates; the presence of a wide range of oxygen isotope values, including the low values that may indicate the presence of individuals spending time in the highlands; the presence of three extremely sick subadults in the East Tomb; the high frequency of spinal pathology; and the presence of CH1A, from Looted Chamber 1, the only male primary burial in the Huaca Burial Platform. He is the second-tallest individual at the site, has a unique carbon and nitrogen isotopic signature indicating a special diet low in maize and high in protein, and demonstrates several characteristics that are reminiscent of

the Dos Cabezas giants (Donnan 2001; Merbs and Cordy-Collins 2011).

The presence of male individuals among the secondary burials, in a context that is so clearly dedicated to women, is a very interesting observation. The fact that the burials are not complete skeletons would argue against them being drawn from a warehouse context. However, both the partial skeletons as well as the mix of sexes within the human remains could be explained if these secondary burials were exhumed individuals who were no longer known. In the absence of sex-specific burial goods, the mortuary officials from Farfán would likely not have known the sex of the individuals they were exhuming. If this was the case, then the sex of the individual chosen for the offering was not important.

The following observations can be offered with regard to the *aqllakona* from the Huaca Burial Platform. All of the sexable primary burials are female, and grave good associations make it a reasonable assumption that the subadults (not sexable on osteological grounds) were female as well. The range of isotopic variation suggests that they were drawn from throughout the Inca Empire.

The youngest individuals are somewhat younger than the minimum age of eight to nine years proposed by Polo (1873 [c. 1572]:165) and others for induction into the *aqllakona*, Guaman Poma, however, suggested a minimum age of four for apprentice *aqllas* (1980 [c. 1615]:299 [301]–399 [302] pp. 272–275), while Sarmiento (1967 [1572]:151) wrote that girls became *aqlla* at age twelve. However, there are several middle-aged and old adults, which is consistent with the age grades enumerated by Guaman Poma de Ayala (1980 [c. 1615]:299 [301]–399 [302] pp. 272–275). These varying ages suggest that the characterization of the *aqllakona* by the chronicles should not be accepted uncritically.

Girls were chosen by several criteria including aptitude, beauty, and social status. However, many of the women demonstrate pathological conditions that would have been clearly visible, and some would have been quite debilitating. Therefore the women may have been chosen according to aspects other than beauty (*e.g.* Cieza de León (1984 [c. 1553]:128; Guaman Poma de Ayala (1980 [c. 1615]:218 [220]:192).

The activity patterns as reconstructed from MSMs do not accord with those one might expect of a weaver (*cf.* Toyne 2002:140) or spinner (*cf.* Nelson, Nelson, Castillo, and Mackey 2000), despite the very clear archaeological evidence of weaving paraphernalia. However, these women were weavers, regardless of whether we have MSMs or not; that is their contract with the Inca state. Indeed the MSMs show little patterning at all, suggesting that these individuals were engaged in a variety of activities other than weaving.

In summary, several bioarchaeological observations made here are consistent with the expectations from the Spanish chronicles, such as uniformity of sex and isotopic variability, demonstrating that women were chosen throughout the empire. However, others are not, such as the age range, presence of pathological conditions, and trauma. Thus, daily life in an *aqllawasi* may have been somewhat different from that described by the Spanish chroniclers.

BURIAL	AGE	SEX	POS	ORT	ORG	CM	S/M	PC	CIN	TEX	MET	AN	ORI	SH	WEA
C T2A	YA	F	S	N	n/a	B	M	n/a	n/a	n/a	3	n/a	n/a	1	n/a
C T2B	AD	n/a	S	N	n/a	B	n/a	n/a	n/a	n/a	3	n/a	n/a	1	n/a
C T2C	AD	n/a	S	N	n/a	C	n/a	n/a	X	n/a	3	n/a	n/a	1	n/a
CT2D	JUV	n/a	S	N	n/a	E	n/a	n/a	X	n/a	3	n/a	n/a	1	n/a
CT2E	JUV	n/a	S	N	n/a	n/a	n/a	n/a	X	n/a	3	n/a	n/a	1	n/a
CT2F	JUV	n/a	S	NE	n/a	B	n/a	n/a	X	n/a	3	n/a	n/a	1	n/a
C T11A	OA	F	S	E	6	BA	M	n/a	n/a	1	3	n/a	H	2	23
C T11B	OA	F	S	N	6	A	n/a	n/a	n/a	1	3		OC	2	3
C T11C	AD	F	S	W	6	B	n/a	3	n/a	1	3	n/a	OC	2	n/a
C T11D	OA	F	S	S	5, 6	A	n/a	n/a	n/a	1	3	3	H	2	2
N T1A	AD	F	S	W	5	B	M	n/a	n/a	n/a	9	2	J	n/a	n/a
N T1B	OA	F	S	N	n/a	B	n/a	n/a	X	n/a	38910	2	J	2	n/a
N TIC	IN	n/a	E	W	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	J	n/a	n/a
E T1	AD	F	S	N	n/a	A	M	2	n/a	n/a	n/a	n/a	J	n/a	n/a
E T4	AD	F	S	E	5	B	n/a	19	n/a	n/a	n/a	n/a	J	n/a	2
E T5	MA	F	S	N	n/a	A	n/a	1	n/a	n/a	n/a	n/a	H	n/a	n/a
E T6	AD	F	S	N	n/a	B	n/a	1	n/a	n/a	n/a	n/a	OC	n/a	n/a
E T7	OA	F	S	S	n/a	A	n/a	4	n/a	1	125810	n/a	J	n/a	14
E T9	JUV	F	S	S	n/a	C	n/a	1	n/a	n/a	n/a	n/a	n/a	2	n/a
E T10	JUV	F	S	S	n/a	B	n/a	n/a	n/a	n/a	n/a	n/a	OC	n/a	n/a

*Because so little data was available on Looted Chamber 1, these individuals are not included in Table 3.1. For age and sex, see Chapter 3B, Table 3.6.

Burial: burial designation number.

Age: NEO=neonate (0–0.9 years), IN=infant (1–2.9 years), CH=child (3–5.9 years), JUV=juvenile (6–11.9 years), AD=adolescent (12–19.9 years), YA=young adult (c. 20–29 years), MA=mid-adult (c. 30–39 years), and OA=old adult (c. 40+ years).

Sex: F=female, M=male, N/A=not available.

Pos: burial position, S=seated, E=extended.

Ort: seated orientation of the body, based on which way pelvis is facing; extended orientation is based on head direction only.

Org: organics, 1=seed, 2=maize, 3=fruit, 4=fish, 5=gourd, 6=*Nectandra* seed necklace, 7=wooden figurine.

CM: cranial modifications A–G (see Nelson, Chapter 2, Figure 2.1).

S/M: tomb configuration, S=single, M=multiple individuals.

PC: quantity of ceramics directly associated with an individual, rather than a communal offering.

Cin: presence of cinnabar on the bones.

Tex: 1=textile bag, 2=other textiles, 3=shroud.

Met: presence of metal, 1=discs, 2=beads, 3=rings, 4=folded copper pieces, 5=silver beads, 6=copper spindle, 7=copper tweezers, 8=other silver object, 9=silver-plated copper rattle, 10=copper tumi, 11=other copper.

An: animal remains, 1=feline, 2=llama, 3=guinea pig.

Ori: individual originally from J=the Jequetepeque Valley; OC=other coastal valley, H=the highlands.

Sh: shell, 1=shell beads, 2=whole Spondylus shell, 3=mixed media with other material.

Wea: weaving equipment, 1=spindle whorl, 2=weaving swords, 3=weaving basket, 4=needles, 5=chalk, 6=unspun wool.

Table 3.1. Huaca Burial Platform, Primary Burial Data (N=20*).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
C T2A	young adult female (20–30 yrs)	short (142 cm)	<ul style="list-style-type: none"> • moderate to poor dental health • slight wear & calculus; 1 enamel chip; 2 molar crowns destroyed by calculus 		Form B ^c (CI=95.9) ^d
C T2B	adolescent female (16–18 yrs)	n/a	<ul style="list-style-type: none"> • good dental health • 1 enamel chip 	$\delta^{13}\text{C} = -10.1$ $\delta^{15}\text{N} = 12.0$	Form B (CI=96.8)
C T2C	adolescent (12–14 yrs)	n/a	<ul style="list-style-type: none"> • no femoral head arteries—early stage of avascular osteonecrosis? • forward angulation (kyphosis) of spine focused on T6–butterfly vertebra • good dental health • 1 enamel chip 	$\delta^{13}\text{C} = -10.1$ $\delta^{15}\text{N} = 13.6$	Form C (CI=102.1)
C T2D	juvenile (7–8 yrs)	n/a	<ul style="list-style-type: none"> • poor dental health • 4 carious lesions (1 destroyed a molar crown), slight calculus and heavy wear 	n/a	Form E (CI=n/a)
C T2E	juvenile (5–7 yrs)	n/a	<ul style="list-style-type: none"> • good dental health 	n/a	Form B (CI=n/a)
C T2F	juvenile (6–8 yrs)	n/a	<ul style="list-style-type: none"> • good to moderate dental health • 1 carious lesion and a few enamel chips 	n/a	Form B (CI approx. 101)

^a Unsexable subadult individuals do not have a sex assigned.

^b $\delta^{18}\text{O}_p$ =oxygen, $\delta^{13}\text{C}$ =carbon, $\delta^{15}\text{N}$ =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

^c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

^d CI=cranial index.

Table 3.2. Huaca Burial Platform—Center Tomb 2 (N=6).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
C T11A	old adult female (40+ yrs)	short (140.3 cm)	<ul style="list-style-type: none"> • collapse of T8–T10 and extensive osteophyte formation T11–L2 • collapse produces a kyphosis and scoliosis • very poor dental health • extensive tooth loss (7 teeth), 2 large abscesses, periodontal disease, enamel chips, calculus, flat wear 	$\delta^{18}\text{O}_p$ tooth (I1)=14.3 $\delta^{18}\text{O}_p$ tooth (M3)=14.1 $\delta^{18}\text{O}_p$ bone=15.5 $\delta^{13}\text{C}=-11.8$ $\delta^{15}\text{N}=10.0$	Form A ^c (CI=87.3) ^d
C T11B	old adult female (40+ yrs)	short (140.8 cm)	<ul style="list-style-type: none"> • collapse of T7 and T11 • Schmorl's nodes on inferior surface of T6 and superior surface of T9 • poor dental health • extensive wear, including heavy labial wear on the lower incisors, degeneration of the TMJ, two molar crowns destroyed by caries with accompanying abscesses, slight impaction of upper right M3, enamel chips 	$\delta^{18}\text{O}_p$ tooth (I2)=18.3 $\delta^{18}\text{O}_p$ bone=15.5 $\delta^{13}\text{C}=-11.0$ $\delta^{15}\text{N}=10.9$	Form A (CI=87.4)
C T11C	adolescent female (15–20 yrs)	medium (146.8 cm)	<ul style="list-style-type: none"> • bowing of both fibulae • collapse of T11 and T12 • collapse produces scoliosis and kyphosis • good dental health • 2 carious lesions, slight wear 	$\delta^{18}\text{O}_p$ tooth (M3)=16.0 $\delta^{18}\text{O}_p$ bone=15.9 $\delta^{13}\text{C}=-11.1$ $\delta^{15}\text{N}=11.0$	Form B (CI=90.0)
C T11D	old adult female (40+ yrs)	short (139.3 cm)	<ul style="list-style-type: none"> • benign osteoma on right parietal • very slight spinal degeneration • arthritic degeneration of joints around the sternum • very poor dental health • 4 carious lesions active at death, 3 abscesses, tooth loss, periodontal disease 	$\delta^{18}\text{O}_p$ tooth (M2)=19.7 $\delta^{18}\text{O}_p$ bone=11.4 $\delta^{13}\text{C}=-11.1$ $\delta^{15}\text{N}=10.6$	Form A (CI=90.0)

^a Unsexable subadult individuals do not have a sex assigned.

^b $^{18}\text{O}_p$ =oxygen, ^{13}C =carbon, ^{15}N =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

^c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

^d CI=cranial index.

Table 3.3. Huaca Burial Platform–Center Tomb 11 (N=4).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
N T1A	adolescent female (c. 15 years)	short (141.0 cm)	<ul style="list-style-type: none"> • small lesion in right elbow • L5 spondylolysis • moderate dental health • 5 small carious lesions, 2 enamel chips, slight calculus 	$\delta^{18}\text{O}_p$ tooth (M3)=16.1 $\delta^{18}\text{O}_p$ bone=16.7 $\delta^{13}\text{C}=-10.9$ $\delta^{15}\text{N}=12.4$	Form B ^c (CI=93.7) ^d
N T1B	old adult female (40+ years)	short (139.2 cm)	<ul style="list-style-type: none"> • erosive destruction of the pubic symphysis • slight degenerative changes throughout • extensive destruction of L1 and L2 and large sclerotic lesions in T9–L3; tuberculosis? • moderate dental health • 1 carious lesion • slight degeneration of the temporomandibular joint • slight calculus • flat wear • enamel chips 	$\delta^{18}\text{O}_p$ tooth (M3)=15.1 $\delta^{18}\text{O}_p$ bone=15.3 $\delta^{13}\text{C}=-9.6$ $\delta^{15}\text{N}=12.7$	Form B (CI=87.9)
N T1C	infant (c. 9 month–1 year)	n/a	<ul style="list-style-type: none"> • several isolated patches of periostitis (both humeri and proximal right femur) 	$\delta^{18}\text{O}_p$ bone=16.9	n/a

^a Unsexable subadult individuals do not have a sex assigned.

^b $\delta^{18}\text{O}_p$ =oxygen, $\delta^{13}\text{C}$ =carbon, $\delta^{15}\text{N}$ =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

^c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

^d CI=cranial index.

Table 3.4. Huaca Burial Platform–North Tomb 1 (N=3).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
E T1	adolescent female (16–18 years)	tall (151.9 cm)	<ul style="list-style-type: none"> wedging of 5 vertebrae from T10–L2 degenerative focus from C7 to T2 moderate dental health many chips in the enamel periodontal disease around lower molars 	$\delta^{18}\text{O}_p$ tooth (I1)=15.9 $\delta^{18}\text{O}_p$ tooth (M3)=15.0 $\delta^{18}\text{O}_p$ bone=15.7 $\delta^{13}\text{C}=-11.5$ $\delta^{15}\text{N}=10.5$	Form A ^c (CI=89.6) ^d
E T4	adolescent female (15–17 years)	medium (143.7 cm)	<ul style="list-style-type: none"> good-moderate dental health 3 carious lesions mild calculus mild periodontal disease around molars 	$\delta^{18}\text{O}_p$ tooth (I1)=17.2 $\delta^{18}\text{O}_p$ tooth (M3)=17.0 $\delta^{18}\text{O}_p$ bone=15.5 $\delta^{13}\text{C}=-11.2$ $\delta^{15}\text{N}=10.5$	Form B (CI=94.5)
E T5	mid-adult female (30–40 years)	medium (149.7 cm)	<ul style="list-style-type: none"> avascular necrosis or slipped epiphysis of femoral head/neck Schmorl's nodes on matching surfaces of T6–T7, T7–T8, T8–T9, T9–T10 osteophytes on same vertebrae poor dental health several carious lesions, 2 abscesses, tooth loss, calculus, enamel chips, heavy wear and abundant periodontal disease 	$\delta^{18}\text{O}_p$ tooth (I1)=14.5 $\delta^{18}\text{O}_p$ tooth (M3)=13.4 $\delta^{18}\text{O}_p$ bone=15.5 $\delta^{13}\text{C}=-10.5$ $\delta^{15}\text{N}=10.4$	Form A (CI=85.1)
E T6	adolescent (c. 12 years)	n/a	<ul style="list-style-type: none"> patches of periostitis on the humeri, clavicles, ribs, femora, and tibiae porosity on sphenoid good dental health 	$\delta^{18}\text{O}_p$ tooth (I1)=19.1 $\delta^{18}\text{O}_p$ tooth (M2)=18.4 $\delta^{18}\text{O}_p$ bone=15.2 $\delta^{13}\text{C}=-12.2$ $\delta^{15}\text{N}=8.2$	Form B (CI=89.8)
E T7	old adult female (40+ years)	tall (151.5 cm)	<ul style="list-style-type: none"> a few degenerative changes in the mid/lower thoracic spine osteophytes in lumbar spine degenerative changes of the sacroiliac joint poor dental health heavy wear (more on maxilla than mandible), many enamel chips, 2 carious lesions, 1 abscess slight periodontal disease 	$\delta^{18}\text{O}_p$ tooth (M3)=16.3 $\delta^{18}\text{O}_p$ bone=15.1 $\delta^{13}\text{C}=-9.7$ $\delta^{15}\text{N}=12.3$	Form A (CI=86.1)
E T9	juvenile (6–7 years)	n/a	<ul style="list-style-type: none"> patches of periostitis on the femora and tibiae porosity on mandible and sphenoid extremely poor dental health 3 carious lesions, 2 abscesses, severe periodontal disease, 4 deciduous crowns destroyed, large calcified mass on upper right 1st and 2nd deciduous molars 	$\delta^{18}\text{O}_p$ bone=16.3 $\delta^{13}\text{C}=-10.5$ $\delta^{15}\text{N}=10.2$	Form C (CI=98.5)
E T10	juvenile (6–7 years)	n/a	<ul style="list-style-type: none"> patches of periostitis on scapulae, humeri, femora, tibiae and fibulae porosity on sphenoid and mandible bowed left fibula poor dental health abundant calculus, enamel chips, 2 carious lesions 	$\delta^{18}\text{O}_p$ tooth (I1)=17.5 $\delta^{18}\text{O}_p$ bone=15.3 $\delta^{13}\text{C}=-10.4$ $\delta^{15}\text{N}=10.6$	Form B (CI=94.5)

^a Unsexable subadult individuals do not have a sex assigned.

^b $^{18}\text{O}_p$ =oxygen, ^{13}C =carbon, ^{15}N =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

^c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

^d CI=cranial index.

Table 3.5. Huaca Burial Platform–East Tomb (N=7).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
CH 1A	mid-adult male (30–40 yrs)	tall (165.7cm)	<ul style="list-style-type: none"> • osteoporosis • collapse of L5 • good dental health • mild calculus, 2 enamel chips, moderate wear 	$\delta^{18}\text{O}_p$ tooth (PM1)=16.9	n/a
CH 1B	young adult female (20–30 yrs)	tall (150.4cm)	<ul style="list-style-type: none"> • moderate dental health • mild calculus, enamel chips, 2 caries, periodontal disease, impacted lower third molars 	n/a	Form B ^c (CI=93.5) ^d
CH 1C	mid-adult female (30–40 yrs)	medium (144.3cm)	<ul style="list-style-type: none"> • poor dental health • tooth loss, heavy wear, 5 abscesses, periodontal disease 	n/a	Form A (CI=89.4)
CH 1D	child (c. 4 yrs)	n/a	n/a	n/a	n/a
CH 1E	child (c. 4.5–5.5 yrs)	n/a	n/a	n/a	n/a
CH 1F	child (c. 4 yrs)	n/a	n/a	n/a	n/a
CH 1G	juvenile (6–8 yrs)	n/a	<ul style="list-style-type: none"> • good dental health • moderate wear 	n/a	n/a

^a Unsexable subadult individuals do not have a sex assigned.

^b $^{18}\text{O}_p$ =oxygen, ^{13}C =carbon, ^{15}N =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

^c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

^d CI=cranial index.

Table 3.6. Huaca Burial Platform–Looted Chamber 1 (N=7).

Individual	Skeletal Elements
S21B	bones of both legs, both upper arms and hands (but not lower arm bones); no cranium, mandible, pelvis, feet; several thoracic vertebrae are all that remain of the thorax and spine
S21A	a tibia, bones of the foot, scapula, humerus, teeth and cranial vault fragments, and many other bone fragments
S21C	pelvic fragments, right femur, ankle bones, and other bone fragments
S21D	pelvic fragments and other bone fragments
S26A1	cranium; vertebrae C1–C6; no mandible
S26A2	cranium with mandible; vertebrae C1–C4
S26A3	cranium, isolated teeth, ulna, radius, and femur
S26A4	most of the spine, hands, feet, fragments of the pelvis, fragments of the scapulae and the sternum; several teeth are preserved; long bones preserved include the left tibia, both fibulae, the right clavicle and unsided ulna fragments
S26A5	two complete feet
S26A6	major bones of the right arm and leg, both scapulae, fragments of the ribs and vertebrae, a complete pelvis, both patellae, the right forearm, and both feet; no cranium or mandible
S26A7	right and left humeri, a fragment of the left ulna, bones of both hands, the right femur, tibia, and fibula, fragments of the right tibia, and elements of both feet; no thorax, pelvis, cranium, or mandible
S26A8	mandible only
S26B1	almost complete skeleton—she is missing her left arm bones, right lower arm bones, right leg bones, both fibulae, 2 lumbar vertebrae, and the right clavicle
S26B2	bones of both arms, the thorax (not complete), the left half of the pelvis, and the left leg; no cranium
S26B3	miscellaneous fragments including pieces of the pelvis and major long bones
S26B4	miscellaneous fragments including pieces of the pelvis and major long bones
S31B	right ulna, left fibula, right femur, right tibia both calcanei, isolated cervical, thoracic and lumbar vertebrae, a few rib fragments, and a mandible; no cranium or mandible
S31A	major bones of the left leg, foot bones from both sides, the left pelvis, both patellae, elements of the left hand, the left radius, and some lumbar vertebrae; no cranium or mandible
S31C	right humerus and radius

Table 3.7. Huaca Burial Platform—Secondary Burials, Skeletal Elements.

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
S21B	young adult female (20–30 yrs)	medium (145.0cm)	<ul style="list-style-type: none"> • small erosive lesion at right elbow • collapse of T11 • fusion of T6 and T7 • segmentation error (fusion of arches) of T2–T4 	$\delta^{18}\text{O}_p$ bone=17.3	n/a
S21A	young adult female (20–30 yrs)	short (141.3cm)	n/a	n/a	n/a
S21C	juvenile (5.5–7.5 yrs)	n/a	n/a	n/a	n/a
S21D	adolescent (8.5–12.5 yrs)	n/a	n/a	n/a	n/a
S26A1	old adult female (40+ yrs)	n/a	<ul style="list-style-type: none"> • poor dental health • 4 abscesses, tooth loss, 4 crowns destroyed to roots, 1 broken incisor, 2 small cavities and periodontal disease 	$\delta^{18}\text{O}_p$ bone=15.0 $\delta^{18}\text{O}_p$ tooth (M3)=15.9	Form B ^c (CI=89.2) ^d
S26A2	mid-adult female (30–40 yrs)	n/a	<ul style="list-style-type: none"> • very poor dental health • heavy wear, 4 cavities, 2 teeth lost antemortem, coca lesion 	n/a	Form G (CI=69.0)
S26A3	infant (2–2.5 yrs)	n/a	n/a	n/a	Form B (CI=92.3)
S26A4	infant (2–3 yrs)	n/a	<ul style="list-style-type: none"> • 2 focal destructive lesions on right fibula • round to square lesions on anterior surface of most preserved vertebrae • also Butterfly Vertebrae in mid-thoracic region 	n/a	n/a
S26A5	adult (20+ yrs)	n/a	n/a	n/a	n/a
S26A6	adult female (25+ yrs)	medium (148.3cm)	<ul style="list-style-type: none"> • slight degeneration of upper and lower thirds of thoracic spine and in lumbar spine 	n/a	n/a
S26A7	adult female (20+ yrs)	medium (143.8cm)	n/a	n/a	n/a
S26A8	adult female (20+ yrs)	n/a	n/a	n/a	n/a
S26B1	old adult female (40+ yrs)	tall (152.2cm)	<ul style="list-style-type: none"> • tied with I10 S1 as the tallest female at the site • collapse of T7 and L1 • osteophytes above and below collapsed vertebrae • good dental health • slight calculus, several enamel chips • alveolar resorption on buccal surface of mandible by 1st and right 2nd molars (coca lesion?) 	$\delta^{18}\text{O}_p$ tooth (I1)=15.0 $\delta^{18}\text{O}_p$ tooth (M3)=15.8 $\delta^{18}\text{O}_p$ bone=15.7 $\delta^{13}\text{C}=-10.7$ $\delta^{15}\text{N}=11.0$	Form A (CI=80.7)
S26B2	old adult male (40+ yrs)	medium (159.7cm)	<ul style="list-style-type: none"> • small erosive lesion at left elbow • degeneration of cervical spine • osteophytes in lumbar spine 	n/a	n/a
S26B3	child (2.5–3.5 yrs)	n/a	n/a	n/a	n/a
S26B4	juvenile (6.5–7.5 yrs)	n/a	n/a	n/a	n/a

Table 3.8. Huaca Burial Platform—Secondary Burials (N=19).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
S31B	mid-adult male (30–40 yrs)	tall (161.3cm)	<ul style="list-style-type: none"> • extensive osteophyte formation around the single lumbar vertebra (L5) • very poor dental health • calculus, loss of both first molars, supernumary teeth (mandible only) 	n/a	n/a
S31A	old adult male (40+ yrs)	medium (156.4cm)	<ul style="list-style-type: none"> • pronounced osteophytes on anterior margin of lumbar vertebrae 	n/a	n/a
S31C	child (2.5–4.5 yrs)	n/a	<ul style="list-style-type: none"> • subperiosteal porosity around metaphyseal margins and deltoid tuberosity of humerus and radial tuberosity of radius 	n/a	n/a

^a Unsexable subadult individuals do not have a sex assigned.

^b ¹⁸O_p=oxygen, ¹³C=carbon, ¹⁵N=nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

^c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

^d CI=cranial index.

Table 3.8. Huaca Burial Platform—Secondary Burials (N=19) (cont.).

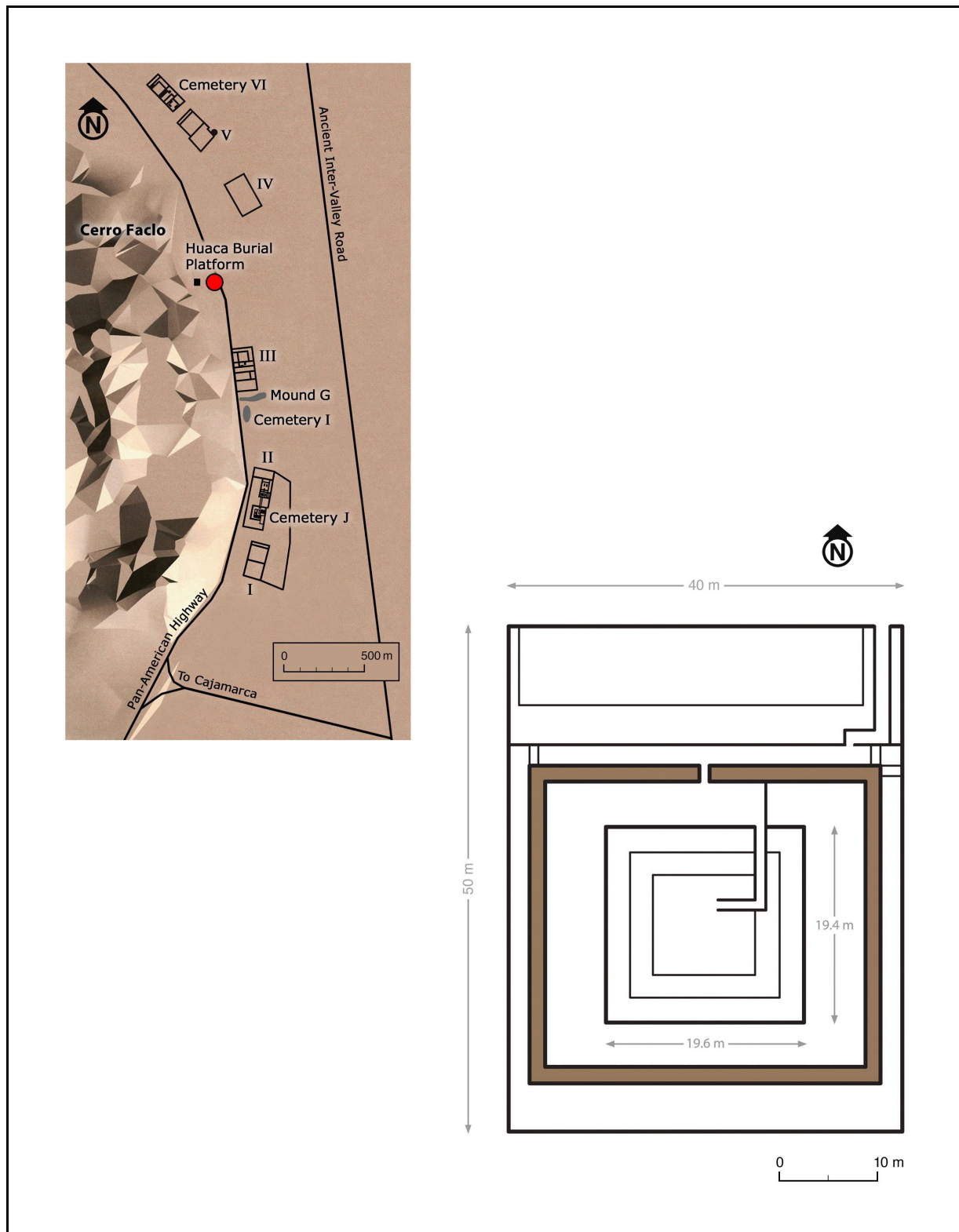


Figure 3.1. Top: overview of Farfán's compounds, showing the location of the Huaca Burial Platform; bottom: plan view of the Huaca Burial Platform.

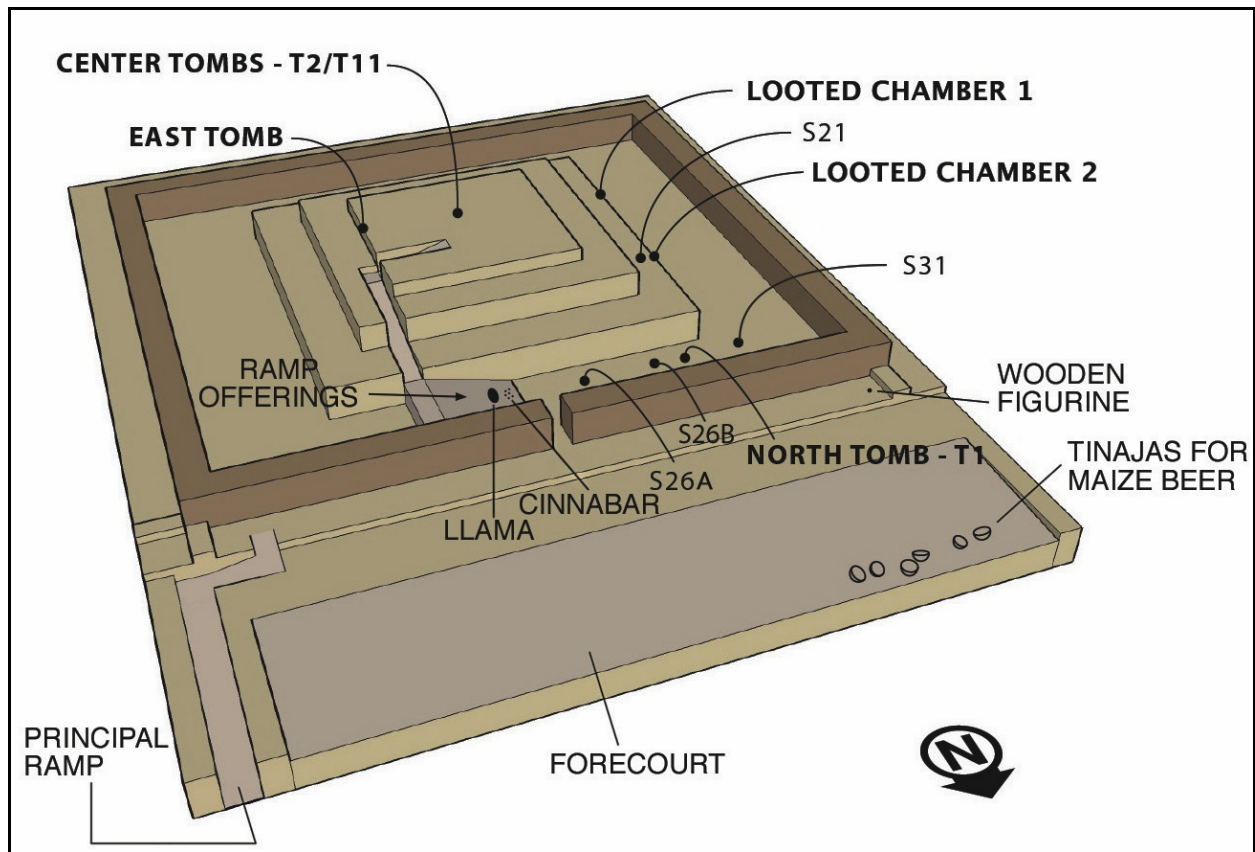


Figure 3.2. Perspective view of the Huaca Burial Platform, indicating the primary tombs in bold (T). Secondary tombs (S) and other features are also indicated.



Figure 3.3. The form of the Huaca Burial Platform emerges as the crew clears away the overburden.



Figure 3.4. Top: excavation on the Huaca Burial Platform's east side that revealed the principal ramp, seen at the bottom of this figure.



Figure 3.5. Wooden human figure embedded in the fine plaster floor of the walkway, Huaca Burial Platform.

Figure 3.6. Cinnabar offering placed on the interior ramp, Huaca Burial Platform.



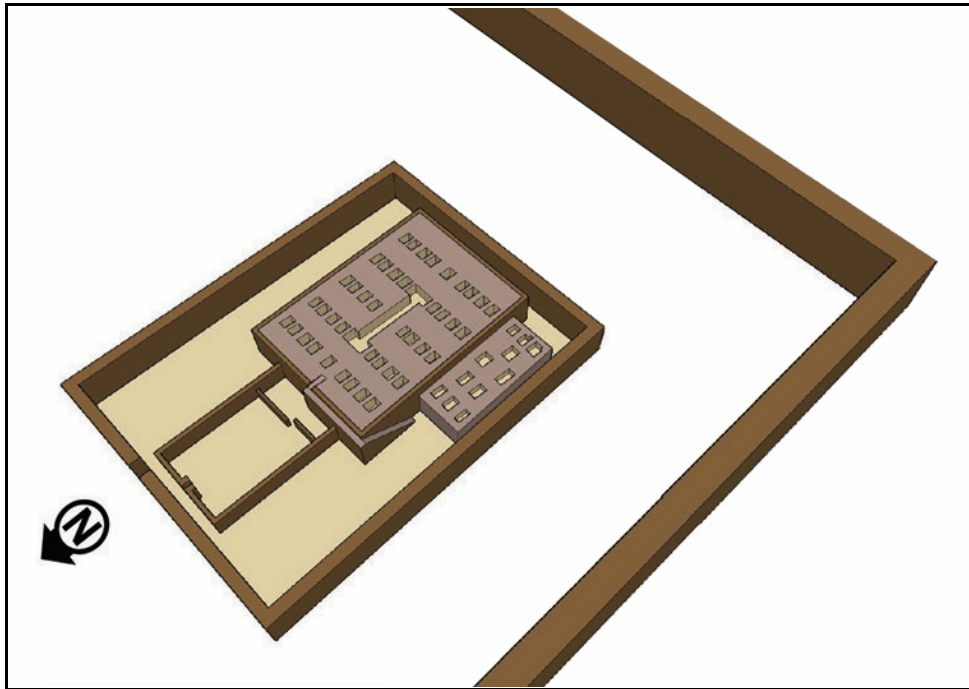


Figure 3.7a. Perspective view of a Chimu burial platform.

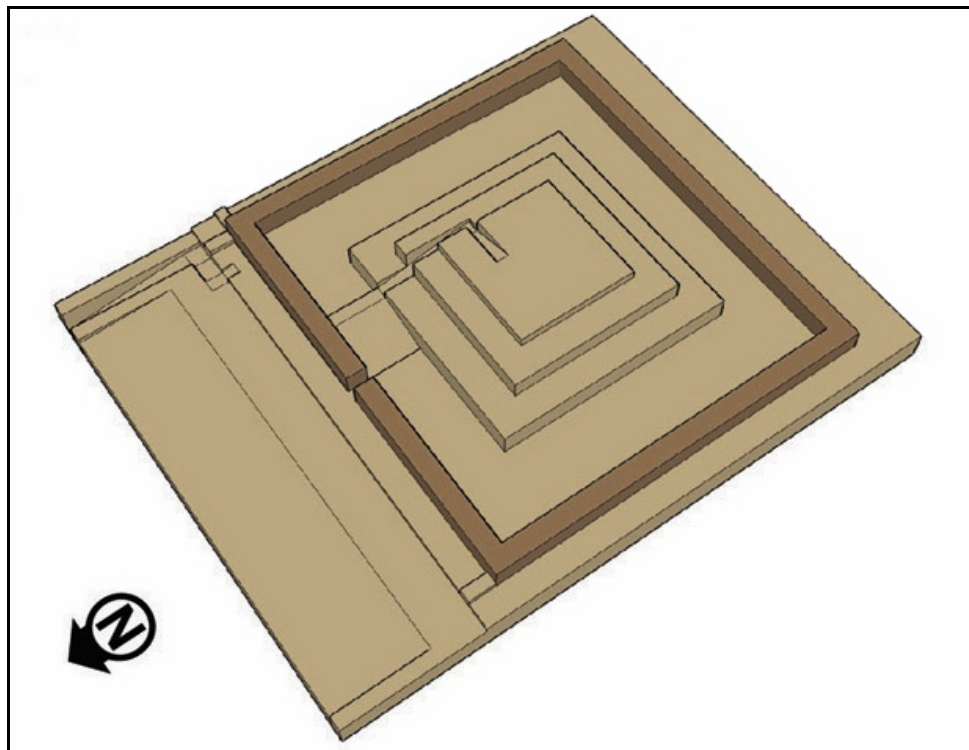


Figure 3.7b. Perspective view of the Farfán Inca Huaca Burial Platform.

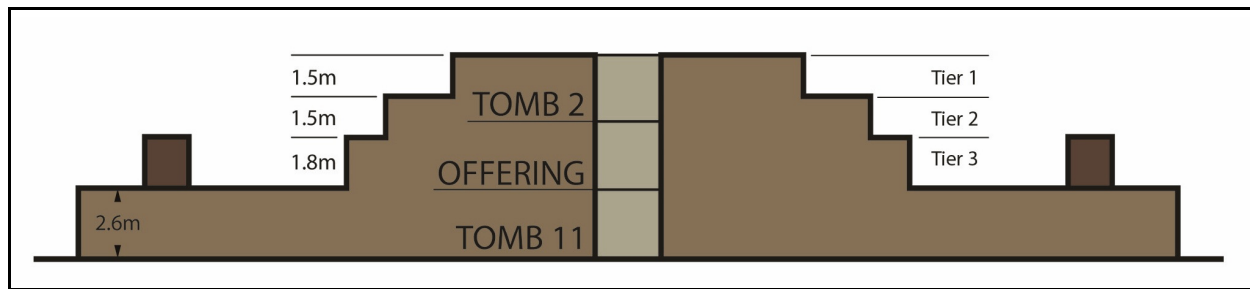


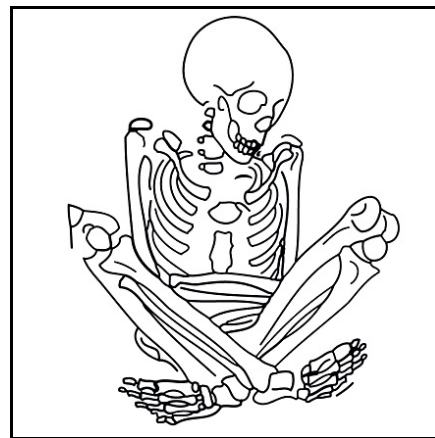
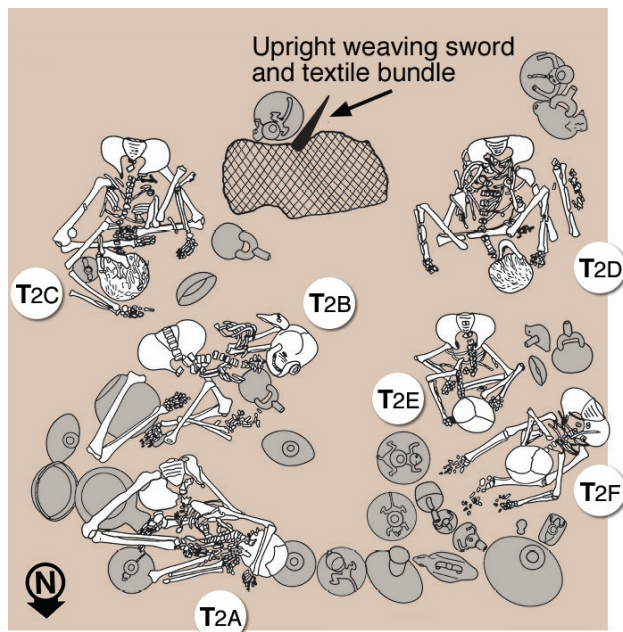
Figure 3.8. The Huaca Burial Platform's center shaft, with the three levels in the platform indicated. The two tombs (Tomb 2 or Center Tomb 2) and Tomb 11 (or Center Tomb 11) are separated by the spondylus offering.



Fig. 3.9. Crew member Juan Chavarri uncovering the top of a face-neck jar in Center Tomb 2.



Figure 3.10a. Photograph of Center Tomb 2 with some ceramic vessels removed in order to see the skeletal remains (see Appendix 6 for entire grave lot).



Figures. 3.10b, c. (b, left): drawing of the burials in Center Tomb 2; (c., right): the original position of the bodies, which are all seated with knees flexed and apart.

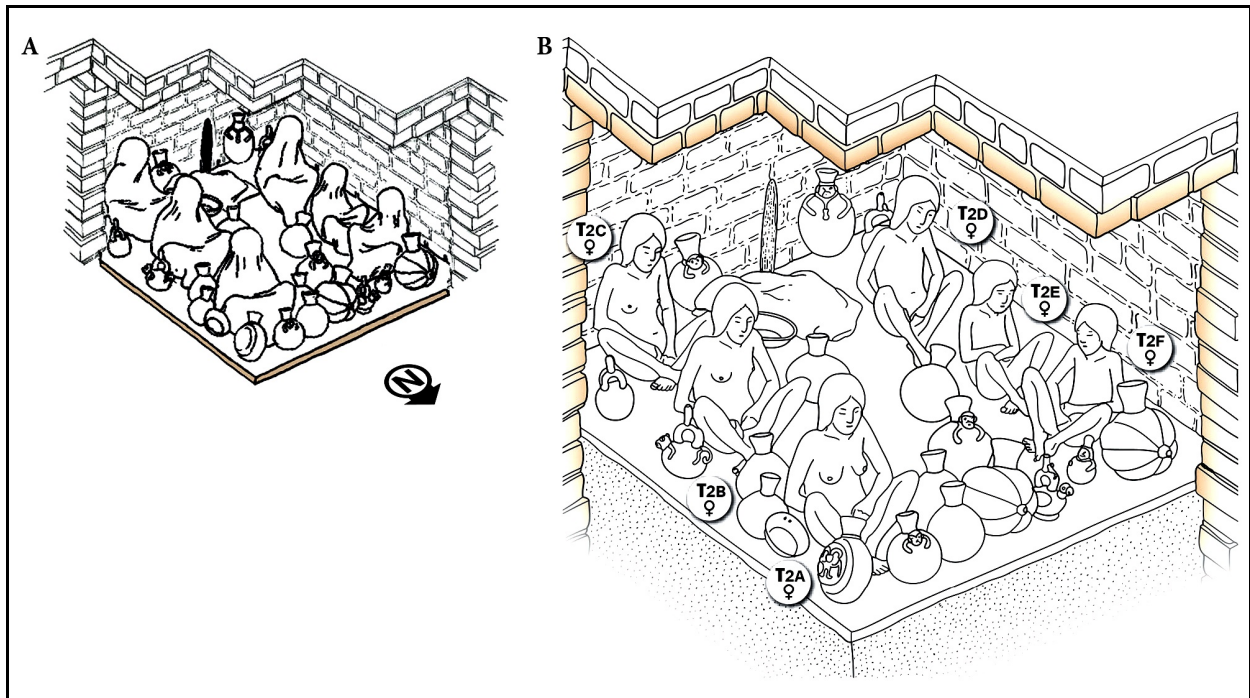


Figure 3.11. (a) The bodies in Center Tomb 2 were covered with plain-weave cotton shrouds;
(b) Reconstruction drawing of the females within the tomb.

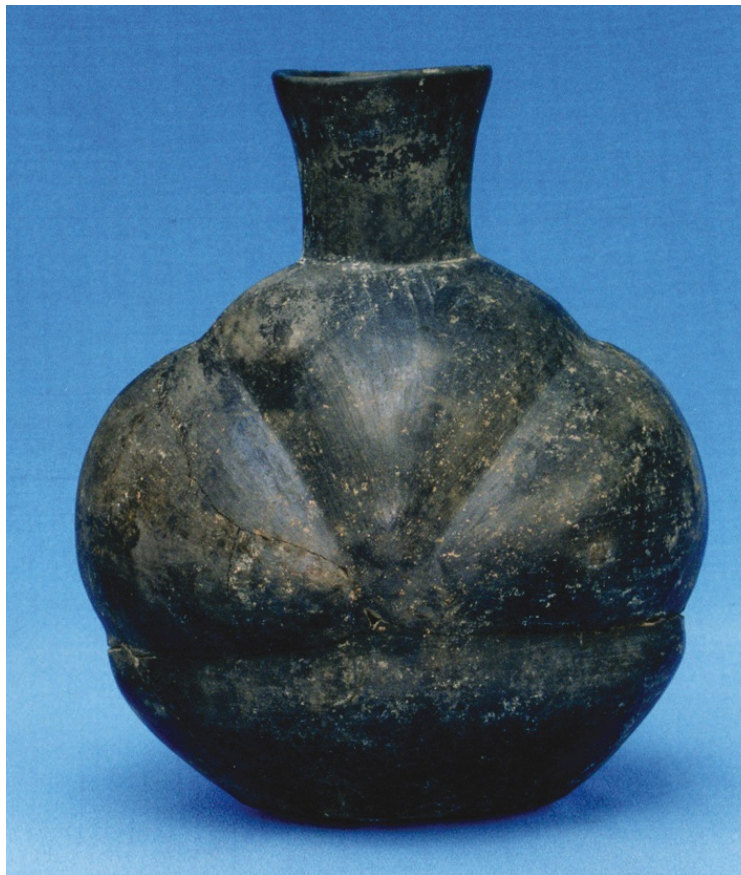


Figure 3.12. One of the pair of identical jars found in Center Tomb 2.
Height: 32.5 centimeters.



Figure 3.13. Jar showing pattern burnishing on its neck and two distinct images of the Staff God, with the back view shown in the drawing. Huaca Burial Platform, Communal Offering, Center Tomb 2. Height: 32.5 centimeters.

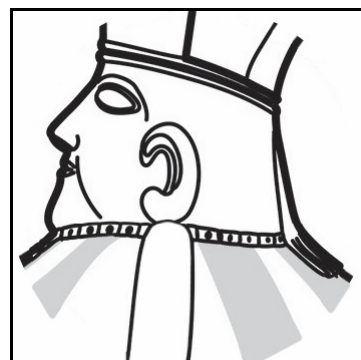


Figure 3.14 a (left) and b (top). Face-neck jar showing the typical Hybrid-Inka style profile with protruding jaw and evidence of pattern burnishing indicated in gray on the drawing. Huaca Burial Platform, communal offering Center Tomb 2. Height: 31 centimeters.

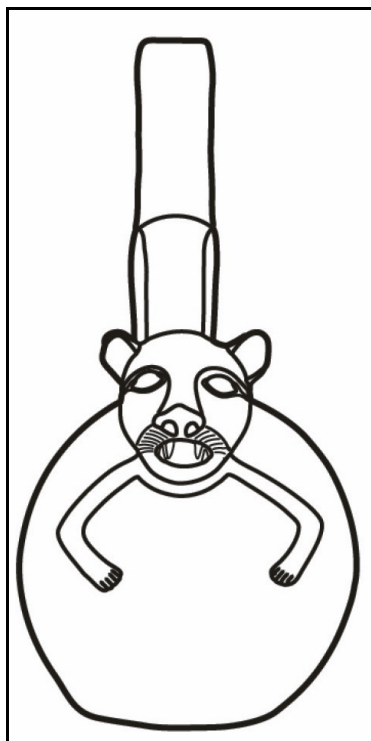


Figure 3.15. Blackware stirrup spout vessel with a feline face from the Huaca Burial Platform Center Tomb 2 and similar to that found in North Tomb 1 (see Figure 3.35). Height: 22.6 centimeters.

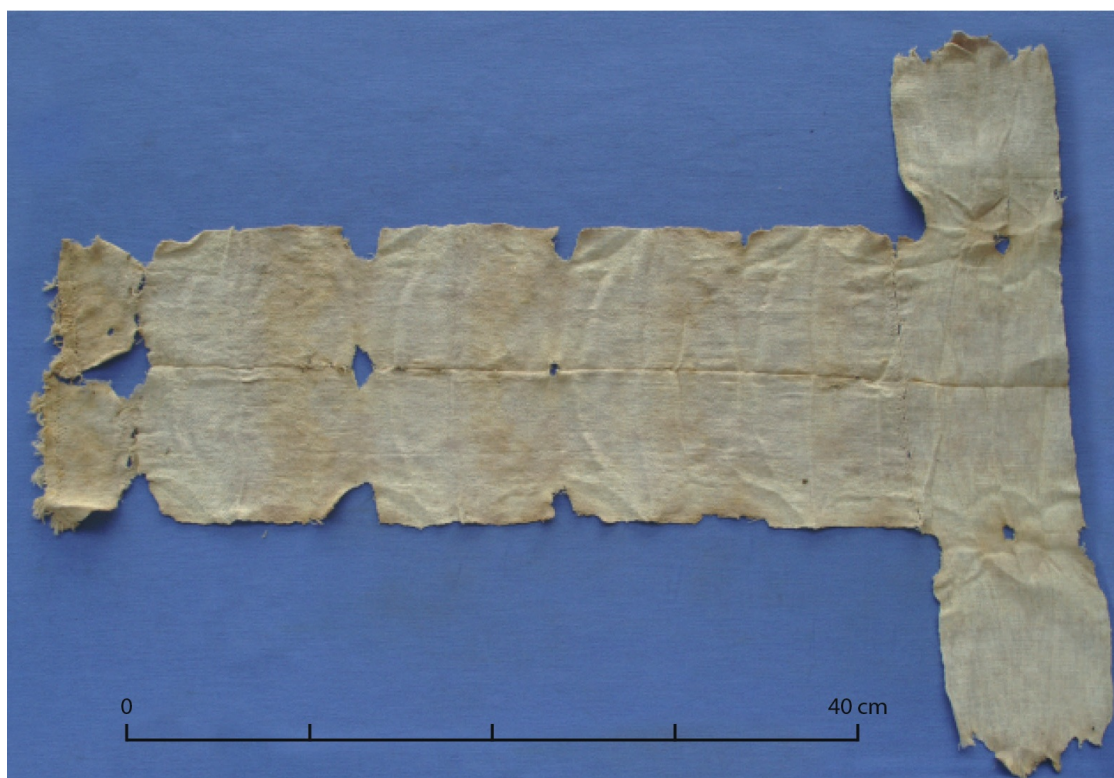


Figure 3.16. Miniature plain-weave loincloth, 53 by 40 centimeters (at its widest point). Huaca Burial Platform.



Figure 3.17. One of the rings found with the younger girls in Center Tomb 2. These rings had pieces of yarn and shell beads tied to them.

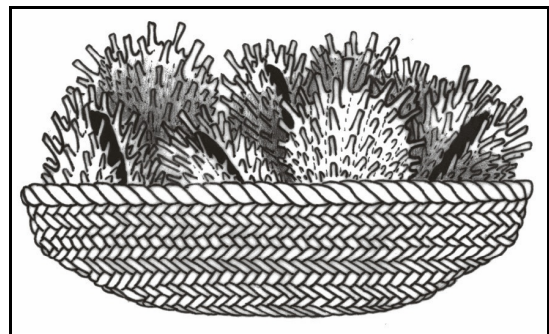


Figure 3.18. Left: spondylus shells as found in situ in the Huaca Burial Platform; right: illustration of the basket containing the offering of spondylus bivalves.

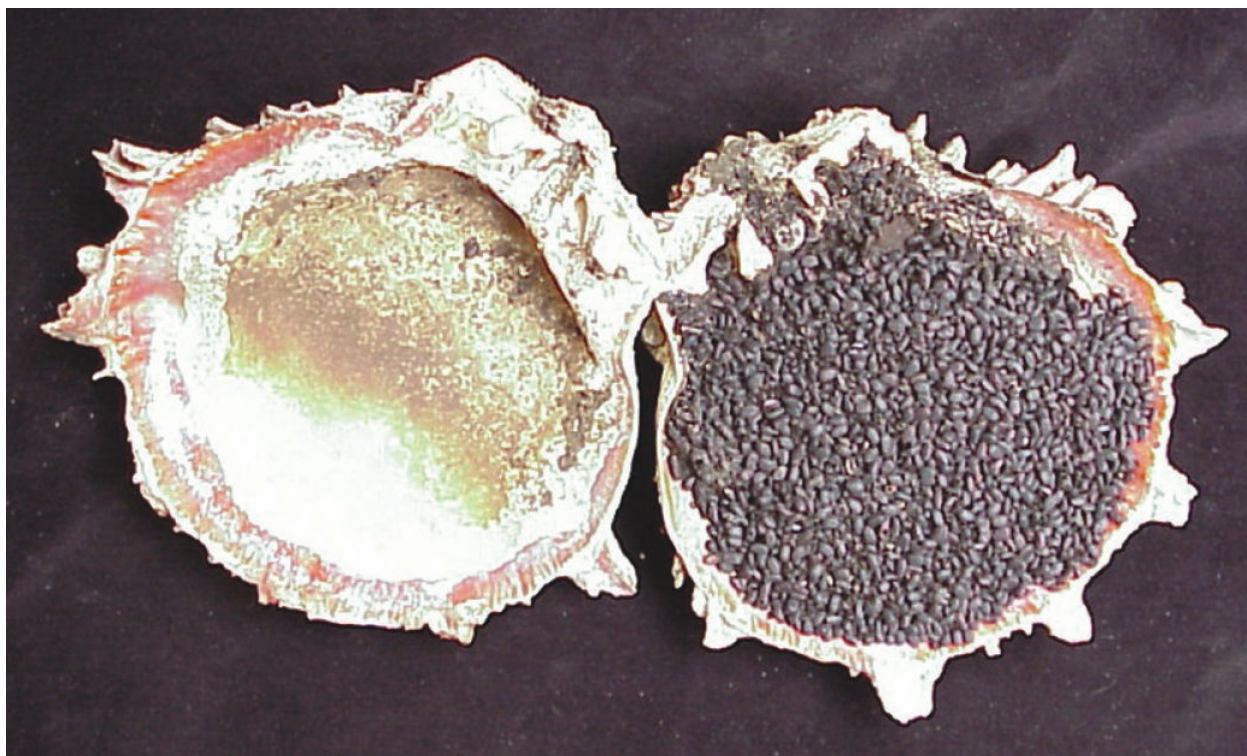


Figure 3.19. An open spondylus shell from the offering that contains the dry cochineal insects which yield a red pigment, Huaca Burial Platform.



Figure 3.20. An Inca-period jar, found outside of Farfán, in the Jequetepeque Valley, that shows spondylus shells arranged in a similar manner to the offering excavated in Farfán's Huaca Burial Platform (Mackey 2009b).

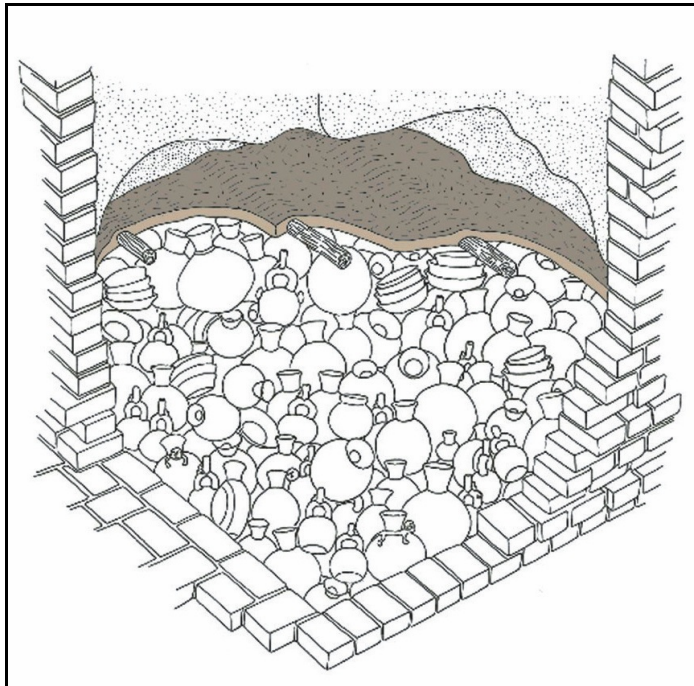


Figure 3.21 . Reconstruction of Center Tomb 11 after its roof was partially removed.

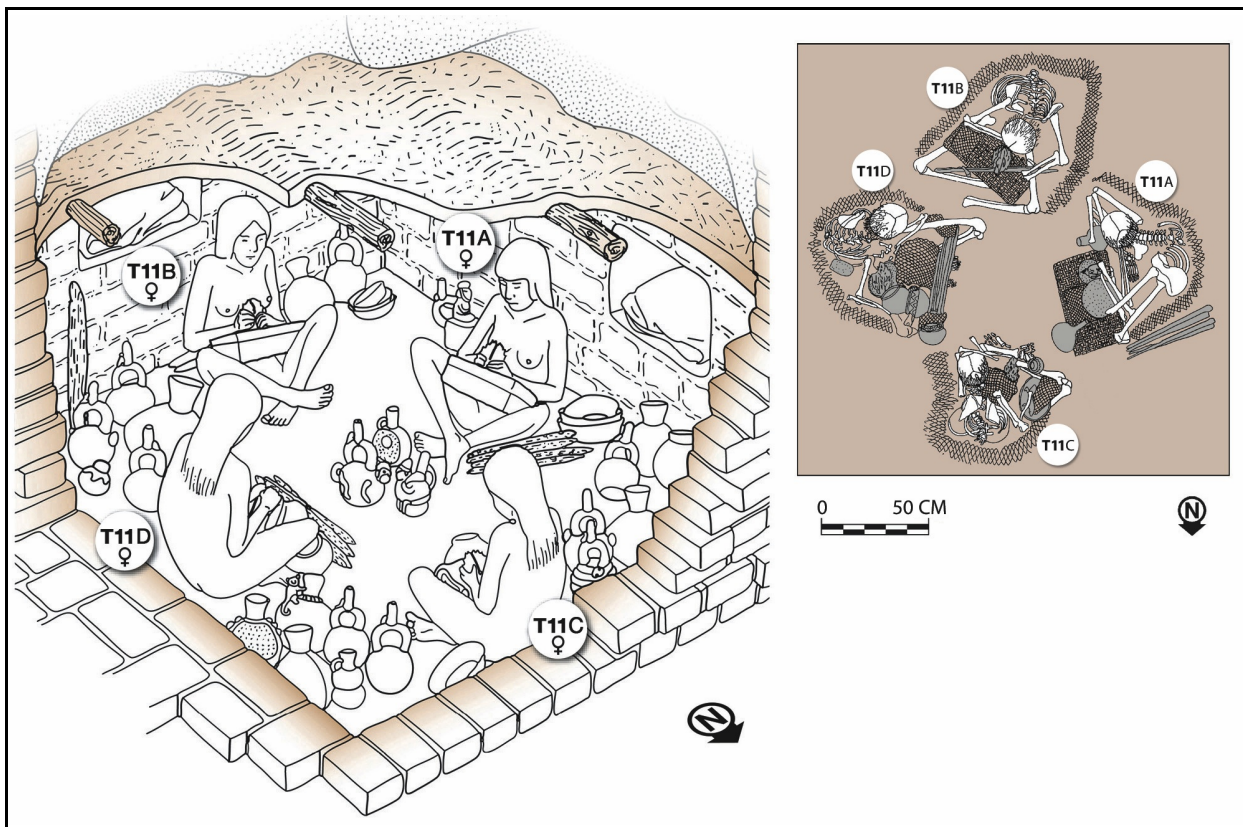


Figure. 3.22. Left: reconstruction of the women in Center Tomb 11; right: an excavation drawing of the tomb that measures 1.75 by 1.75 meters.



Figure 3.23. Textile bundle (48 centimeters by 28 centimeters) in the niche in the eastern wall of Center Tomb 11.

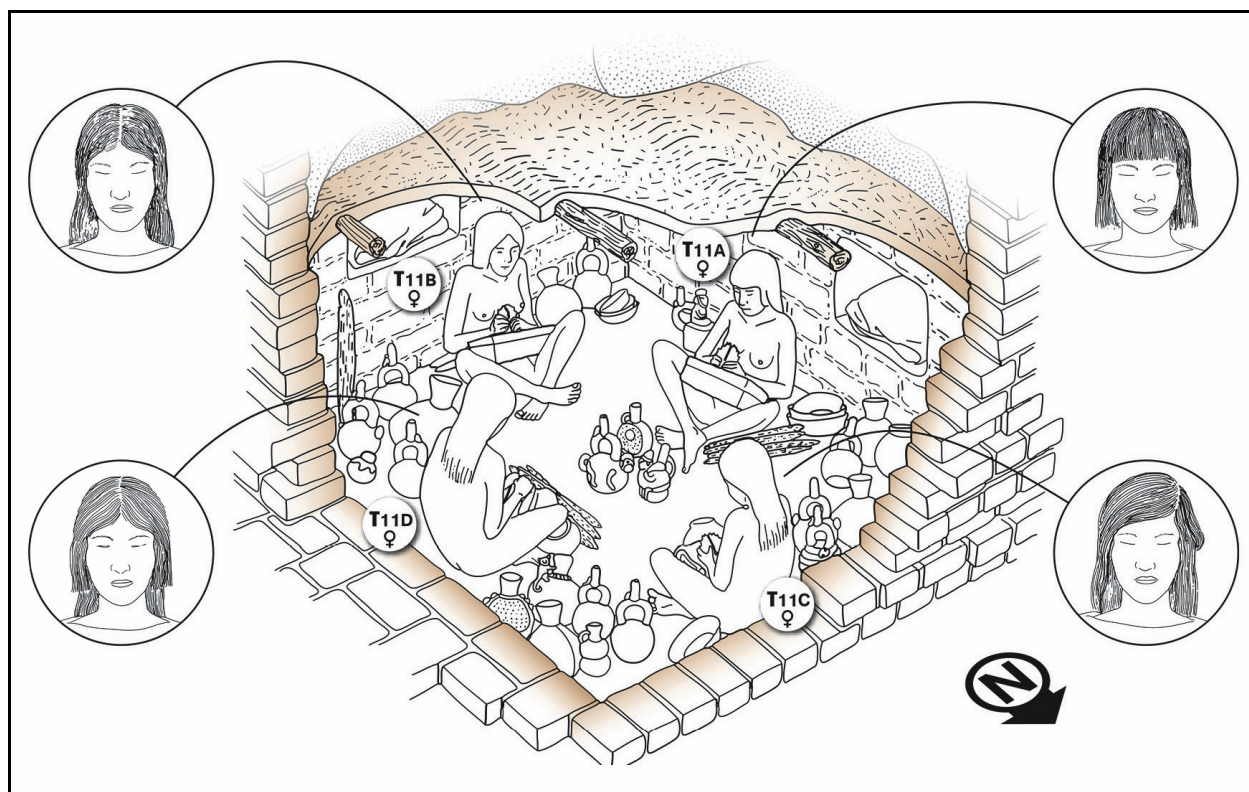


Figure 3.24. Illustrations of the four different hairstyles of the women in Center Tomb 11.

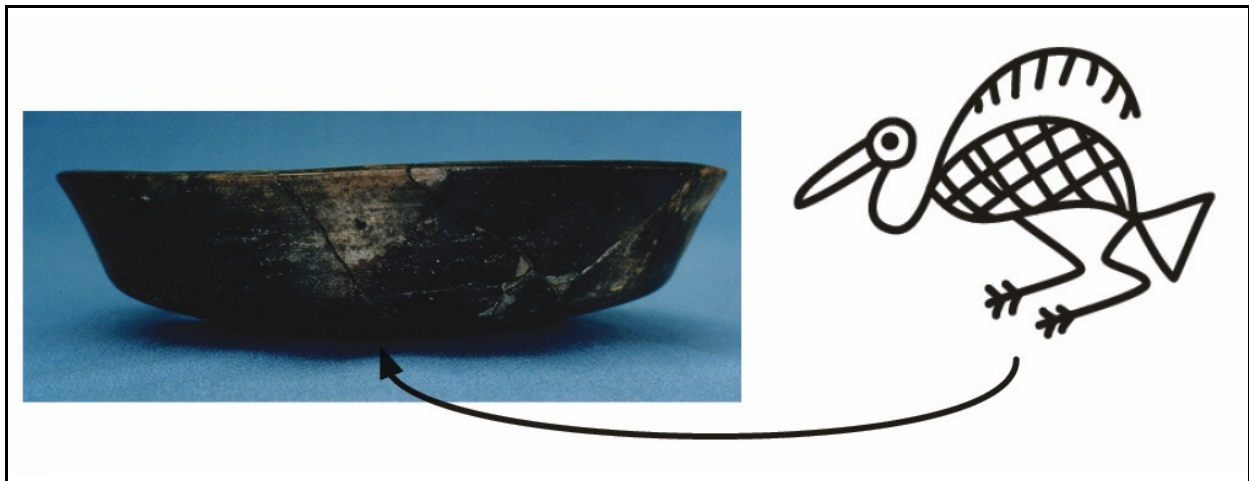


Figure 3.25. Burnished blackware plate with avian decorations on the bottom exterior of the plate.
Huaca Burial Platform, Center Tomb 11. Height: 5 centimeters.

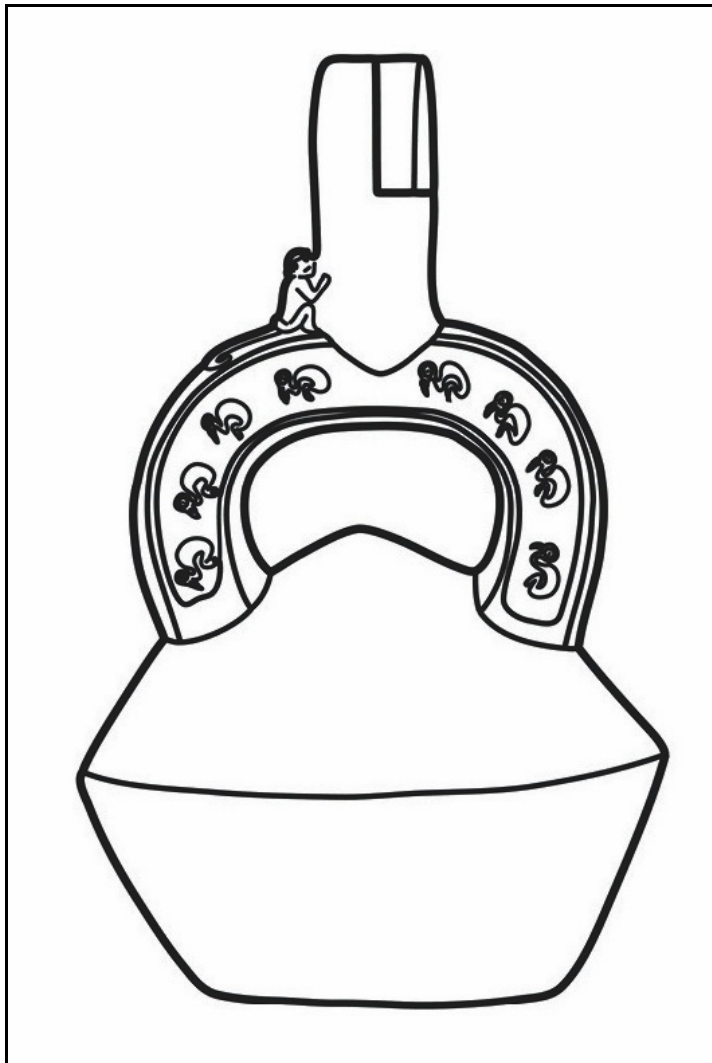


Figure 3.26. Late Horizon Jequetepeque Style blackware stirrup spout vessel with press-molded birds on the stirrup,
Center Tomb 11. Height: 22.7 centimeters.

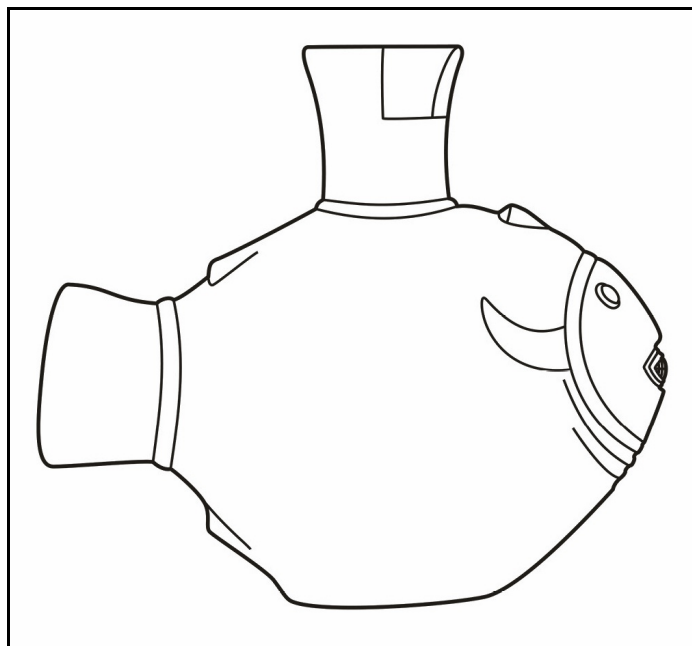
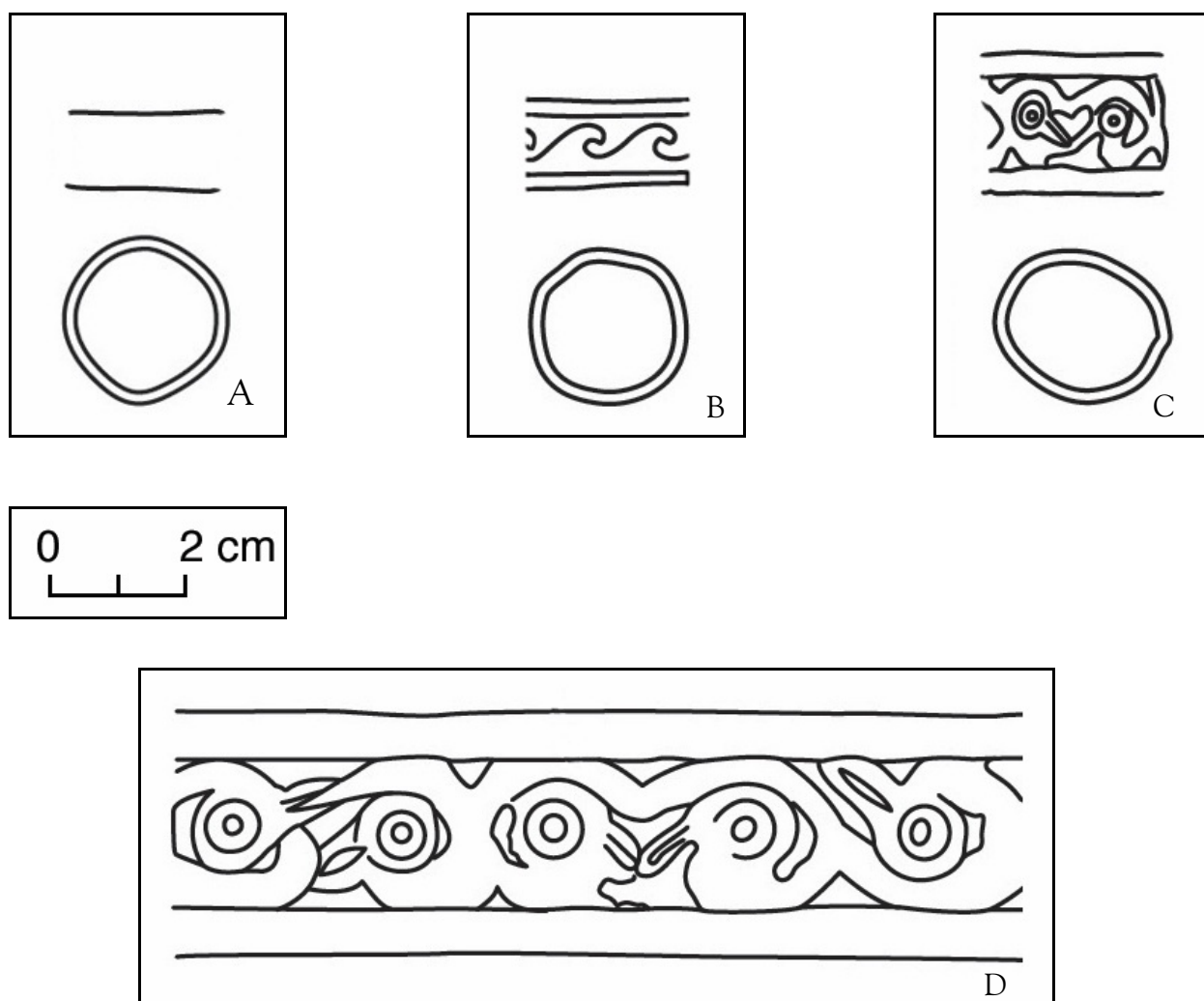


Figure 3.27. Oversized fish effigy jar, Center Tomb 11. Height: 30 centimeters.



Figure 3.28. Example of a rolled textile rectangle from a bundle in Center Tomb 11.



Figs. 3.29A–D. All four women in Center Tomb 11 had at least two copper rings, three of which are shown here. All ring diameters are 2 centimeters, while the width varies from 1 centimeter, as in ring (A) to 1.8 cm in ring (C). The design motif for (C) is shown in the rollout (D).



Figure 3.30. Examples of *Nectandra* seeds from the necklaces found with all females in Center Tomb 11.

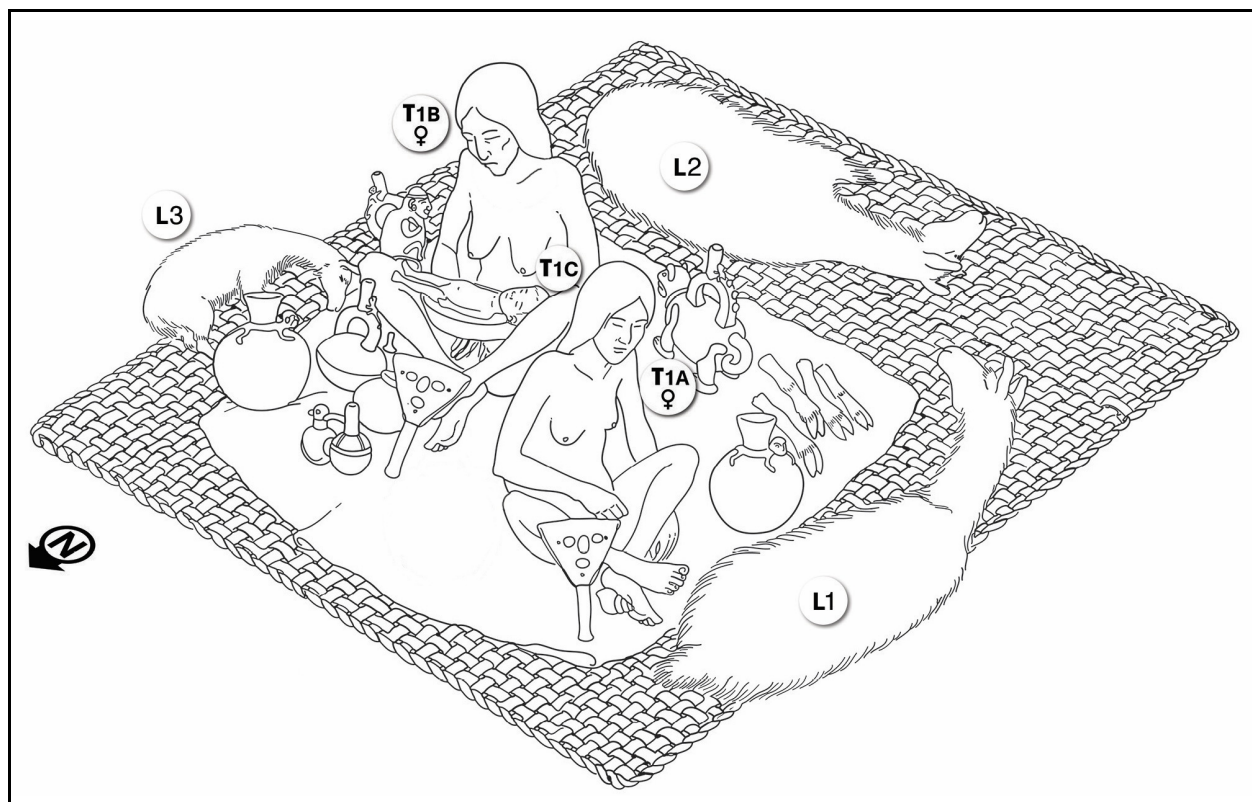


Figure 3.31A. Reconstruction of the individuals and llamas in North Tomb 1.
Not all offerings are shown, because some are obscured by other objects.

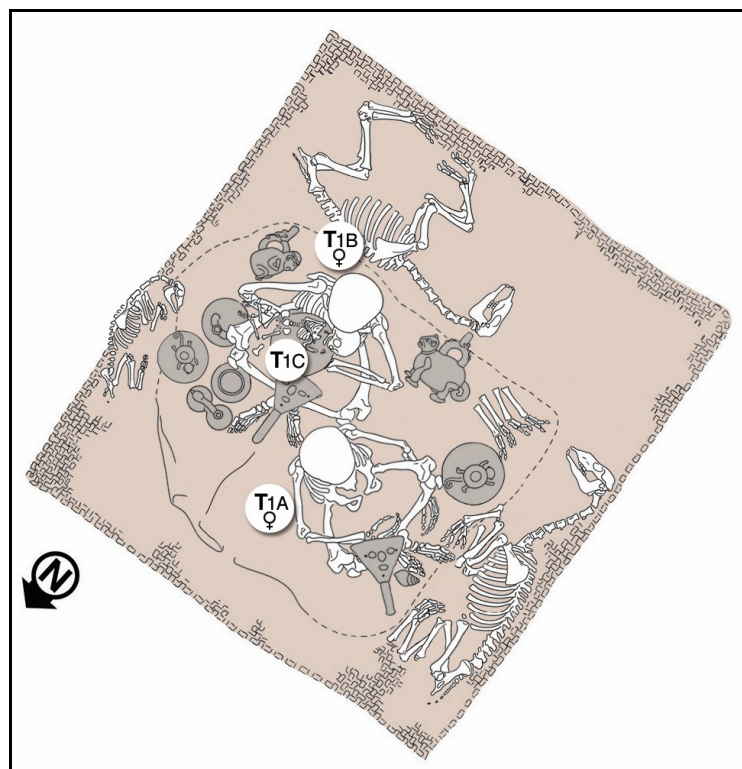


Figure 3.31B. In situ drawing of North Tomb 1, not including ceramics that would have covered some of the human remains (see Appendix 7). The tomb measures 1.8 meters long by 1.7 meters wide.



Figure 3.32. Photograph of the elderly woman's skull (North Tomb 1B) showing cinnabar.



Figure 3.33. Fragment of a tent-like textile that covered the women in North Tomb 1.



Figure 3.34a. A blackware stirrup spout vessel of a crustacean, with a square stirrup, North Tomb 1. Height: 13.2 centimeters.



Figure 3.34b. A redware stirrup spout vessel of a crustacean with square stirrups, North Tomb 1. Height: 13.2 centimeters.



Figure 3.35. Stirrup spout vessel with elephantine legs, a feline head, and spondylus-like protuberances on the stirrup, North Tomb 1. Height: 24.4 centimeters.

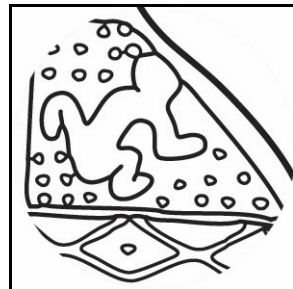


Figure 3.36. Blackware double-chambered spout and bridge vessel with the head, neck, and body of a parrot. Press-molded on the second chamber is an image of a monkey, North Tomb 1. Height: 12 centimeters.



Figure 3.37. Front (left) and side (right) views of an anthropomorphized rattle of silver-plated copper, 25 centimeters in length and 19.5 centimeters at its widest point. Found in North Tomb 1A.

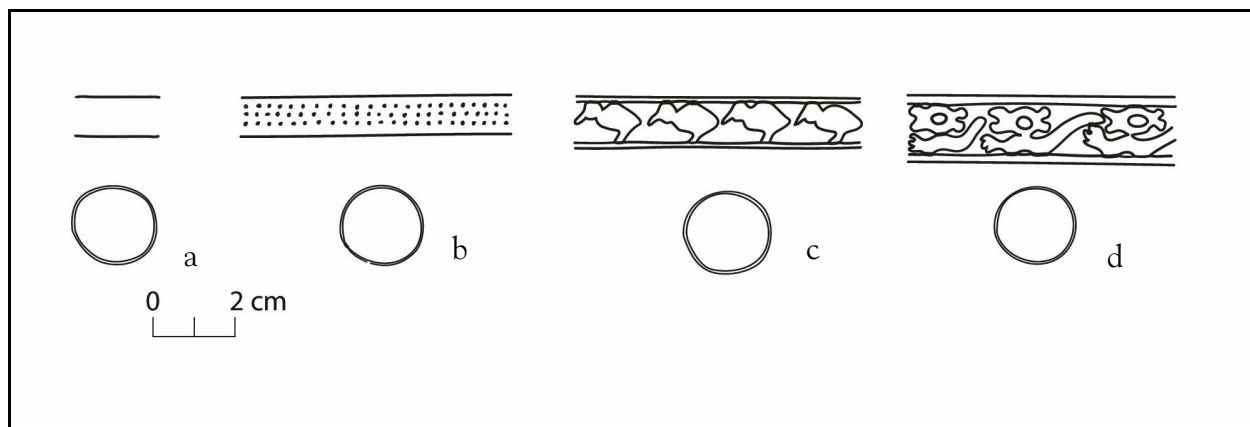


Figure 3.38. Four of the six copper rings found with the elderly woman (North Tomb 1B). Ring diameters range from 2 to 2.2 centimeters. Widths vary from 1 centimeter (a) to 1.8 centimeters (d).

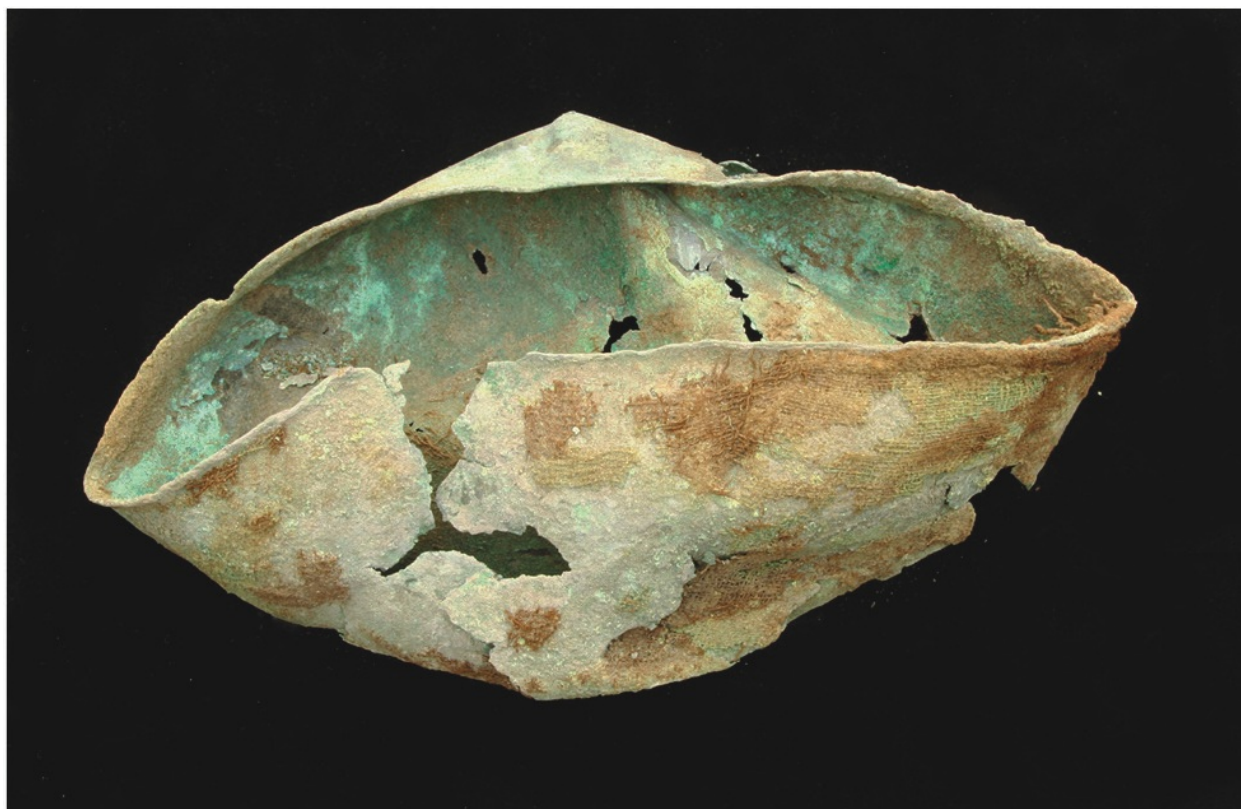


Figure 3.39. Silver-plated copper bowl, purposefully crushed in antiquity, found next to the elderly woman (North Tomb 1B).



Figure 3.40. Copper tumi knife found with North Tomb 1B. Length: 7.5 centimeters.

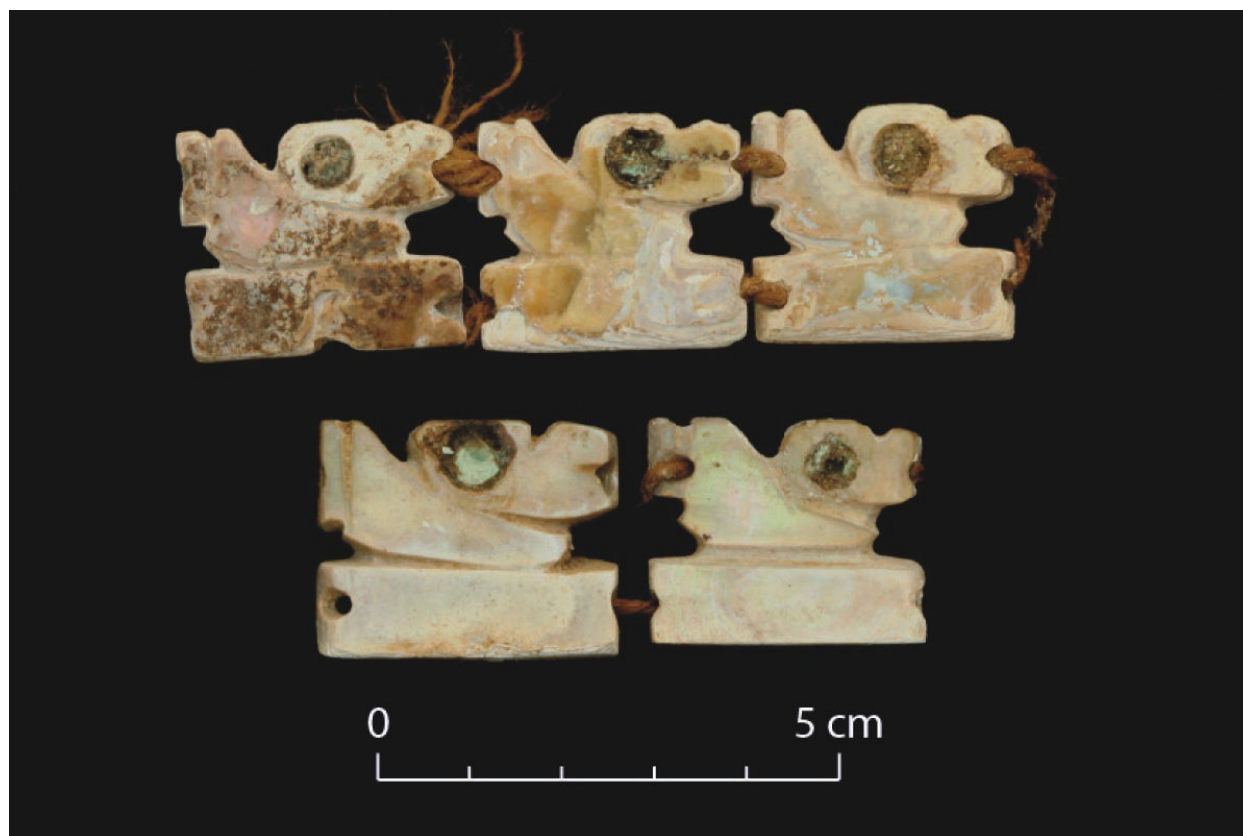


Figure 3.41. Five of the 36 shell beads that were originally strung as a necklace for North Tomb 1B. The birds depicted are similar to those excavated with the sacrificed women at Pachacamac on Peru's central coast (Tiballi 2010:156, figure 15; Uhle 1991 [1903]:95, figure 113).



Figure 3.42. Twelve pieces of worked quartz that may have been tied to the bird necklace above (North Tomb 1B).

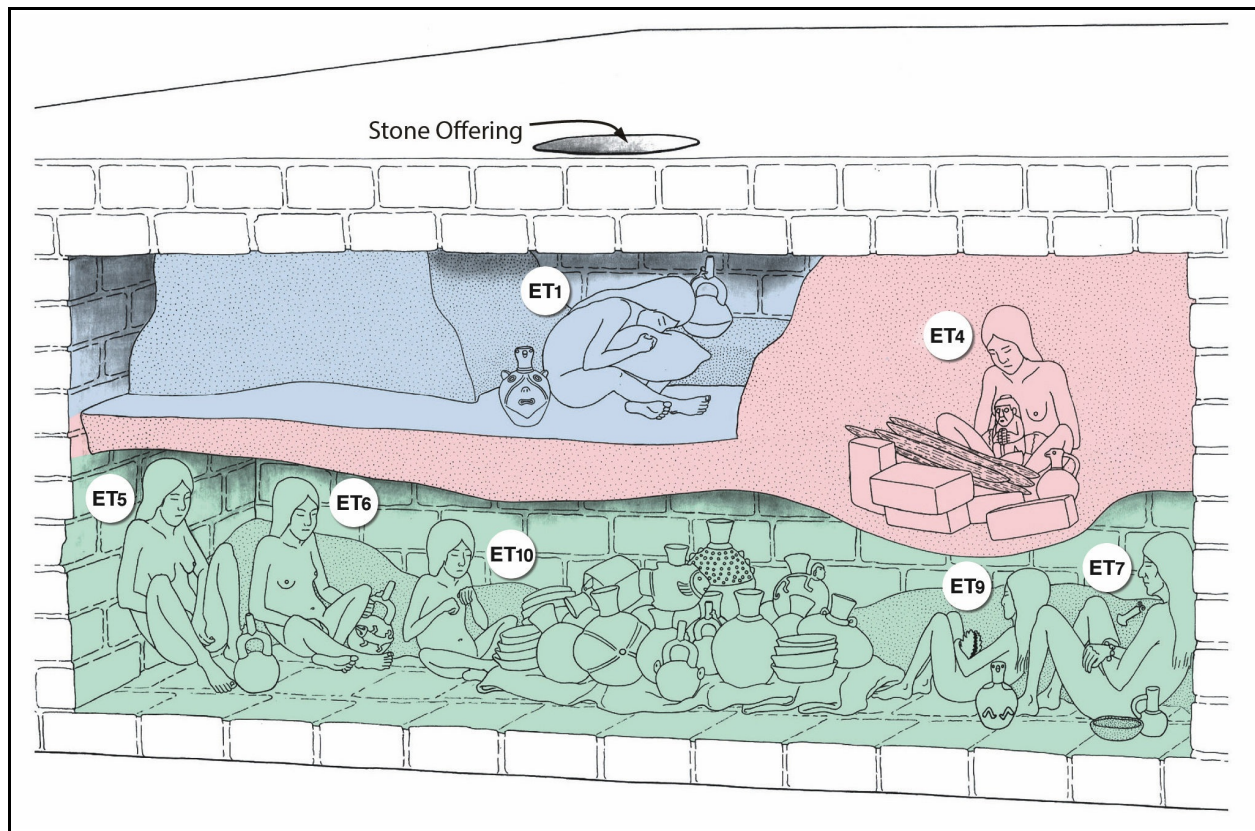


Figure 3.43. Reconstruction of the East Tomb indicating the women buried in the three levels. The tomb measures 4 meters in length, 1.5 meters in height and 1.5 meters in depth. Not all ceramic vessels are shown (see Appendix 7 for entire grave lot).

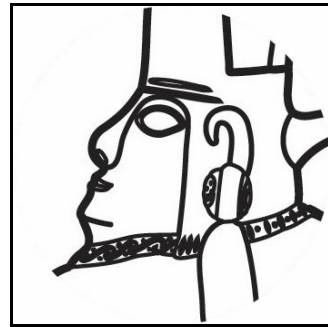


Figure 3.44. Inka Hybrid-style face-neck spout and handle vessel with an interlocking wave design around the body, East Tomb offering. Height: 22.7 centimeters.



Figure 3.45. One of a pair of vessels decorated with protruding nubs representing a spondylus shell, East Tomb offering. Height: 32.5 centimeters.



Figure 3.46. Example of one of the rolled bundles found in the textile offering in the East Tomb.



Figure 3.47. Painted Inca-period llama effigy jar with a bird neck, East Tomb 1.
Height: 29.8 centimeters.

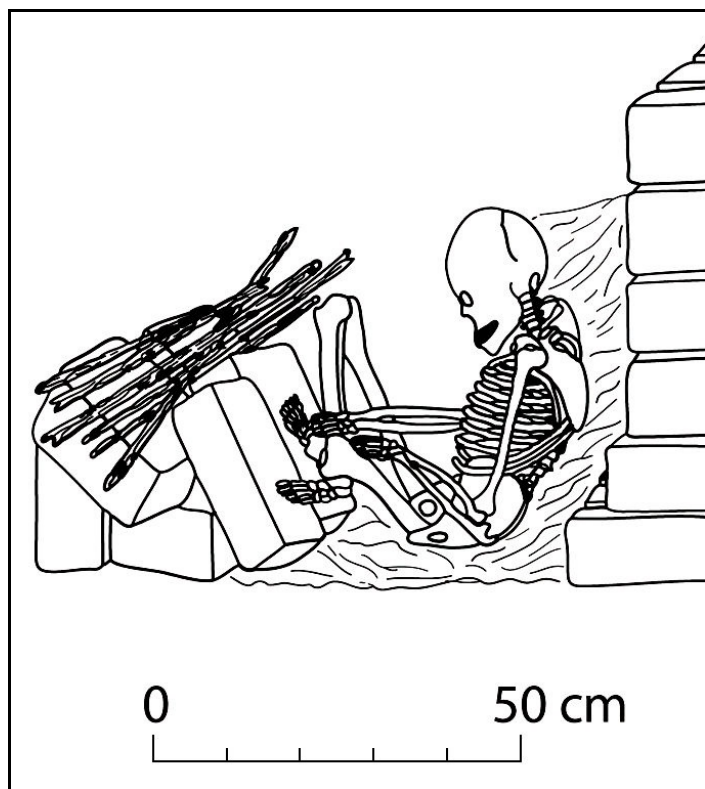


Figure 3.48. Top: excavation photograph; bottom: in situ drawing of the woman in East Tomb 4.



Figure 3.49. Three blackware bowls connected by bridges, East Tomb 4. Height: 8 centimeters.



Figure 3.50. Partially burnished redware incurving bowl, East Tomb 4. Height: 5.7 centimeters.



Figure 3.51. Press-molded blackware bird-neck jar, East Tomb 4. Height: 15 centimeters.



Figure 3.52. Blackware stirrup spout vessel with a spondylus shell motif and press-molded birds on the stirrup, East Tomb 4. Height: 25.5 centimeters.

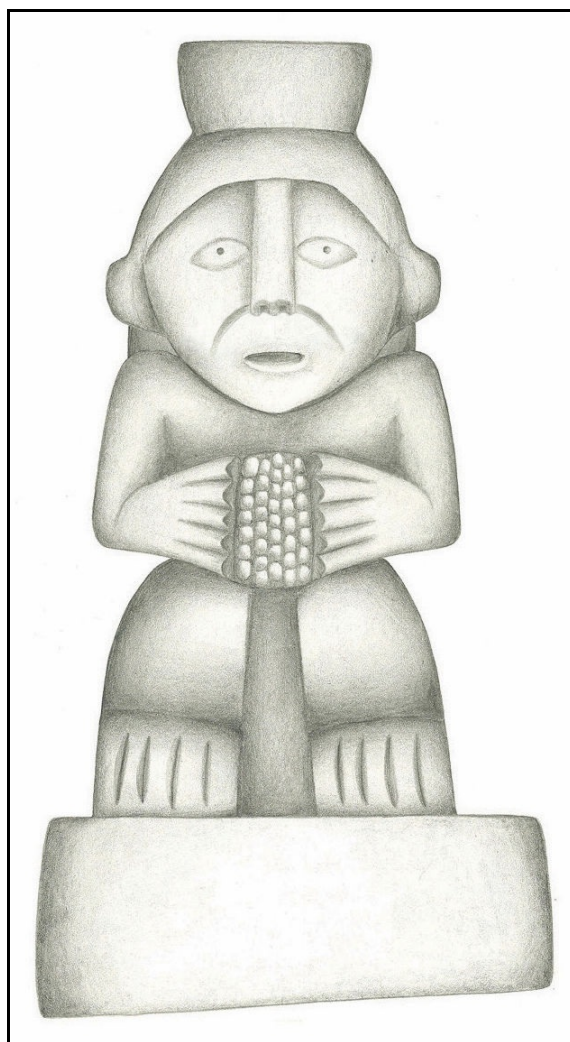


Figure 3.53. Left: carved wooden statue of a kneeling woman who may represent Zaramama, the mother of maize, East Tomb 4. Height: 25 centimeters; right: a drawing of the statue.

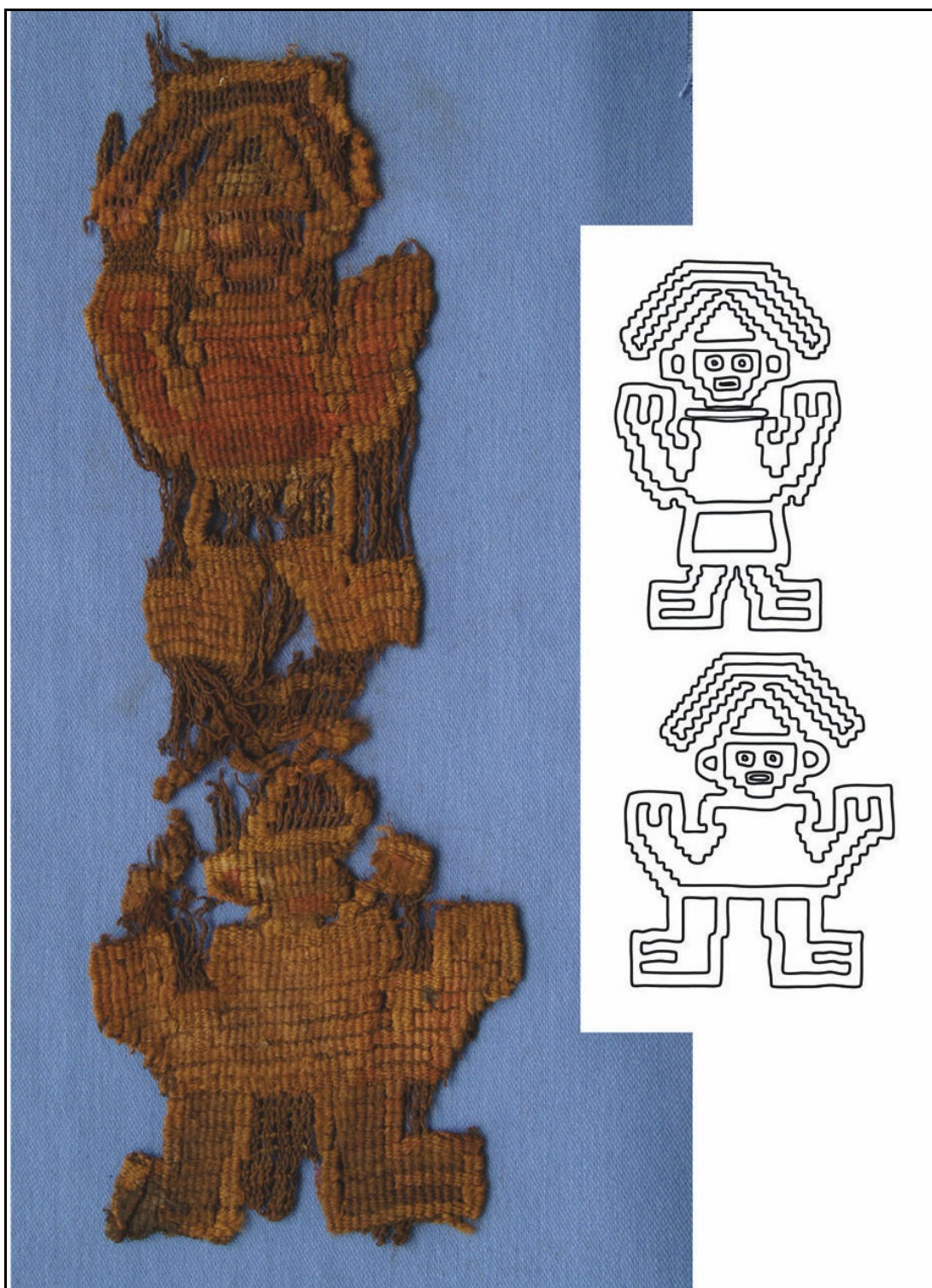


Figure 3.54. A portion of a fragmentary split-tapestry cotton and camelid fiber textile, East Tomb 7.

The total combined dimensions of the fragment recovered are 55 by 34 centimeters. The portion of the fragment in the photo measures 15 by 8 centimeters and shows two different figures with upraised arms (see inset).



Figure 3.55. Textile band interred with the woman in East Tomb 7, which replicates the silver rattle found with the women in North Tomb 1.



Figure 3.56. Right: photograph of a wooden ear-spool with a figure inlaid in shell, also shown in drawings below, East Tomb 7.

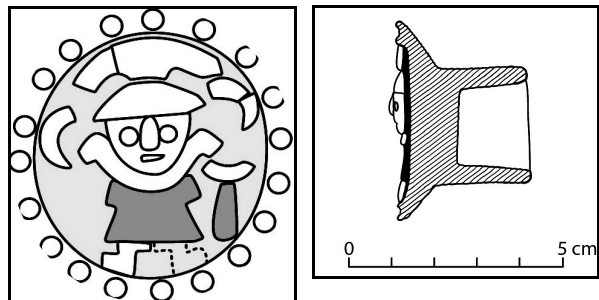




Figure 3.57. Case made of deerskin and the four needles contained within: three copper and one bone, East Tomb 7.

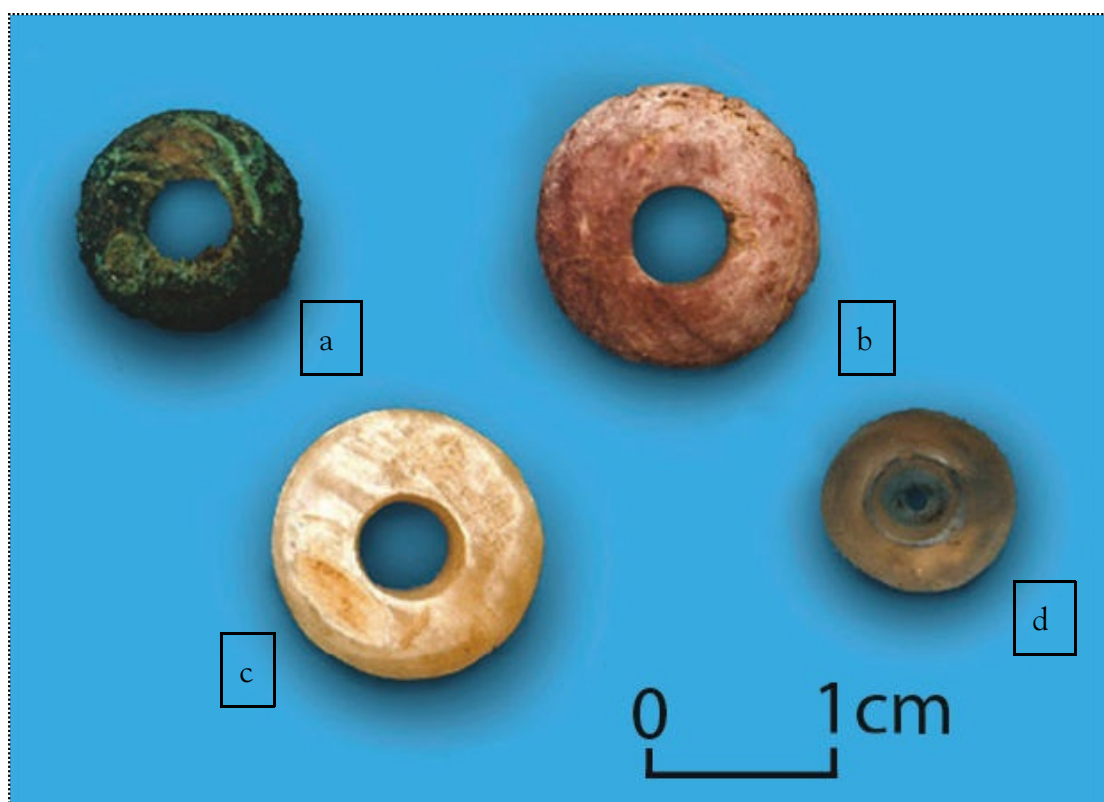


Figure 3.58. Spindle whorls of (a) copper, (b) spondylus, (c) shell, and (d) quartz, East Tomb 7.



Figure 3.59. Example of an copper disc with a cutout zoomorphic design, East Tomb 7.

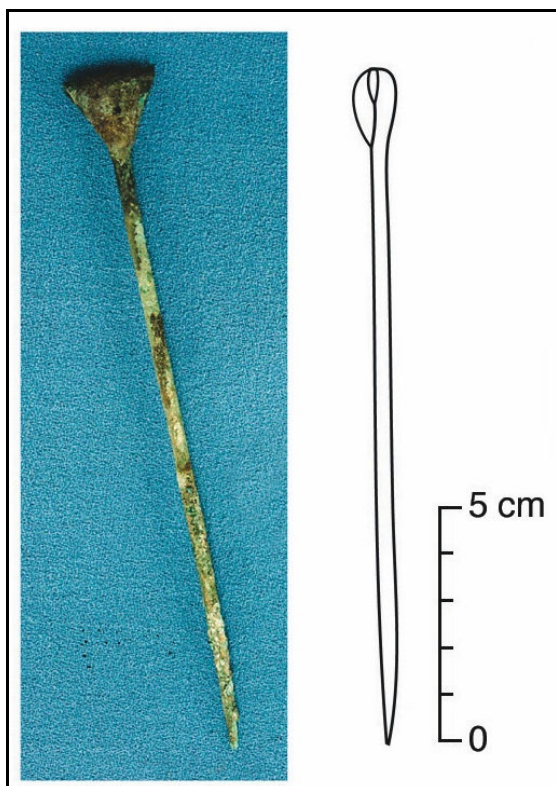


Figure 3.60. Copper tupu (pin), East Tomb 7.



Figure 3.61. One of two undecorated silver-plated copper bracelets, East Tomb 7.



Figure 3.62. Two bracelets of copper beads, East Tomb 7.

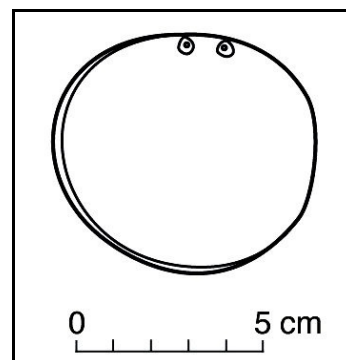


Figure 3.63. Conical metal pendant with two perforations, East Tomb 7. Diameter: 7 centimeters.

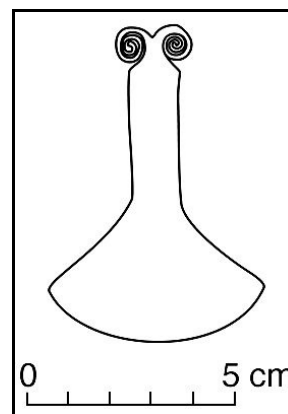


Figure 3.64. Left: photograph of a copper tumi knife, East Tomb 7; right: drawing of the knife. Length: 7.5 centimeters.

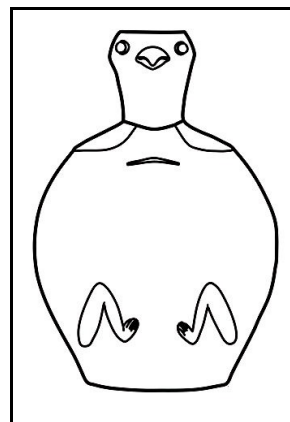


Figure 3.65. Late Horizon Jequetepeque Style blackware bird-neck jar, East Tomb 7, similar to the others excavated in the East Tomb. Height: 22.2 centimeters.



Figure 3.66. Blackware stirrup spout vessel clutched in the hand of the adult female, East Tomb 5. Height: 22 centimeters.

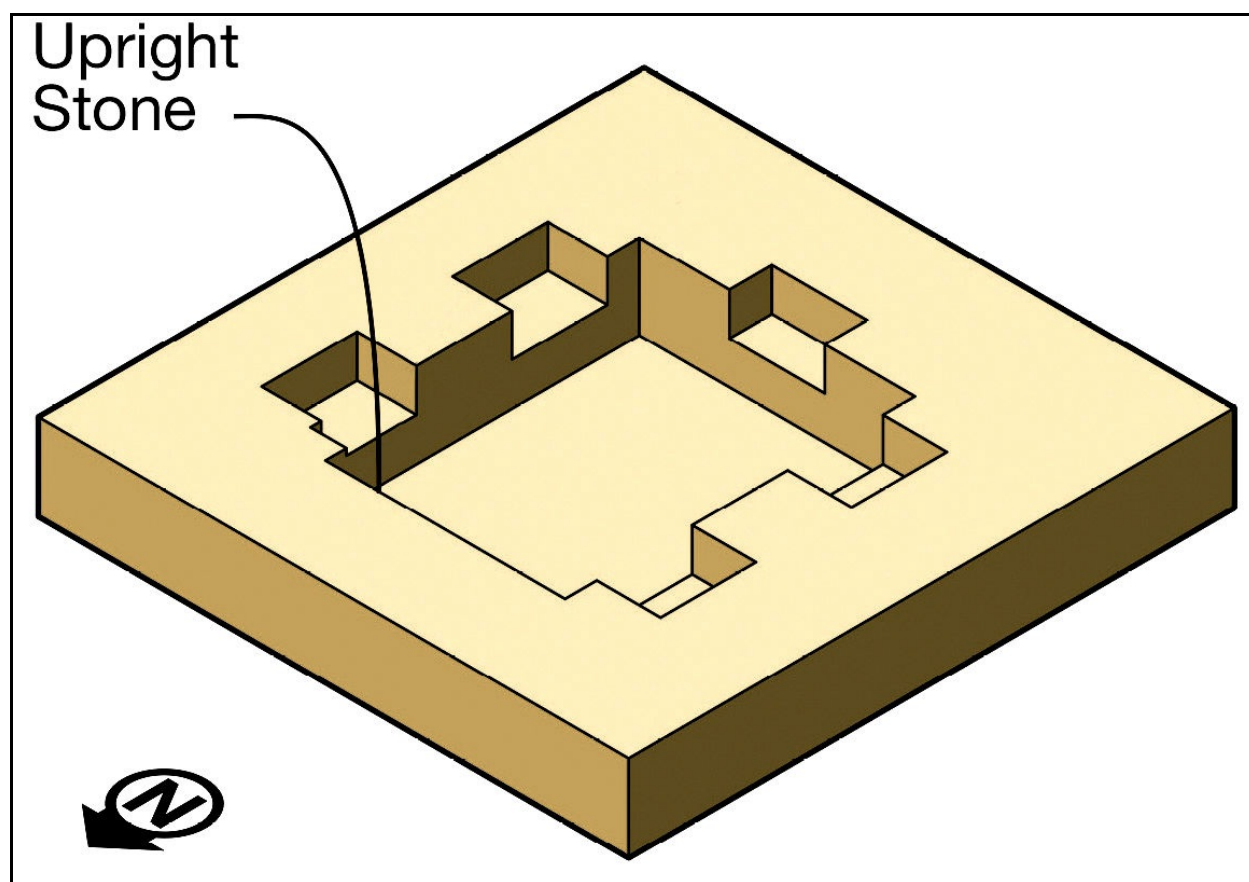


Figure 3.67. Top: perspective view of Looted Chamber 1 showing its five niches. The entire chamber measures 1.8 by 1.8 meters; left: an upright, roughly-worked stone placed in the Chamber's north-east corner.



Figure 3.68. One of eight monkey effigy vessels found in Looted Chamber 1. Height: 19.2 centimeters.



Figure 3.69. A stirrup spout vessel found in Looted Chamber 1, broken in antiquity, with an image of the Moon Animal on its body. Unknown height.



Figure 3.70. Six miniature blackware vessels, found in Looted Chamber 1. Most show a monkey effigy at the base of the jar neck. Heights: 5 to 7.5 centimeters. Only one of these vessels is shown in Appendix 7.

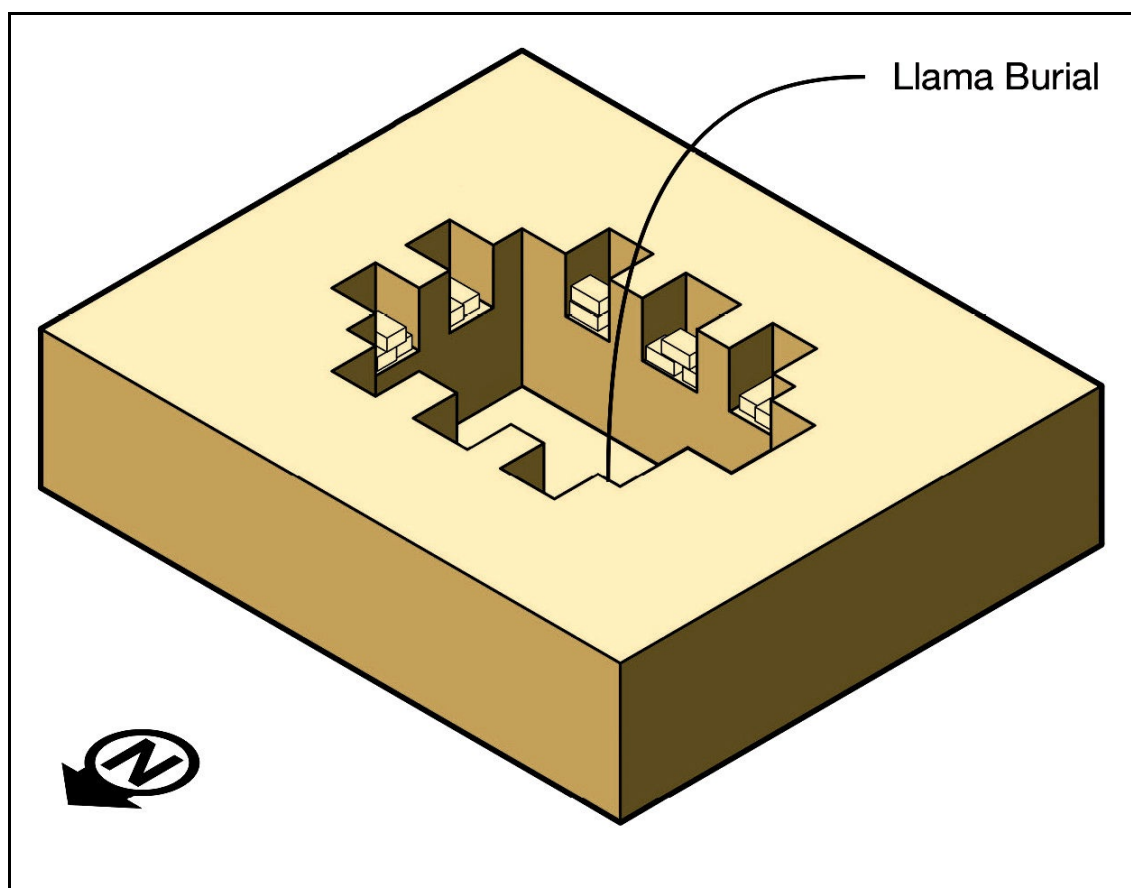


Figure 3.71. Perspective view of Looted Chamber 2, which measures 1.7 by 1.3 meters, showing six niches filled with adobe bricks, and indicating the location of the sub-floor llama burial.

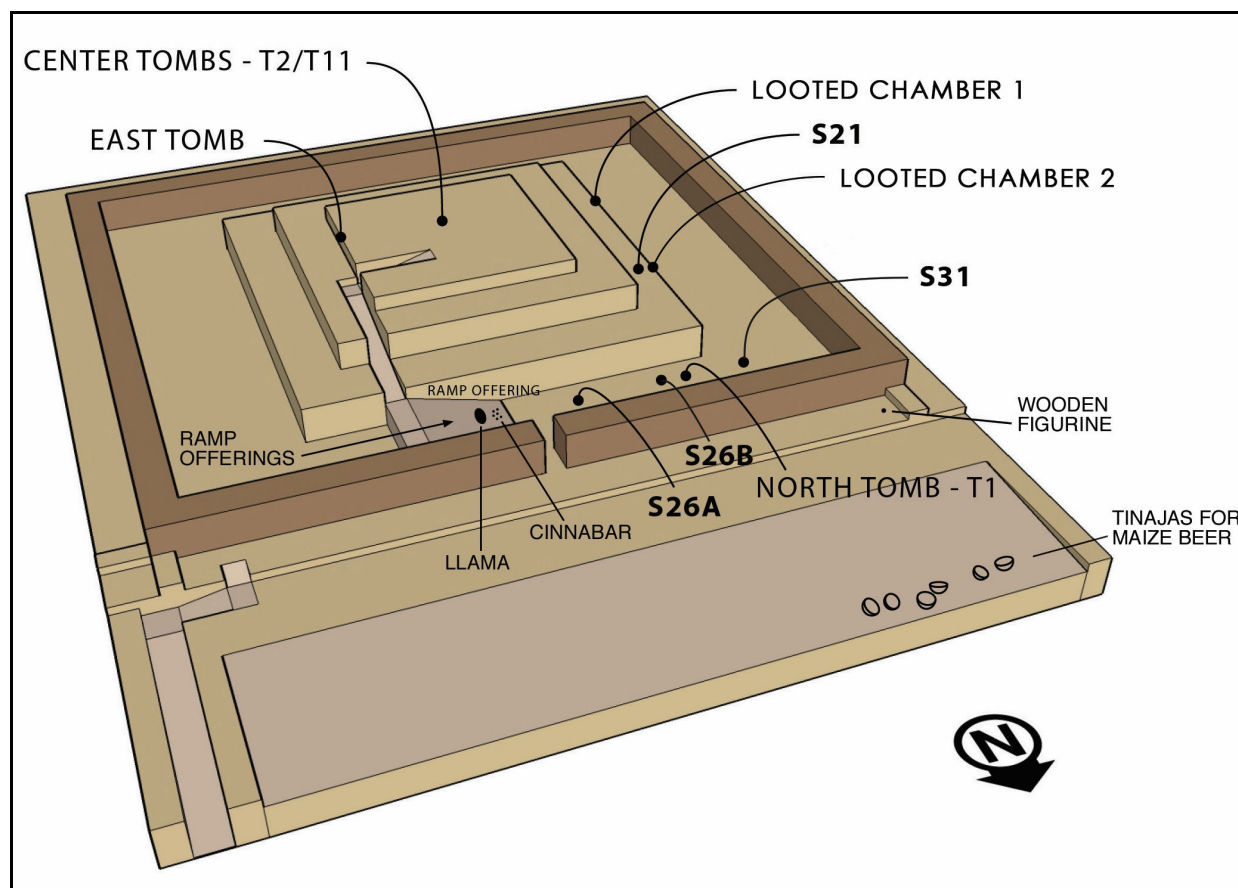


Figure 3.72. Perspective view of the Huaca Burial Platform indicating the secondary tombs in bold letters.



Figure 3.73. Partial remains of a young adult female (S21) placed against the east exterior wall of Looted Chamber 2.



Figure 3.74. Fifty-four small cups called crisoles or ofrendas, Looted Chamber 2, S21. These undecorated, unfired cups (not illustrated in Appendix 7) were possibly used for drinking chicha. Heights range from 4.5 to 5.5 centimeters.

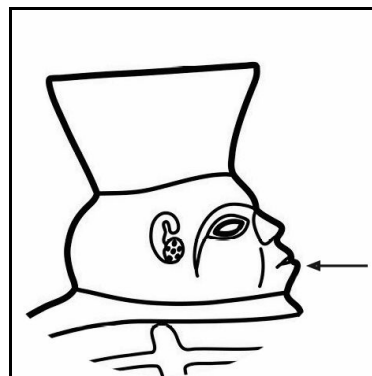


Figure 3.75. Ceramic representation of a female with ear-plugs and a labret (marked with an arrow in the drawing), carrying a child, Looted Chamber 2, S21. A labret existed on the chin of this vessel, but was broken in antiquity. Height: 20.6 centimeters.

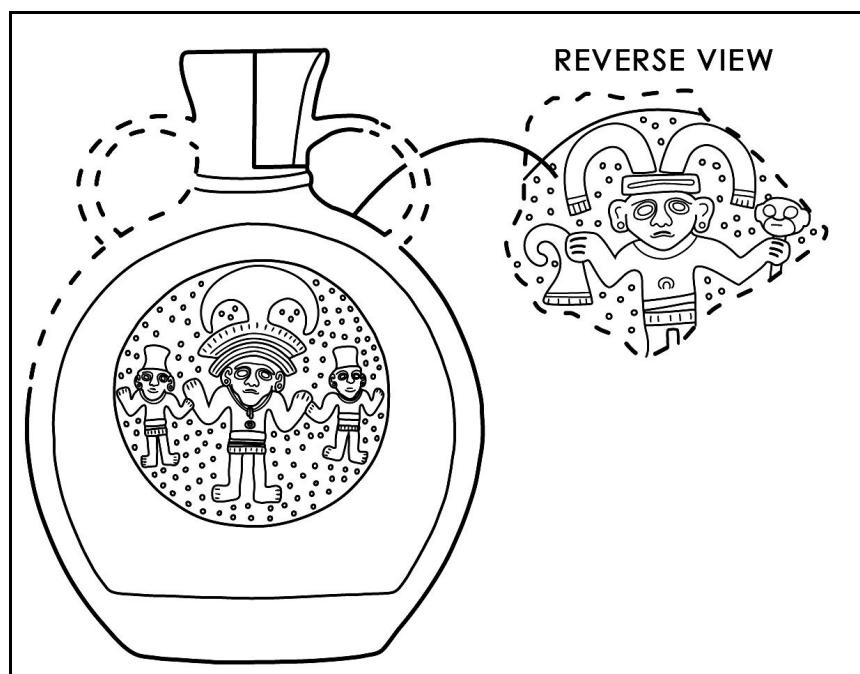
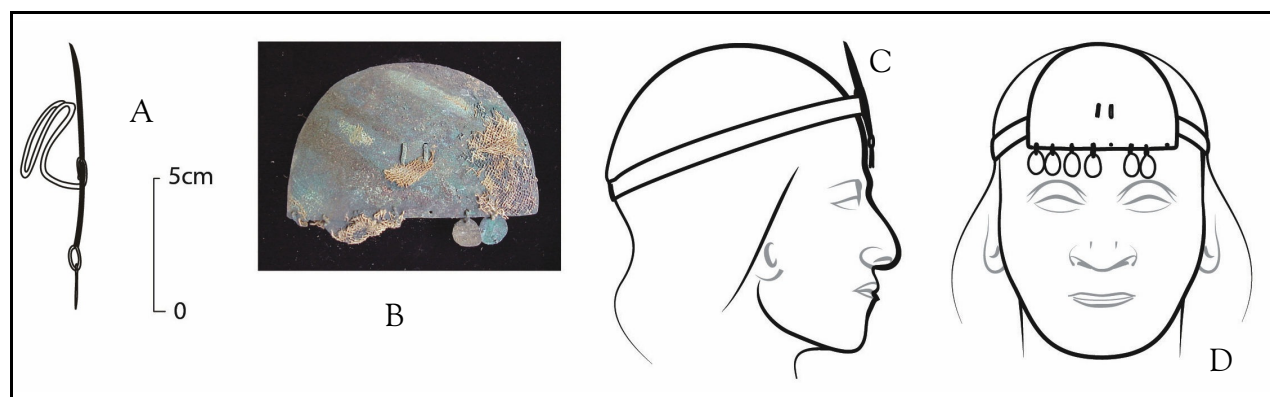


Figure 3.76. Blackware jar showing deity figures with different headdresses on each side of the vessel's body, Looted Chamber 2, S21. Height: 31 centimeters.



Figures 3.77. Various views of the copper headdress ornament, Looted Chamber 2, S21:
 (A) Profile drawing of the ornament indicating one of the hooks that was used to attach it to a headband; (B) Photograph of the ornament that had been wrapped in a textile;
 (C) and (D) reconstructions of how the ornament was worn.



Figure 3.78. Upper portion of a shell figure, Looted Chamber 2, S21.

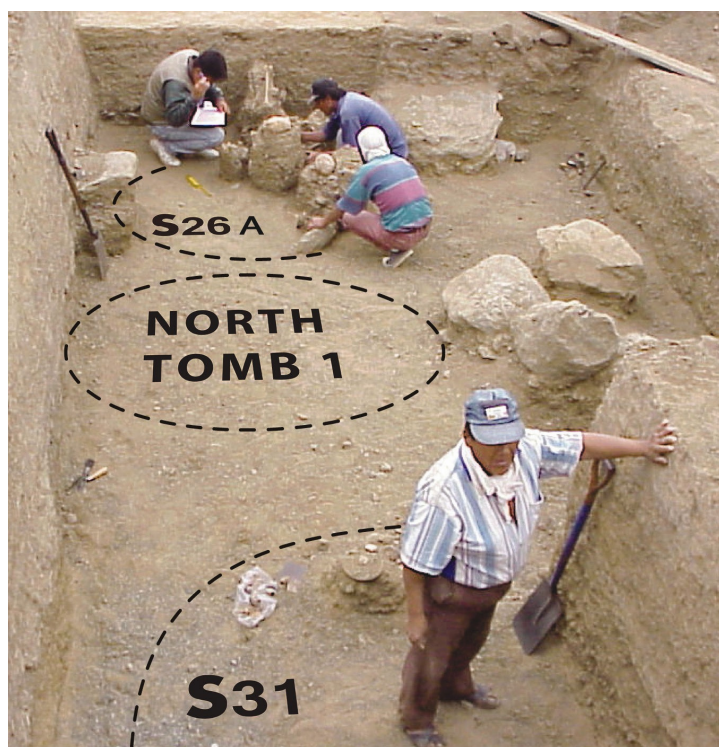


Figure 3.79. Photograph indicating the two associated secondary burials that flank North Tomb 1. S26A is on the east side, and S31 is on the west. Also shown are three large boulders to the south that mark the placement of North Tomb 1.



Figure 3.80. Secondary Tomb S31, showing the pottery vessels, and the animal and human remains.



Figure 3.81. Blackware jar with a broken neck showing two animal figures on either side, associated with burial S31. Height unknown.

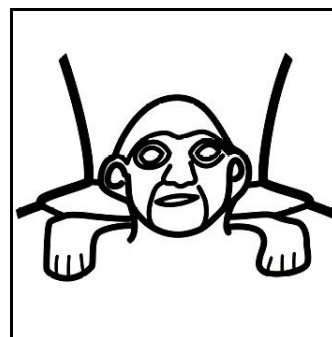


Figure 3.82. Monkey effigy vessel similar to those found with the primary tombs in the Huaca Burial Platform, found in burial S31. Height: 18.5 centimeters.

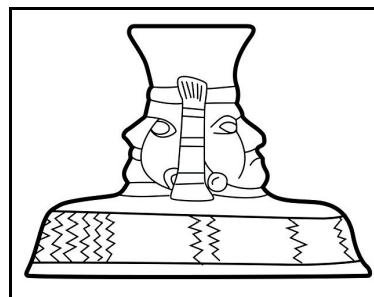


Figure 3.83. Composite vessel consisting of two common forms, an inverted plate and a face-neck jar neck with a Janus motif, found accompanying burial S26B. Height: 11.5 centimeters.



Figure 3.84. C T2C. “Butterfly vertebra”—the sixth thoracic vertebra demonstrating a sagittal cleft.
 Left: view of the vertebra; right: right lateral view of the fifth to seventh thoracic vertebrae.
 Note the concave surfaces of the middle (sixth) vertebra.

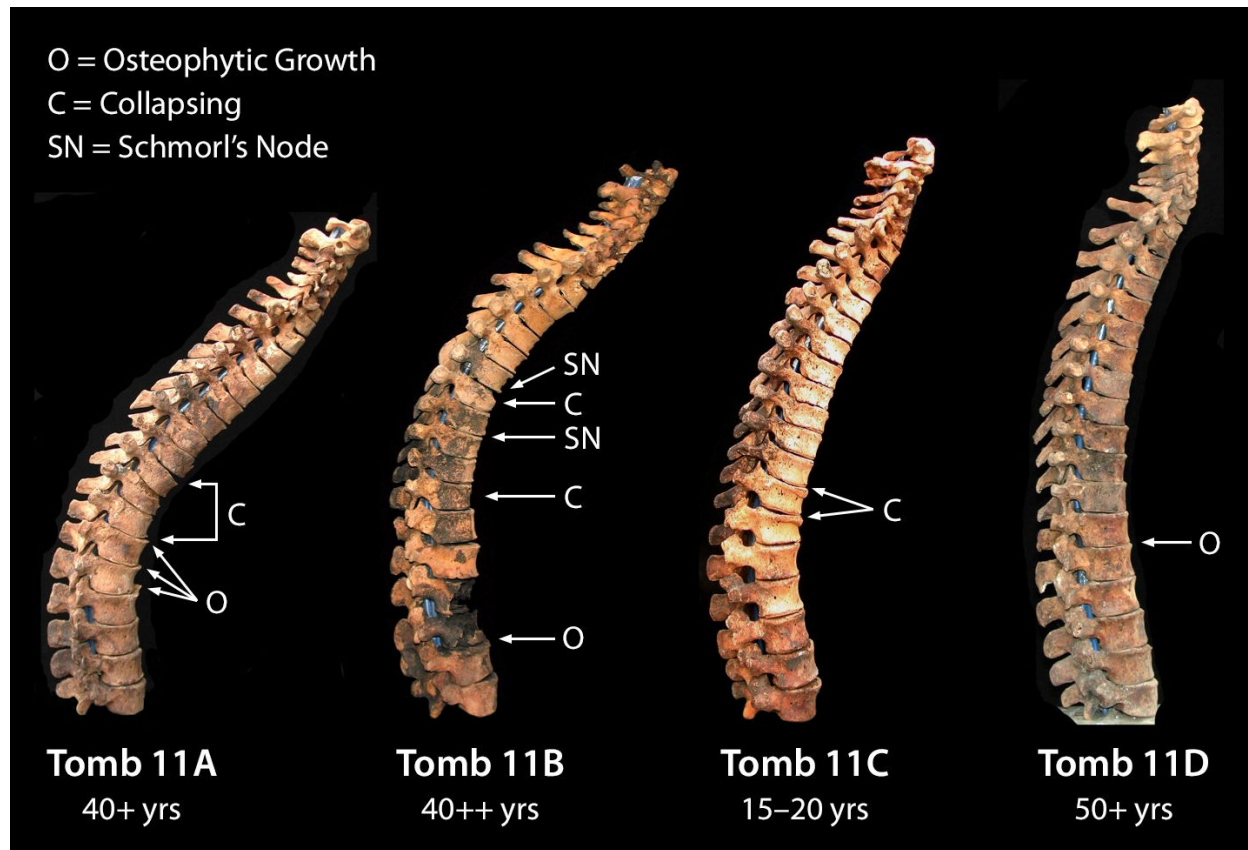


Figure 3.85. Comparison of the articulated spines for the individuals from C T11. Note that C T11C, the youngest individual in the series, is demonstrating vertebral collapse, while C T11D, the oldest individual in the series, shows the least spinal degeneration.



Figure 3.86. Detail of the lower thoracic and lumbar vertebrae of N T1B, an old adult female. The large lesions and destruction of the vertebrae are indicative of spinal tuberculosis. Note that this individual is missing T12 and the twelfth pair of ribs.



Figure 3.87. Left: Fusion of the body of the second and third cervical vertebrae of the adolescent female, N T1A; right: Spondylolysis of the fifth lumbar vertebra and formation/fusion error of her first sacral vertebra.



Figure 3.88. Left and right femora of E T5. Note the shortened neck, mushroom shaped femoral head and elevated greater trochanter on the left femur. These features are indicative of avascular necrosis of the head and neck or a slipped epiphysis.

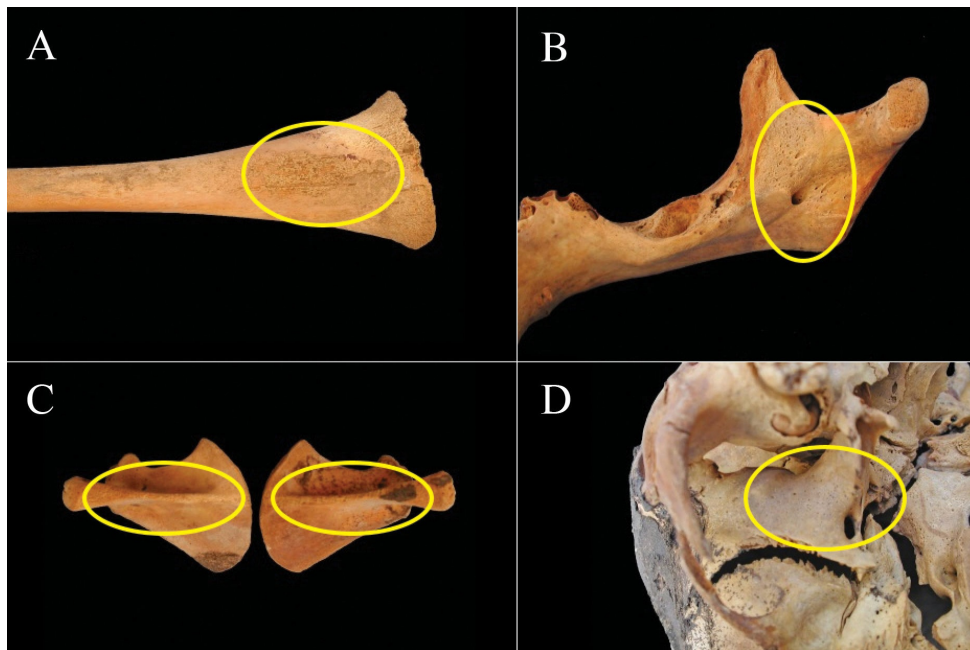


Figure 3.89. Skeletal elements of E T9 that are affected by periostitis or increased porosity (areas circled): (A) Posterior side of the distal right femur; (B) Lingual aspect of the right side of the mandible; (C) Posterior side of the scapulae; (D) The sphenoid bone.

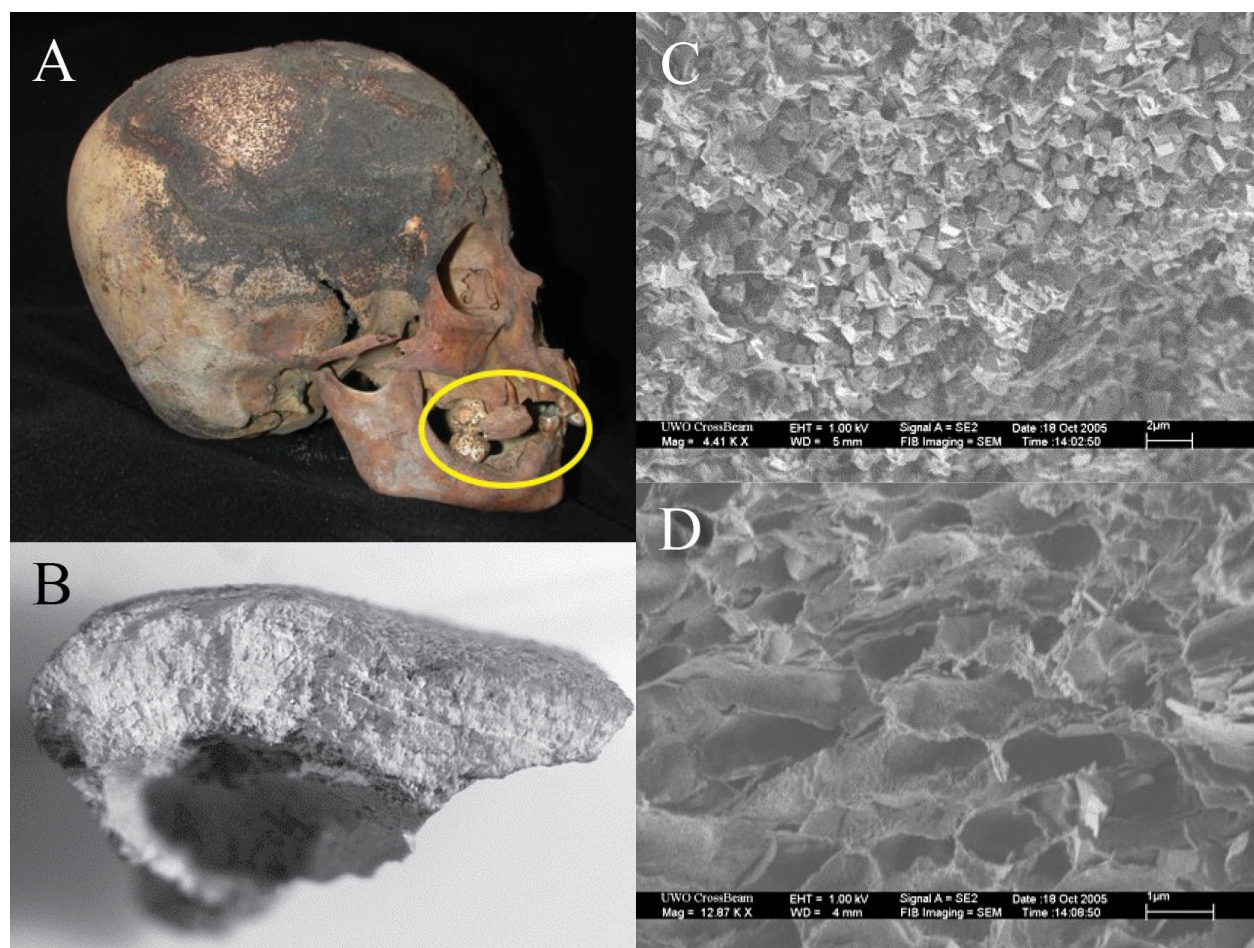


Figure 3.90. Calcified mass observed on the maxilla of E T9: (A) Lateral view of the skull. Calcified mass is circled; (B) Low magnification view of a cross-section of the calcified mass. Note the layered structure of the mass; (C) Scanning electron micrograph of the cross-section. Note the organized cubic structure of the mineral. Scale bar=2 microns; (D) Scanning electron micrograph of the cross-section. Note the cellular structure of the material. Scale bar=1 micron. SEM images courtesy of Bernd Grohe (taken at UWO Nanofabrication Facility).



Figure 3.91. Left radius and ulna of CH1A. Figure demonstrates the displaced fracture of the left radius and ulna.



Figure 3.92. Infant (S26A4). Top: the reconstructed vertebral column. A lack of fused vertebral arches makes exact positioning impossible. Note large lesions on the posterior aspect of the vertebral bodies, between the arches, that later would attach; the mid-thoracic vertebral body with sagittal clefing—a butterfly vertebra.



Figure 3.93. A mid-adult female (S26A2) is the only individual from Farfán who demonstrates Aymara, or annular cranial modification. Top: the lateral view, superficially similar to fronto-occipital oblique modification. Note exposure of roots around the left lower molars, buccal caries, and erosion of the rear part of the maxillary alveolus, typical of lesions produced by coca-chewing; top view of the greatly elongated but not broadened skull.

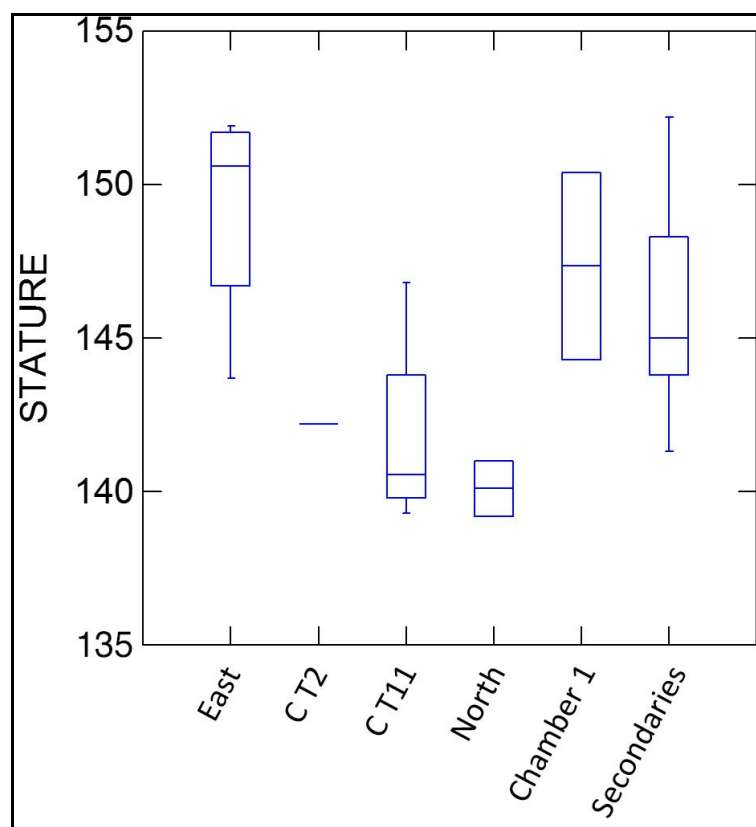


Figure 3.94. Box and whisker plot of stature (in centimeters) by tomb in the Platform Tombs.



Figure 3.95. Elderly female (S26A1). Depressed fracture on rear left parietal bone, measuring approximately one by two centimeters.

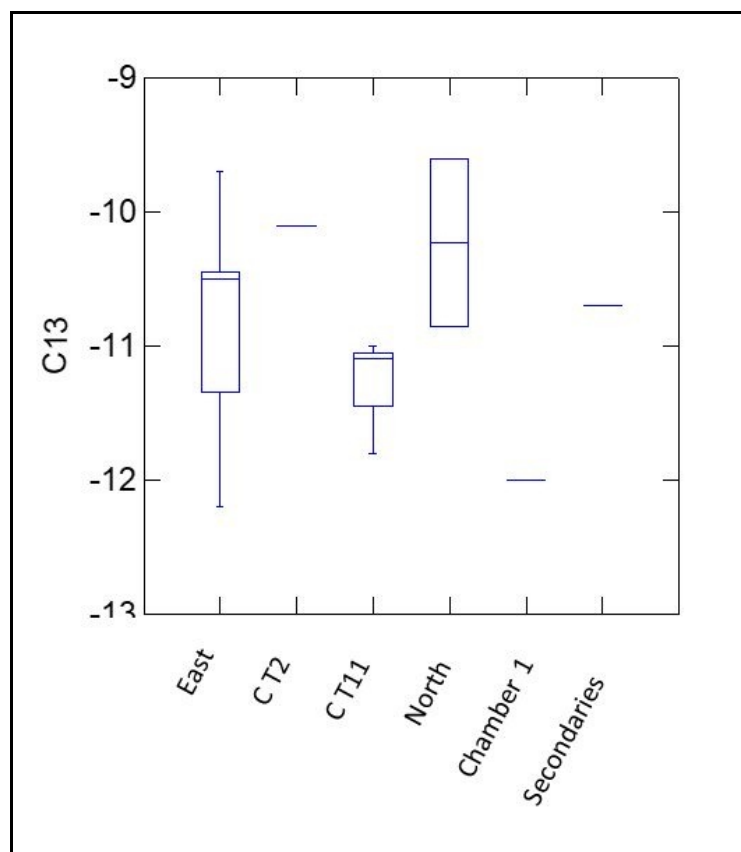


Figure 3.96. Box-and-whisker plot of $\delta^{13}\text{C}$ by tomb in the Huaca Burial Platform.

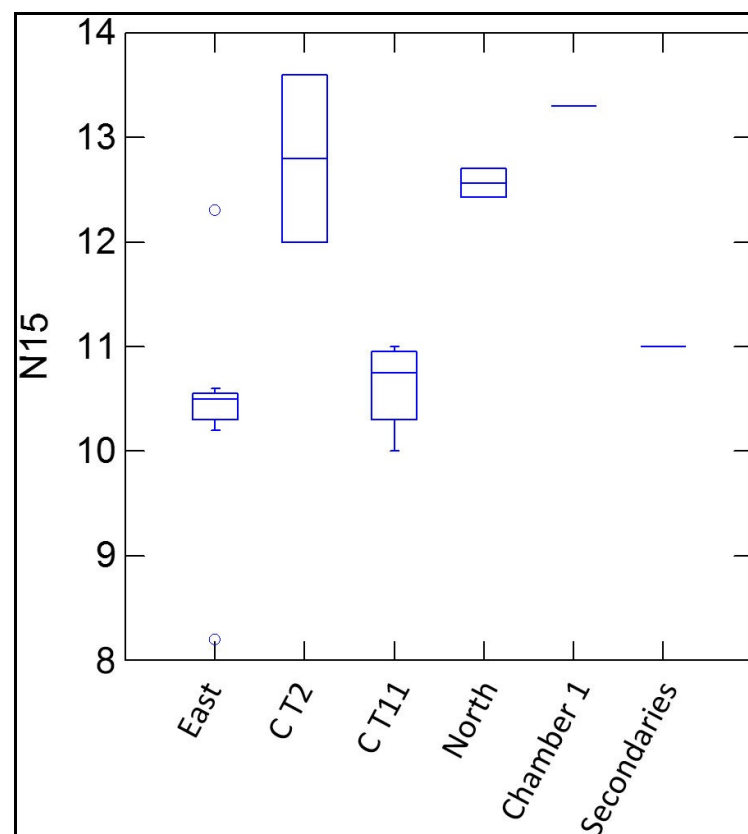


Figure 3.97. Box-and-whisker plot of $\delta^{15}\text{N}$ by tomb in the Huaca Burial Platform.

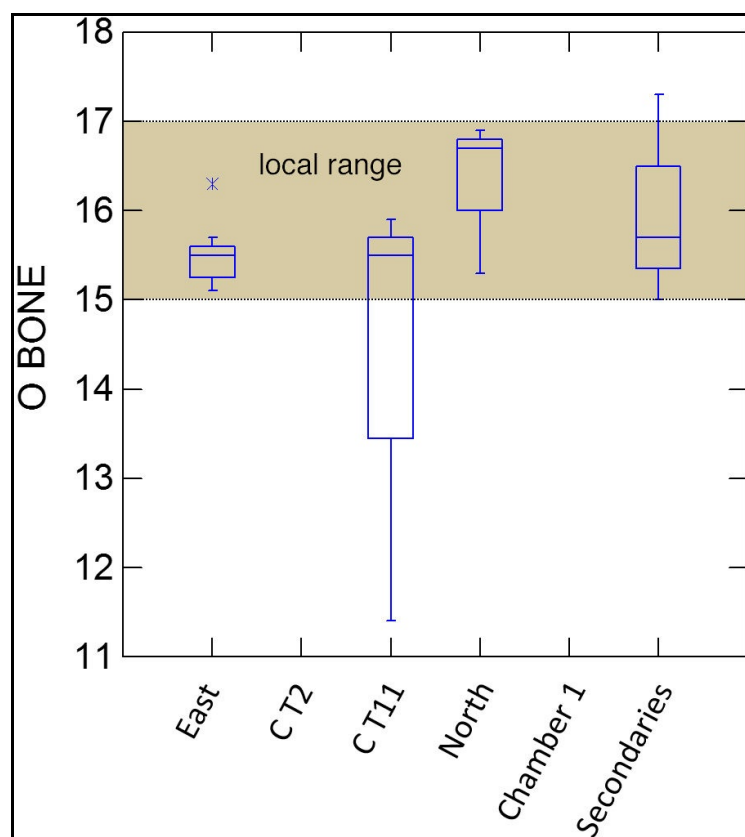


Figure 3.98. Box-and-whisker plot of $\delta^{18}\text{O}$ values for bone by tomb in the Huaca Burial Platform.

CHAPTER 4

CEMETERY J: INCA BURIALS IN A FORMER CHIMU SACRED SPACE

Carol J. Mackey and Andrew J. Nelson

INTRODUCTION

Part A of this chapter focuses on the tombs and grave goods in Cemetery J and burial JO in Compound II. Cemetery J is the only subterranean cemetery at Farfán and, like the others, was arranged in levels. It is adjacent to the earlier Chimu burial platform, and by remodeling the surrounding area, the Inca placed their signature on a former Chimu sacred space. The individuals buried here were Inca-affiliated administrators and their families who were interred with vessels of Hybrid-Inca and Late Horizon Jequetepeque ceramic styles. An elite old female (JO) was found to the west of the subterranean cemetery in an above-ground adobe structure.

The bioarchaeological characteristics of the individuals buried in Cemetery J and the JO tomb are detailed in Part B of this chapter. The primary burials include sixteen adults, while the secondary burials consist of four individuals.

CHAPTER 4A: TOMBS AND BURIAL GOODS

Carol J. Mackey

The History of Compound II

Following their defeat of the Lambayeque people in the Jequetepeque Valley around A.D. 1320, the Chimu built Compound II over a razed Lambayeque structure (Mackey 2011:156). Compound II is the largest and most elaborate of all the Chimu-built compounds at Farfán and adhered to their architectural canons. The

compound contains two plazas, two audiencias, storerooms, a *wachaque* or walk-in-well, and the largest Chimu burial platform constructed outside of the capital city of Chan Chan (Figure 4.1).

Chimu burial platforms at Chan Chan are associated with the king and his lineage (Conrad 1982:104; Pillsbury and Leonard 2004:255, 262), which suggests that a member of Chimu royalty lived, and was subsequently buried, at Farfán. Compound II's burial platform (Figure 4.2), however, was more than just a royal burial structure—it was a lasting symbol and reminder of the Chimu victory over the Lambayeque people and the conquest of the Jequetepeque Valley. Therefore, after the Inca conquered the valley, it may have been politically important for the Inca to make a visual and ideological statement in the area surrounding this Chimu symbol.

Adhering to their policy of non-destruction, the Inca modified and built in the area around the Chimu burial platform, transforming it into an Inca sacred space (Figure 4.3). The Inca built a multi-level subterranean cemetery (J) under the plaza of the Chimu burial platform, interring individuals who most likely had worked and lived at Farfán. This is the only cemetery at Farfán that did not contain ethnic Lambayeque individuals, further indicating that it was a population closely tied to the Inca administration. Although the Inca did not destroy the former Chimu symbol, they nonetheless made significant changes to the surrounding area.

The Inca Remodeling of a Chimu Sacred Space

During the Chimu occupation, the burial platform area in Compound II at Farfán contained few architectural elements, aside from the plaza and a *wachaque*, or walk-in well. The former Chimu platform stands approximately 6.5 meters tall, but is presently in a poor state of preservation, and likely stood much higher in the past. At present, all that remains is an adobe shell, completely hollowed-out by looters. Despite the destruction, the form of the burial platform—an access ramp, a portion of an exterior frieze, and the plaza fronting the burial platform—are preserved (Figure 4.2). The Inca transformed this area into their sacred space by making a number of immediate and obvious changes to three areas surrounding the former Chimu platform: the entry to the platform area and the plaza (J), the unoccupied areas to the east (JE), and the west (JO) of the plaza.

The Entry to the Platform Area and the Plaza (J)

The Inca altered the main entry to the burial platform area. They changed the access by constructing a baffled entry inside the main doorway, redirecting traffic to the east (Figure 4.3). The original Chimu northern entry to the plaza was sealed (Figure 4.3 [B]). A new doorway and ramp (Figure 4.3 [C]) was built on the plaza's east side, as well as a new door in the western wall (Figure 4.3 [D]). A bench was constructed against the eastern wall (Figure 4.3 [E]) and a 2.5 meter-high wall was built at the southern end of the plaza that partially obscured, but did not totally block, the access to the ramp of the Chimu platform (Figure 4.3 [F]).

The Eastern Addition (JE)

To the east of the plaza, the Inca constructed twenty-two 2 by 2 meter storerooms and an associated U-shaped structure. Absence of doorways indicates that these storerooms were entered by a ladder from the roof of the room (Figure 4.4). These structures are not typical North Coast-style storerooms, such as those found at Chan Chan, which had step-over doorways. Instead they are similar in form to those found at the Inca administrative center of Inkawasi on Peru's South Coast (Hyslop 1990: 173–174). The Inca storerooms at Farfán housed a range of different types of goods. The recovery of sherds of fine pottery and feathers (possibly flamingo) in the rooms suggests that the prestige goods stored here were used in rituals and/or burials. This is supported by the close spatial association between the storage rooms and the Inca tombs found in Cemetery J, described below.

A small U-shaped structure is located to the south of the storerooms. This structure, once roofed, faced north and had two niches on its back wall, as well as the remains of a fine plastered raised floor. As with earlier Chimu audiences, persons in this room may have been tasked with overseeing and controlling access to the storerooms (Andrews 1974:244–245, 256; Day 1982; Klymyshyn 1987; Mackey 1987; but see also Moore 1992; Topic 2003), further bolstering the suggestion that the storerooms may have held objects of high value. Perhaps to further emphasize their control over this area, the Inca also constructed north-south and east-west walls around the storage area of JE. The portion of the wall running parallel to the plaza was a wall of double thickness (Figure 4.3). The original Chimu wall in the plaza measured sixty centimeters in width. The second Inca-built wall, also sixty centimeters wide, paralleled and abutted the original Chimu wall, with the newly-built portion of the wall facing the storerooms. The

walls were plastered so that the two separate walls were not visible (see arrows in Figure 4.3). The Inca practice of making double walls is found in other compounds throughout Farfán, indicating that they placed importance on having new Inca-built walls covering the older Chimu construction.

The Western Addition (JO)

The Inca added an aboveground adobe tomb (Figure 4.3 [G]) and a separate binned structure (Figure 4.3 [H]) on the west side of the original Chimu plaza. The tomb contained three compartments; only two, however, had been utilized in antiquity. The Inca also built a wall surrounding JO, the western addition. As observed in the eastern addition, the portion of the wall that runs parallel to the plaza was also a wall of double thickness, with the newly-built wall facing the Inca structures (Figure 4.3). This western addition (JO), with its walls and structures, blocked one of the traditional routes to the Chimu burial platform.

The aboveground adobe tomb measures four meters in length by three meters in width by one meter in height and contains three compartments (Figure 4.5). The east compartment, which measured fifty centimeters wide and ran the full length of the tomb, had probably never been used, as it was not sealed like the other two compartments. In addition, this narrow space could have only accommodated an extended burial. During the Inca occupation, only very young children were placed in an extended position.

The compartment in the southwest corner of the tomb was sealed with adobe bricks. It was the smallest of the three and measured one hundred twenty centimeters in length by ninety centimeters in width by one meter in height. Despite its size, it held one of the most important burials at Farfán. This was a secondary

rather than a primary burial. The body was completely disarticulated and may have been curated for some time before it was placed in the tomb. The results of the bioarchaeological analysis (Chapter 4B) indicate that the old woman who occupied the tomb was extremely active in her early years, but suffered in later life from age-related skeletal degeneration. She lived past forty years of age, which is considered old for this time. Her disarticulated remains and grave goods were intentionally placed in three distinct levels, echoing the three-level concept found in all of Farfán's Late Horizon cemeteries. Skeletal elements from the upper body were visible when we removed the tomb's seal and were interspersed with pottery and other grave goods (Figure 4.5). The skull and pelvis were excavated, along with other ceramic vessels, in the second level. The lowest level of the tomb contained pottery and the lower extremities of the body.

The tomb of the old woman contained twenty-two vessels, the largest number of ceramic offerings in a single interment during the Inca period at Farfán (Appendix 7). The most common vessel type was a reduced blackware plate, a form typically found in all high-status Inca tombs at Farfán (Figure 4.6). Although two of the plates contained the remains of unidentified seeds and fish bones, the other plates were empty. The plates were stacked, as were others excavated from Farfán's Huaca Burial Platform (Chapter 3A), in sets of two or four. Over half of the plates in the tomb were found in the first level, as is also typical of the Huaca Burial Platform. Another connection to the Huaca Burial Platform is that the plates were decorated on their bases. Similarly decorated plates have been reported from the Inca ceramic workshop at Cañoncillo in the Jequetepeque Valley (Donnan 1997: figure 6e).

The aboveground tomb also contained four jars decorated with three-dimensional monkey

heads, a motif that continued from Formative through Chimu and into Inca times (Figure 4.7; Appendix 4; Levine 2011 [2016]:171, figure 2). Another vessel, a finely-molded llama head in polished blackware, stands apart for its fine workmanship, despite the fact that the jar neck had been broken in antiquity (Figure 4.8). This vessel is a harbinger of the remains found in the third compartment of this tomb.

One of the most interesting pieces in the tomb of the old woman is a goblet (Figure 4.9). During Moche times, a similar goblet was interred in the tomb of a priestess (c. A.D. 750) excavated at the site of San José de Moro in the Jequetepeque Valley (Donnan and Castillo 1994:419–420). This version of the goblet, in Hybrid-Inca style, may be a continuation of that form associated with the priestess tradition (see also Johnson and Zori 2011:23, figure 15; Mackey and Pillsbury 2013). The goblet is made of polished blackware and its pedestal, rather than being smooth like the Moche version, is Janus-faced, a decorative motif found in the Cusco-Inca style. Further support for the old woman's connection to long-standing local traditions in the valley is suggested by her Form G cranial modification. This type, uncommon at Inca period Farfán, is similar to those found with some earlier Moche burials (Chapter 4B).

In addition to fragmentary seeds and fish bones, the woman's tomb contained other non-ceramic artifacts. Weaving swords of algarroba wood were in the upper and lower levels, while metal items included a copper needle, a silver-plated spoon, and nose ornament (Figure 4.10).

The third compartment, located in the northwest corner, was also sealed with adobe bricks. When the bricks were removed, a complete, articulated body of a llama was revealed (Figure 4.5). The llama had been placed in the center of the compartment, and over its body we unearthed fragments of a textile woven of both

camelid fiber and cotton. Skeletal and dental analyses of the llama indicate that, at age twelve to fourteen years, it is the oldest camelid thus far encountered at Farfán. As with llamas in the Huaca Burial Platform, this animal had scorch marks on the carpals and phalanges (Appendix 3). The burial of the aged llama next to the older woman's tomb suggest a "like with like" concept (Gaither *et al.* 2008) similar to that found in the Huaca Burial Platform.

The Subterranean Cemetery J in the Plaza Fronting the Chimu Burial Platform

Although a 5 by 5 meter grid was placed over the entire area of the plaza (Figures 4.11, 4.12), our excavation revealed that only a small portion of the plaza was dedicated to the burials. The area of the subterranean cemetery was 10 meters in length and 3.5 meters in width. Separated by 50 centimeters is a small northern extension 2 meters long by 2.5 meters wide, and just over 2 meters in depth. The location of each body and its grave goods was taken from a datum set into the surface of the plaza floor. The results of this information allowed for the reconstruction drawing of the cemetery (Figure 4.13).

The changes in the two side additions (JO and JE) altered the outward appearance of the area surrounding the Chimu burial platform. By far the most significant change to this area, however, was the Inca construction of Cemetery J, a three-tiered, subterranean cemetery under the plaza (Figures 4.11, 4.12). Together, the east and west additions and the subterranean cemetery changed the focus from the Chimu burial platform to the remodeled plaza, providing a new setting for Inca rituals and ceremonies.

This cemetery was well planned. The bodies were evenly spaced and placed on separate levels, although only the western portion (J25) had three levels. We began our excavations on

the west side, where we noted a looter's pit exposing human bones. In the reconstruction drawing of the cemetery (Figure 4.13), the blank space on the west side above T6 and S1 probably contained interments, and it was most likely bones from these burials that we noted before beginning excavation. Our evidence showed, however, that the rest of the cemetery remained undisturbed.

In Cemetery J a total of twenty individuals—eleven in unit J25, five in J26, and four in J14—were interred in multiple levels (Figures 4.13, 4.14). These levels were not placed one atop the other, but were instead slightly staggered, reminiscent of terraces (as seen in the Compound VI Cemetery (Chapter 7A). The lowest level was placed three meters below the surface of the plaza. The six bodies in Level 3, in Units J25 and J26 (the blue level in Figure 4.13) were placed on a compacted floor, and then covered with loose earth. The bodies in Level 2 (the pink level in Figure 4.13) are on a terrace that is some sixty centimeters to the south and thirty to forty centimeters above Level 3. The bodies in Level 2 were not placed on a flat compacted surface, as was seen in Level 3, but, instead, each tomb was dug into the north face of the earthen bulwark. The two burials in Level 1 of J25 (the green level in Figure 4.13) were most likely pit tombs dug down from the surface after the bodies in Level 2 had been covered.

The earth covering the bodies in Level 3 of Unit J25 was of a much harder and more compact consistency than the soil in the other two levels, suggesting that a liquid, possibly chicha, had been poured over the earth. Several of the individuals in Level 3 had sand and mud in their hair. This may have resulted from pouring libations over the bodies, through exposure to the elements or by intentionally covering the head with mud, as was noted for some burials in Center Tomb 11 in the Huaca Burial Platform (Chapter 3A).

Unit J14, the small northern extension, contained only two levels. The two individuals in Level 3 were placed three meters below the plaza floor and were north of the main cemetery by fifty centimeters. Above them in Level 2 were two individuals who were oriented to the south. In Cemetery J, all of the tombs were unlined and unadorned. None of the bodies in Cemetery J were clothed; however, fragments of textiles made of camelid fiber and cotton adhered to the bodies and hair of many individuals, indicating that they had been covered with shrouds.¹

Burial Patterns within the Cemetery

Although Cemetery J contained individuals of both genders and various ages, the demographic distribution was not normal. Of the twenty primary and secondary burials, almost half of the burials (N=9) were subadults: neonates, infants, or juveniles. Among the adults, seven burials were females and four were males (Figure 4.13), meaning that women were more common than men, as is true for every Late Horizon cemetery at Farfán except Compound VI.

The most salient characteristics of Cemetery J are the considerable planning and placement of the bodies within the cemetery. The positioning of the bodies may reflect the ethnic or geographic origins of the interred individuals within the Inca empire. One example is the grouping of females buried in Level 3, in which four of the five women share the same cranial type, Form A, which is also shared by the secondary male burial S1 in the same level. The most common cranial types at Farfán are Forms A and B—the former is unmodified and the latter

¹ Fragments of the shroud remained only on the upper bodies, though it is possible that they were fully covered, and the textiles around the lower parts of the bodies were destroyed by the decomposition process.

has only slight modification (Chapter 2). Because the choice to modify or not modify the skull is a cultural trait, the clustering of this feature in the lowest level of Cemetery J may indicate community, kin, and/or ethnic affiliation.

Within Cemetery J, position and orientation of the bodies vary. Most of the bodies were in a seated position, with the legs crossed and knees apart. Two burials (J25 T1 and J25 T5) had their knees flexed under their chins, a position associated with the Inca Horizon in the highlands (Figure 4.13; Verano 2003:72, 77). Only the very young, up to two years of age, were interred on their backs in a supine position. These young individuals were consistently found oriented east-west, with the head pointing east (Figure 4.14). Adult individuals were found facing to the north, south, east, and west (Figure 4.14), although there are distinct clusters of individuals according to their orientation. The majority of these burials were more likely to be oriented north than any other direction and most of these were found on the lowest level. Since individuals were also oriented to other directions, the objective may have been to have them facing the four *suyus* or territories of the Inca Empire. This characteristic orientation of individuals to four directions is also found in Center Tomb 11 in the Huaca Burial Platform (Chapter 3A).

Grave Goods

Depending on the type of goods, burial offerings in Cemetery J were positioned on or around the body. Gourd bowls, textiles, shells, or other objects were generally placed in the lap. Ceramics were located near the body, either to the front or to the side of an individual's crossed legs, or on an earthen ledge behind the body.

All of the burials in Cemetery J contained an offering. Commonly, infants or children were

buried with a piece of copper and shell beads, such as in the burial of the neonate (J25 T2), or the juvenile (J26 T1B) who was found with only a piece of copper, following the North Coast tradition in which copper was often placed in the mouth or hands. All copper offerings were folded and tied with thread, similar to that shown in Figure 4.18. One to four pottery vessels generally accompanied adult individuals. Three individuals on the lower level of unit J25 held complete spondylus shells (a middle-aged female J25 T7, a young adult female J25 T8, and another middle-aged female J25 S1), as did the child in Level 2 (J26 T3). The women in the lowest level were all buried with weaving paraphernalia. The young adult female (J25 T9) had the remnants of a weaving basket, while a middle-aged woman (J26 S1) had a spindle whorl, part of a weaving sword, and unspun camelid wool. The other women in Level 3 had either copper needles or chalk. These are the only women outside of the Huaca Burial Platform to have been interred with weaving equipment, and it is of interest that they were all together in the lowest level.

Examples of Burials in J25 and J26

The descriptions of several burials in units J25 and J26 illustrate the type of ceramics found in Cemetery J and their placement within the tombs (Appendix 6). The thorax and pelvis of the seated mid-adult male in Level 2, Tomb 6 (J25 T6) was oriented to the north, but the remainder of the body faced west (Figure 4.15). Three gourd bowls covered his lap and chest. An Inca-style aryballo was placed on his left side and partially covered his arm (Figure 4.16). Although manufactured on the coast, this highly burnished, Hybrid-style redware vessel closely follows the stylistic conventions of traditional Cusco-style aryballos. It has a conical pointed base and two strap handles attached vertically to the lower body. The vessel also has the typical *adorno*, a round nub with diagonal

incisions attached to the shoulder, as well as two pierced lugs suspended from the undersurface of the rim (Miller 1987–1989 [2004]:128, diagram 1). To the right side of J25 T6 we excavated a blackware spout-and-handle jar with a wide strap handle (Figure 4.17). The motif on the vessel body is that of a quarter moon set against a background of small stipples, possibly stars, a design that persisted from Chimú times. Several shell beads had been placed close to the body, as well as a piece of copper that had been folded and tied with thread (Figure 4.18).

The tomb of the child (J26 T3, Figure 4.19) is important because it illustrates a number of features common to the burials in this cemetery. These features include the presence of twin vessels, a Late Horizon Jequetepeque bird-neck jar, and the interment of fine grave goods with subadults. Because of the young age of the individual—between six and seven years—it was not possible to determine the gender. The body is in a seated position oriented to the west. A complete spondylus shell was found in the child's lap and the head had fallen forward, almost touching the shell (Figures 4.19, 4.20). Two matched vessels are found on the right side of the body. These twin vessels have a distinct form, and resemble two ollas set one over the other with vertical strap handles placed where the vessels join (Figure 4.21). Three additional vessels were behind the body on an elevated earthen ledge. Among the vessels on the ledge is a large ovoid bird-neck jar (Figure 4.22). The tomb also contained a small piece of copper wrapped in textile, gourd fragments, and two copper tweezers attached to cotton cords, one of which is shown in Figure 4.23.

Burials and Grave Goods in the Northern Extension (J14)

A centerpiece offering, consisting of a small, northward extension, was placed near the cemetery's center, but separated from it by 50 to 60

centimeters (Figure 4.13). The lowest level of this extension contains two burials. One is a secondary burial of a seated, old female (J14 S1) who lacks both head and feet (Figure 4.24). Her tomb contained several fine examples of Late Horizon vessels. One is a Hybrid blackware aryballo that also served as a *paccha* (Figure 4.25). The *paccha*, thought to have been used in Inca divination and agricultural ceremonies, has a series of interior tubes that carry the liquid to a small spout at the bottom of the vessel for drinking or pouring (Cummins 2007:278, figure 13; Lothrop 1956:237–242; Mackey 2009b: 297–298, catalogue number 71). A second vessel, notable for its fine craftsmanship, is a Late Horizon Jequetepeque style stirrup spout vessel with the head of a feline (Figure 4.26). This is very similar to the Inca-style feline carved on the wooden post placed at the entry to Compound II during the Inca occupation (Figure 4.27; Keatinge and Conrad 1983:271, figure 9). In addition to the ceramics, we unearthed six undecorated gourd bowls stacked inside one another. The two gourd bowls at the top were wrapped in a textile woven of camelid fiber and cotton. Guinea pig bones were also found in this old woman's tomb.

The second burial is of an infant (J14 T3), who was placed over a partially-worked oblong block of granite measuring thirteen by twelve centimeters (Figure 4.28). Four vessels surround the infant, including a painted Hybrid redware face-neck aryballo (Figure 4.29) and one that displays a modeled depiction of a copulating couple (Figure 4.30). This black ware vessel illustrates the common Late Horizon trait of pattern burnishing, indicated by black zig-zag lines. The rest of the vessel, however, is not burnished. As noted by Bourget (2006) and others (e.g. Mackey and Pillsbury 2013:129), symbols of fertility, such as this copulating couple, are often found in North Coast mortuary contexts, and may be another feature that

harkens back to earlier cultures such as the Moche.

Directly above the burials of the old female and the infant are the tombs of an old adult male (J14 T1) and a young adult female (J14 T2). The male burial contained an elaborate stirrup spout vessel with a front-facing figure wearing a crescent-shaped headdress (Figure 4.31). In addition to the stirrup spout, his grave goods also included two cooking ollas (Appendix 7). Accompanying the ceramic vessels were fragments of a camelid fiber and cotton textile. In addition, the tomb contained the remains of several gourd bowls and fragments of copper. This is the only burial at Farfán of a male whose tomb included copper needles, substantiating the notion that males participated in weaving. The young female (J14 T2) to his left had a blackware olla with a press-molded anthropomorphized wave motif. This rendering of the wave motif is found only at Farfán and appears to be the site's signature design (Figure 4.32).

Summary

The changes made by the Inca in Compound II to the area surrounding the former Chimu burial platform, including the architectural additions on either side of the plaza and the installation of a subterranean cemetery, were meant to convey to visitors that they had entered a setting characterized by an Inca—and not a Chimu—signature. By transforming this area, the Inca shifted the focus from the Chimu platform to a new Inca sacred space.

Cemetery J, located in the plaza fronting the Chimu burial platform and the tomb to the west of the plaza (JO), show similarities and differences when compared to Farfán's other cemeteries. The similarities include the seated burial position with knees apart; the orientation in Cemetery J of the bodies to four different directions may represent the "Four Quarters" or four

suyus of the Inca Empire, as is found in the Huaca Burial Platform (Chapter 3A); the presence of several ceramic forms, such as vessels with three-dimensional monkey heads; pairs of identical ceramic vessels; plates stacked in sets of two or four (in Tomb JO); and the predominance of adult female burials. The northern extension of Cemetery J (J14) was meant to create a "centerpiece" offering for the cemetery as a whole—one that included an infant and a secondary burial of a female. A similar centerpiece offering occurs in the Compound VI Cemetery (Chapter 7A).

There are, however, many unique characteristics. Cemetery J is the only subterranean cemetery at Farfán; all the others are above-ground mounds. This cemetery, as well as Cemetery I, contains Hybrid-Inca ceramics (Appendices 6, 7). There is a greater range in the accompanying non-ceramic burial goods than in other cemeteries, with the exception of the Huaca Burial Platform. Almost all individuals, no matter their gender or age, have non-ceramic offerings. These may include gourd containers, shell, copper implements like needles and tweezers, seeds, or guinea pig remains (Table 4.1). This is the only cemetery, other than the Huaca Burial Platform, which includes weaving equipment associated with women, indicating that they, as well as the *aqllakona*, were involved in textile manufacture (Table 4.1).

The western addition JO in Compound II contained one of Farfán's highest-status burials: the secondary, disarticulated burial of an old woman (JO S1). Her elevated social standing is indicated by the inclusion of silver implements, fine pottery, and, in the adjacent compartment, an offering of a complete llama (Table 4.1). Taken together, the characteristics of this burial suggest that the individual may have been an important local female who was reburied at Farfán. The disarticulated nature of the bones indicates that she had previously been buried

elsewhere and was only later interred in the new Inca sacred precinct. The location of her tomb was particularly significant in that it blocked access to the former Chimu burial platform and created a new Inca tomb. Two features highlight her local roots. The goblet included in her tomb, a form found in earlier Moche cultural contexts (A.D. 200–800), is rendered here in Inca Hybrid style. In addition, her style of cranial modification, Form G, recalls that of individuals from the Moche culture.

Cemetery J is the only mortuary facility that did not contain ethnic Lambayeque individuals, as identified by cranial modification Form C (Table 4.1). All the other cemeteries at Farfán included at least one Lambayeque burial. As I suggested in Chapter 1 (see also Mackey 2011 [2016]:159–163), the Inca may have co-ruled with local Lambayeque lords, or given them administrative responsibility at the site, and so it is unusual that no representatives of this population were included in the cemetery. As shown in Table 4.1, all but three of the women in these cemeteries are local in origin. The evidence from both bioarchaeological and material remains suggests that subterranean Cemetery J may have been reserved exclusively for individuals affiliated with the Inca administration and their families. Several of the subadults have a cranial modification type (Form F, Chapter 2) that is affiliated with the highlands, even though the majority of individuals in Cemetery J spent the last ten years of their lives in the Jequetepeque Valley. Consistent with this finding is that over half of the individuals show no cranial modification (Form A), which is a characteristic of Farfán burials common in the Late Horizon under Inca rule.

Cemetery J and the surrounding architectural modifications speak to an important policy of the Inca. The Inca sought not to obliterate the former Chimu burial platform, but instead to incorporate the area into a newly-created Inca

sacred space. The Inca may have viewed the labor investment in this area as necessary to establish their political legitimacy and promulgate the state ideology by transforming an important symbol of the conquered Chimu people.

CHAPTER 4B: BIOARCHAEOLOGY OF CEMETERY J

Andrew J. Nelson

Cemetery J, a Late Horizon mortuary facility located adjacent to the earlier Chimu royal burial platform, contains both primary and secondary burials arranged in three levels (Figure 4.13). The first (top) level contains two primary burials, the second comprises ten primary burials, and the third level includes four primary and four secondary burials. With a total of twenty individuals in all, this facility includes more individuals than any other cemetery at Farfán, outside of the Huaca Burial Platform (Chapter 3).

Demographic Composition

Standard protocols, presented in Chapter 2, were used to determine the age and sex of the individuals at Farfán. In Cemetery J, the subadult primary burial sample consists of two neonates (J25 T2 and J26 T2), three infants (J14 T3, J25 T4, and J25 T5), two children (J25 T3 and J26 T1A), and two juveniles (J26 T1B and J26 T3), for a total of nine subadults. The adult primary burial sample consists of three adult males aged young (J25 T1), middle-aged (J25 T6), and old (J14 T1), and four adult females, three young (J14 T2, J25 T8, and J25 T9) and one a mid-adult (J25 T7). The sample of secondary burials comprises one young adult male (J25 S1), one mid-adult female (J26 S1) and two old females (J25 S2 and J14 S1; Table 4.2). There are no adolescents buried in this cemetery, and there are no old adult females in the primary burial sample. The presence of such a large number of subadults, particularly children and juveniles, differentiates this sample from that of Cemetery I (Chapter 5B) and the Compound VI Cemetery (Chapter 7B). In Cemetery J there is a total of seven adult females and four adult males. This preponderance

of females is typical of most cemeteries at Farfán, with the exception of the Compound VI Cemetery (Chapter 7B).

Secondary Burials

There are four secondary burials in Cemetery J. Three of them are relatively complete (J25 S1, J25 S2, and J26 S1), while the fourth (J14 S1) is a partial skeleton comprising elements of the right and left forearms, pelvis, and major leg bones in relatively poor condition. The presence of relatively complete skeletons in secondary burials is worthy of note, as the majority of secondary burials in the other cemeteries at Farfán are not complete. The preservation of the individual bones ranges from poor to good, although many of the bones are quite fragmentary, and many of the small bones of the hands and feet are missing.

Stature, Health, and Disease and Activity Patterns

Osteologists often assess an individual's health during the subadult years using the stature achieved as an adult (e.g. Larsen 2002). Stature could be calculated for ten out of the twenty individuals in Cemetery J (Table 4.2). The secondary burial of an old female (J14 S1) did not have any completely preserved long bones, but an analysis of shaft and joint diameters allowed a general categorization of her body size. All four males were categorized as being of medium stature, with an average stature of 157.9 centimeters. This average stature is only slightly shorter than the male mean for the entire site (158.8 centimeter N=14). Of the seven females for whom stature could be calculated, six were medium statured, and a mid-adult female (J25 T7) was classified as tall (151.8 centimeters). The female mean stature was 146.9 centimeters, which is slightly higher than the mean for the entire site (146.0 centimeters, N=32). None of these individuals was

classified as short. In all, these findings imply that the people buried in Cemetery J had relatively good health and nutrition throughout their adolescent years.

Patterns of the expression of health and disease are affected by diet and both environmental and social conditions, and are thus an important window into any society (*ibid.*). In this study, infectious diseases, degenerative disease, and dental health are used to establish the general patterns of health and disease among the population buried in Cemetery J.

There are four examples of infectious disease in Cemetery J, three of them affecting subadults. The four-year-old child (J25 T3) demonstrates extensive destruction of the hip joint (Figure 4.33). This likely represents an osteomyelitis, or bone infection. In children of this age, common infectious agents such as *Haemophilus influenzae* (a form of the flu) or *Staphylococcus* (a common infectious bacterium) can cause osteomyelitis in immuno-compromised individuals by settling at sites of active bone growth, most commonly the hip (Wang *et al.* 2003). Left untreated, the infection would ultimately become septic and could very quickly destroy the hip (Hollingworth 1995). This individual is also short for its age, indicative of growth faltering. This suggests that this child suffered from a chronic illness that left it susceptible to the infectious agent. Evidence for robust muscle markings on the right hip and the presence of remodeled bone in the infected left hip, however, suggests that this child had this condition for some time, during which it continued to be somewhat mobile. This child would have been in considerable pain (Sherry 1990) and would have required a great deal of care from the parents and other members of the society.

An infant, 1.5 years old, also had an infectious disease (J25 T4). This infant demonstrates porous, disorganized erosion of the inner table of

the cranium in the area around the anterior fontanelle, with patches of vascular impressions on the endocranial bone on the parietal bone (Figure 4.34). Definitive diagnosis of this pattern of endocranial lesions is impossible without histological analysis (Ortner 2003:93), but the lesions are consistent with an inflammatory and/or hemorrhagic process, most likely caused by infection. Such an infection could arise due to a variety of causes. Among other possibilities, it could be secondary to trauma or tuberculosis, the result of a bacterial infection, or due to congenital syphilis or tumors (*ibid.*; Lewis 2004). As a result, the diagnosis can be no more definitive than non-specific meningitis. If it were bacterial in origin, *H. influenzae* or *Streptococcus* would be among the most likely suspects (Hemsley and McGregor 2011). Irrespective of the definitive diagnosis, untreated meningitis has a very high mortality rate, (Hemsley and McGregor 2011).

A seven-year-old juvenile (J26 T1B) evidenced infectious lesions. This juvenile demonstrates an infectious condition with two foci along the vertebral column. The first focus is in the vertebral end of a mid-level left rib, where the articular end is completely eroded and has been remodeled with woven bone (Figure 4.35). The second focus is in the first lumbar vertebra, where an infectious lesion has destroyed the area where the vertebral arch joins the vertebral body on the right-hand side (Figure 4.36). Both of these lesions combine coarse trabecular woven structure with dense sclerotic margins to the lesion, indicating that the infectious condition had been of long duration. This could be the product of chronic recurrent multi-focal osteomyelitis (non-infectious) or infectious osteomyelitis. The presence of these lesions in the spine and rib rather than the appendicular skeleton, however, suggests that the latter diagnosis is more likely (Robertson and Hickling 2001; Schmit and Glorion 2004). In particular, the fungus *Aspergillus* sp. is known to lead to

infection in the spine and rib, while *Staphylococcus* is implicated in many bacterial cases of osteomyelitis (*ibid.*). This juvenile (J26 T1B) was likely immuno-compromised when exposed to the pathogen, perhaps due to chronic health problems, and would have experienced considerable pain and required extensive parental care.

The single example of an infectious disease in a mid-adult male is that of J25 T6. Like the juvenile (J26 T1B), this individual probably had a case of infectious osteomyelitis of the spine. The inferior surface of the 6th and the superior surface of the 7th thoracic vertebrae demonstrate that there had been a focus of infection in the 6th/7th intervertebral disk, leading to destruction of both vertebrae and the collapse of the 6th (Figure 4.37). This lesion is too high in the vertebral column to have been caused by tuberculosis, while the presence of dense, sclerotic bone rules out osteoporosis as the underlying cause (Ortner 2003:411). A study of pyogenic osteomyelitis of the spine in the era before effective antibiotics reported a twenty-five percent mortality rate from this disease (Guri 1946). The disease often starts from a distant focal infection of *Staphylococcus* bacteria and can lead to back pain, elevated temperature, and neurological complications (Carrage 1997; Guri 1946). In adults, this disease does not progress as quickly as it does in children, and a chronic infection can last many months. Such a chronic infection is suggested in this case by the sclerotic bone in the lesion. This individual would have been extremely uncomfortable, would have had reduced mobility, or been immobile, and, like the subadults discussed above, would have required a great deal of care.

Eight out of the twenty individuals in this cemetery demonstrate degenerative changes of the spine. Three of these, J14 T1, J25 T7, and J25 S2, are middle-aged or old adults, and the degeneration of their spines is consistent with

age-related osteoporosis. By contrast, the presence of degenerative changes, including vertebral collapse in three young adults (J25 T1, J25 T9, and J25 S1), and two middle-aged adults (J25 T6 and J26 S1) is quite striking. In these individuals, the anterior portion of the vertebral body is significantly reduced in height, producing an angular deformity in the spine described as a kyphosis. As discussed above, the changes in the spine of the old adult male (J25 T6) are likely due to the destruction of the sixth thoracic vertebra by infection. There is, however, no sign of vertebral infection in any of the other young to middle-aged adult individuals. The site of vertebral collapse varies from the fifth thoracic vertebra (middle of the spine) to the fifth lumbar vertebra (base of the spine); there is no correlation between spinal pathology and musculo-skeletal stress markers; and both sexes are affected. It is therefore unlikely that similar activity patterns led to this pattern.

One young adult female (J25 T9) was examined in detail using densitometry, plain film radiography, and micro-CT analysis (Jaagumagi 2011). In this process, other possible causes of the vertebral collapse, especially osteoporosis, were ruled out. Instead, one possible diagnosis for this pattern of degenerative changes to the spines of young adults is Scheuermann's Kyphosis (or Scheuermann's Disease), a condition wherein the vertebral bodies begin to collapse in late childhood, producing a kyphotic deformity of the spine (Wegner and Frick 1999). It is generally defined as the wedging of three consecutive vertebrae of more than five degrees (*ibid.*). While this diagnosis is generally done using an x-ray, the physical description would fit most of these individuals. The cause of this condition is not well understood, although there appears to be a strong genetic component (Damborg *et al.* 2006; Halal *et al.* 1978). There may also be mechanical factors in its etiology (Wegner and Frick 1999). The large number of affected individuals

in Cemetery J would seem to fit with the genetic interpretation. At the same time, the co-occurrence of Schmorl's Nodes in two of the affected males (J25 T1 and J25 S1), defects in the surface of vertebrae associated with compressive trauma (Faccia and Williams 2008), would be consistent with a mechanical origin of the condition. The biggest concern for modern young individuals is the aesthetic impact of the deformity itself, but when left untreated, the condition is progressive and can lead to serious pain, lack of mobility, and neurological problems arising from the compression of the nerves around the spine (Murray *et al.* 1993; Wegner and Frick 1999). Interestingly, a similar condition is also observed in several of the young individuals from the Huaca Burial Platform at Farfán (Chapter 3B). It is also worthy of note that an aryballo found in this cemetery depicts an individual with a hunched back (see Chapter 2A, and Appendix 6, Figure A6.4, this volume.

The dental health of the individuals buried in Cemetery J is remarkably poor. Among the subadults, one two-year-old (J25 T5) already had periodontal disease, tooth loss, calculus, and one cavity; a seven-year-old (J26 T1B) had two carious lesions that have almost destroyed two tooth crowns; and one six-year-old (J26 T3) has several carious lesions, calculus, and periodontal disease. Only a young adult female (J25 T9) is in good dental health. The other nine adults with preserved dentitions demonstrate carious lesions, abscesses, tooth loss, calculus, and enamel chips. Such poor dental health in young individuals is quite striking, although it is not unique at this site, and clearly demonstrates a diet high in carbohydrates. In combination, these conditions would have led to considerable dental pain in the population at this site.

Activity patterns can be assessed by looking at the degree of osteological response at the attachment sites for muscles on bones (musculoskeletal stress markers, or MSMs), by looking for

other osteological indicators of habitual activity, and by documenting patterns of trauma (cf. Kennedy 1989; Larsen 2002). The overall development of MSMs is not particularly extensive in this sample, particularly when compared to the individuals from Cemetery I (Chapter 5B). Two young adults (J14 T2 and J25 T1) and one old adult (J14 S1) have no well-developed MSMs, suggesting that they were involved in little vigorous or repetitive activity. Several individuals have well-developed MSMs for the hip and calf, as well as squatting facets or other indicators of squatting or kneeling. Several individuals have well-developed MSMs on their arms, but there is no consistent association with MSM development on the legs. Seven individuals (J14 T1, J25 T6, J25 T7, J25 T9, J25 S1, J25 S2, and J26 S1) demonstrate both well-developed MSMs and varying degrees of spinal pathology. This association suggests that these individuals maintained an active lifestyle despite a reduction in mobility and the presence of back pain.

Several individuals in this sample demonstrate evidence of trauma. These vary from minor trauma, such as stubbing a toe (J25 T6), to major trauma, such as a healed spiral fracture of the tibia and fibula (J25 S1). Three individuals demonstrate evidence of healed rib fractures (old male J14 T1, mid-adult male J25 T6, and mid-adult female J26 S1). The first two of these are similar to an individual from Cemetery I (mid-adult female I10 T2), in that they have fractures of the first or second ribs that would have been produced by a violent blow to the chest (Fermanis *et al.* 1985; Love and Symes 2004). The first rib fracture of the mid-adult male (J25 T6) did not heal completely, instead forming a bridge of disorganized bone between the two halves of the rib (Figure 4.38). This fracture callous would not have been stable, and probably affected the mobility of his upper chest and left shoulder. The injuries to an old adult female (J25 S2) include a fracture of the distal

end of the left ulna and two depressed fractures of the skull on the left parietal, indicative of defensive injuries received in an attack by a right-handed person (Larsen 2002).

The fractures of the base of the fourth and fifth metacarpals in the right hand of a mid-adult female (J25 T7) are superficially suggestive of aggression, but so called “punch fractures” generally lead to the fracture of the neck of the metacarpal. A fall on a flexed wrist often leads to a fracture of the metacarpal base, and is the more likely origin of the injury (Long 2007). The lesions on the right and left feet of a mid-adult male (J25 T6) are suggestive of puncture wounds with localized infection, similar to the injury suffered by a mid-adult male (I3 T1A) from Cemetery I. The spiral fracture of the tibia and fibula suffered by a young adult male (J25 S1) is generally produced by rotating the leg on a fixed foot, and is commonly encountered today in snow skiing accidents, although the cause of his injury is unknown. A severe ankle sprain probably produced the lesions around the left ankle of an old male (J14 T1). In sum, the pattern of MSMs and trauma expressed in Cemetery J suggests a group of individuals who maintained moderately active lifestyles (some despite having severe spinal problems), probably engaged in interpersonal violence, and suffered from various trips and falls as they lived their lives.

Cranial Modification

Cultural cranial modification is the deliberate manipulation of the growth of an infant's skull by the application of an external device. Many Andean societies practiced this form of body modification, and it is generally believed that they did so in order to permanently mark individuals as members of a particular social group (Lozada 2011; Torres-Rouff 2003). More than half of the sixteen individuals in this cemetery with preserved crania present some

form of frontal-occipital cranial modification. Six of those demonstrate Form B fronto-occipital modification, while three subadults (J25 T3, J26 T1B, and J26 T3) demonstrate Form F modification, characterized by the unusual fronto-occipital modification of a very long cranium. The only other examples of Form F crania at Farfán, a modification associated with the highlands, are found in Cemetery I (Chapter 5B). There were no individuals with Form C modification, generally thought to have been employed by people affiliated with the Lambayeque ethnic group.

A distinctive feature of some individuals buried in Cemetery J is the length of the cranium, as measured by the cranial index, or the ratio of the maximum breadth to the maximum length of the skull multiplied by 100. One of the young adult females (J25 T8), with a non-modified Form A skull, had a very long cranium, yielding a cranial index of 77.5 (1.6 standard deviation units below the non-modified mean). The secondary burial of an old female (J25 S2) is the longest-headed, non-modified individual from Farfán (cranial index = 75.9, 1.95 standard deviations units from the non-modified mean). The presence of this form of cranium, together with the long-headed individuals who displayed the Form F modification, may give some indication of the geographic origins of these individuals; several studies have noted a coastal/ highland differentiation in unmodified cranial shape, with longer-headed individuals associated with highland contexts (e.g. Ericksen 1962:217; Ross *et al.* 2008:162).

Isotopes

Levels of carbon and nitrogen isotopes in bone are used to reconstruct diet, particularly to examine the amounts of maize and protein (Keegan 1989:226; Williams 2005:33). The analysis of oxygen isotope levels from bones and teeth is used to reconstruct patterns of residence

and mobility (White *et al.* 1998). Four individuals from Cemetery J (J25 T6, J25 T9, J25 S1, and J26 S1) were analyzed for carbon and nitrogen levels and five (the same four, plus J14 T2) were analyzed for oxygen isotope values (Table 4.2).

A mid-adult male (J25 T6) is linked to an individual from the Huaca Burial Platform by having the highest carbon level at Farfán: $\delta^{13}\text{C}$ -9.6. This value indicates a very high proportion of maize in his diet. His nitrogen value is $\delta^{15}\text{N}$ 11.5, indicating that his diet also included a significant amount of marine protein. The other individuals show a more mixed diet, with lower proportions of maize and protein. A young adult female (J25 T9) and a young adult male (J25 S1) have the nitrogen values that are among the lowest at the site, $\delta^{15}\text{N}$ 8.3 and 9.1 respectively, suggesting that their diets were low in protein. There is no correlation between carbon and nitrogen values and dental health, suggesting that the explanation for the pattern of poor dental health may be more complicated than simply the presence of maize carbohydrates in the diet.

All of the bone oxygen isotope signatures from Cemetery J fell within the range ($\delta^{18}\text{O}$ 15–17) that characterizes the Jequetepeque Valley, suggesting that these individuals probably resided in this valley for at least the last ten years of their lives. Two individuals (J25 T6 and J25 T9) have dental values that are above the Jequetepeque range ($\delta^{18}\text{O}$ 17.5 and 17.2 respectively). This suggests that they may not have lived in the valley during their childhood, but moved there sometime after the age of nine, the age of eruption for the incisor teeth that were tested.

Comparison of the Levels within the Cemetery

Burials in the western portion of Cemetery J were arranged in three levels, while only two levels are present on the eastern side. All levels have adults and subadults, males and females (although females dominate the sample as a whole), and individuals suffering from spinal pathology, trauma, and poor dental health. There appears to be little patterning between the levels with respect to the osteological traits examined. One exception, however, may be cranial modification. Although cranial Forms A and B are distributed across levels, there is some concentration of non-modified Form A individuals in Level 3 of the cemetery, where four out of the five adult females with intact crania display this cranial form. Similarly, all of the Form F modified crania, associated with the highlands, are found in the second level and occur only with subadults in Cemetery J.

Comparison of Primary and Secondary Burials

Secondary burials are found only in Level 3. Besides this obvious spatial association, the comparison of primary and secondary burials in this sample yields similar results, as does the comparison of levels, in terms of an overall lack of differentiation between the two groups. Two other differences that do emerge are the facts that there are no subadults and no Form F modified crania among the secondary burials.

Burial JO S1

The old woman designated as JO S1 is interred in an aboveground tomb to the west of Cemetery J, and will be treated on her own here (see Chapter 4A, Figure 4.5). Her pubic symphysis is not preserved, but her age was determined on the basis of the fusion of skeletal

elements and the degree of degenerative changes throughout the skeleton (Table 4.3).

Stature and Childhood Health

The stature of JO S1 was estimated to be medium for the sample of Farfán females (146.8 centimeters). In fact, she lies only slightly above the overall female mean for the site (146.0 centimeters, N=32).

This individual experienced a solitary episode of stress during her early childhood years, recorded as a linear hypoplastic lesion on her lower left first incisor. The approximate age at which this episode occurred is 3.2 years, or 3.0–3.5 years. It is possible that there were other episodes, but the rest of her teeth are now so heavily worn that the crowns are too eroded to make a determination. Because linear hypoplastic lesions are non-specific indicators of stress, we cannot be sure of the cause of this stress episode. It does fall within the 2 to 4 years-of-age window, commonly believed to represent weaning (Katzenberg *et al.* 1996), but given the high variability in the expression of these stress episodes at Farfán, it may also represent other causes, such as early childhood disease.

Health and Disease

There is no evidence for infectious disease or anemia in the skeleton of JO S1 (Tables 4.2, 4.3). She demonstrates a number of degenerative changes of joints that are likely related to both age and activity patterns, and extensive degenerative changes in the spine that are likely to be related to age and age-related osteoporosis.

The degeneration of her spine is quite extensive. There are minor changes such as degeneration of joints and the growth of osteophytes (bony spurs) throughout the spine. However, there are three areas that would have

been particularly problematic for her. The first is the right articular facet between the first and second cervical (neck) vertebrae (Figure 4.39). The normal smooth articular bone of this facet has been completely eroded, and has been replaced by woven, disorganized bone. This would have restricted her ability to rotate her head. In addition, the erosion of the articular joints would have led to the first cervical vertebra having an angled (non-horizontal) orientation, causing the head to be carried with a pronounced tilt to the right. The second pathological area is in the lower thoracic/upper lumbar area, where the eleventh thoracic and second lumbar vertebra demonstrate collapse of the anterior and right sides, leading to a kyphosis (forward angulation) and scoliosis (rotation) of the spine (Figures 4.39, 4.40). The vertebrae above and below this point demonstrate changes associated with limiting mobility of this segment of the vertebral column (the production of stabilizing osteophytes).

The third pathological focus is the fifth lumbar vertebra (Figure 4.41). The posterior arch of this vertebra is completely separate from the vertebral body, a condition referred to as spondylolysis. Spondylolysis, a condition unique to upright, bipedal hominids (Ward and Latimer 2005), has been identified in many archaeological populations (Merbs 2002). When present in the fifth lumbar vertebra it is thought to be caused by stress fracture or fatigue of the vertebral arch (*ibid.*:280), although other factors such as developmental anomalies and spinal alignment variability have also been implicated (Masharawi *et al.* 2007). In this case it is undoubtedly also related to the presence of a sixth lumbar vertebra, which is fused to the top of the sacrum (see below).

In the modern clinical context, spondylolysis is more common in athletic individuals, particularly gymnasts and weight lifters (Standaert and Herring 2000:416), who place extreme amounts

of stress on their lower backs, than in the general population. It is not clear whether this condition is related to age (Merbs 2002:286). The clinical symptoms of spondylolysis vary from none to lower back pain, associated with pain radiating into the buttocks or leg (Standaert and Herring 2000). The more serious symptoms are associated with a form of spondylolysis called spondylolisthesis, where the vertebral body shifts out of alignment in an anterior direction (*ibid.*). This diagnosis is normally difficult to make, but the presence of a porous and remodeled area on the inferior aspect of the spinous process of the fourth lumbar vertebra suggests that it was not aligning properly with the fifth vertebra. This suggests that the diagnosis of spondylolysis might be appropriate in this case. It is quite likely that she suffered from extensive pain in her vertebral column and that her angled head position and spinal angulation and torsion severely limited her mobility.

This old female was in extremely poor dental health. She had lost eleven teeth by the time she died, had four open abscesses, severe periodontal disease, and demonstrated very heavy wear on her remaining teeth. It is particularly worthy of note that she had an unusual wear pattern on her lower anterior teeth where the lingual side of the incisors was worn much more than the labial side. This was likely caused by a pronounced underbite, which may have been the product of her cranial modification (see below and Figure 4.42).

Activity Patterns

While pathological conditions of the spine likely severely limited the kinds of activities that this person could engage in at the time of her death, she appears to have been quite active in her youth (Table 4.3). She has well-developed musculo-skeletal stress markers (MSMs) on her clavicles and degenerative changes to the glenoid fossa (shoulder socket) of her scapulae

that indicate considerable activity involving the shoulder. Her deltoid tuberosities are very well developed on both humeri (upper arm bones). In her lower arms, the pronator quadratus MSMs are very well developed. The deltoid muscle raises the arm from the side, while the pronator muscles rotate the hand from a palm up to a palm down position. She also had well-developed indicators of squatting or kneeling. The pattern of arm MSMs is reminiscent of what one might expect from an individual who spent a lot of time swimming. "Wave style" breast stroke and the butterfly stroke have also been associated with spondylolysis, due to their pattern of repeated flexion and extension of the lower back (Nyska *et al.* 2000). However, auditory exostoses (small growths of bone in the external auditory canal), which are often used as indicators of aquatic activity, particularly in cold waters such as those off the coast of Peru (Kennedy 1986), are not observed in this individual. There is no evidence of trauma on the skeleton of this individual.

Cranial Modification

The cranium of JO S1 demonstrates fronto-occipital Form D cranial modification (Table 4.3, Figure 4.42, and Chapter 2), a form of modification where flattening exists on both the frontal and occipital bones, and the angle of the occipital plane is quite oblique to the Frankfurt Horizontal plane (the eye-ear plane; Imbelloni 1925). There is only one other individual from Farfán with the Form D modification (from Mound G), a form that is rare in the Jequetepeque Valley as a whole. The only other sample of obliquely-modified individuals like Form D in the valley is from a looted Early Moche context at the site of Dos Cabezas (Lichtenfeld 2001:52).

Isotopes

A sample of rib was used to obtain an oxygen isotope signature for JO S1. The result, $\delta^{18}\text{O}$ 16.2, is within the local range of variation for the coast. Thus, it is likely that this individual lived within the region for at least the last ten years of her life.

Comparison to the Cemetery J Individuals

The JO S1 individual is similar to the Cemetery J individuals in several ways: her stature, the single episode of childhood stress, her evidence for habitual kneeling or squatting, the fact that she shares with one individual the trait of having an extra lumbar vertebra, her oxygen isotope signature and the overall poor condition of her spine and teeth. These all fit well with the Cemetery J sample. However, the spinal lesions in the cervical and lower lumbar areas, the particular pattern of arm musculo-skeletal stress markers, and the form of cranial modification do set her apart.

Burial JO S1 Summary

JO S1 is an old female who shows dental and spinal health in keeping with her age. Her well-developed musculature indicates that she had an active life, which included habitual squatting or kneeling and possibly swimming. Her form of cranial modification is very rare at Farfán and in the Jequetepeque Valley, and she demonstrates a segmentation error that occurs at low frequency in coastal populations. However, she has an oxygen isotope signature that does not suggest that she is a foreigner. Evidence derived from her skeletal remains cannot be used to definitively confirm or reject an affiliation with the rest of the Cemetery J sample.

Cemetery J Summary

Cemetery J is the largest cemetery outside of the Huaca Burial Platform, having the largest number of subadults, with the exception of the Huaca Burial Platform. This cemetery demonstrates more examples of infectious disease and trauma than any other cemetery at Farfán. The individuals interred in this cemetery suffered a considerable amount of stress during childhood and most grew to be of medium stature. They suffered from a variety of pathological conditions and poor dental health, and many experienced severe spinal degeneration. They demonstrate variable degrees of activity, some despite the spinal problems, and some bear the marks of engagement in interpersonal violence.

Three kinds of cranial modification are expressed in the main cemetery. Three of the five Form F style individuals from Farfán are found in this cemetery, as are the two longest-headed, non-modified individuals. These five individuals may be associated with the highlands, although we were unfortunately unable to confirm this with oxygen isotopic analysis, because we could not recover oxygen isotopes from these individuals.

It is worth noting that the spatial organization of the cemetery and the grave offerings show remarkable consistency with the patterns of cranial modification, suggesting that the modification was being used as an ethnic marker. However, biological markers of health and disease, stature, activity and so on cross-cut that pattern, suggesting that those ethnic differences were not a barrier to interbreeding.

Burial	Age	Sex	Pos	Ort	Org	CM	S/M	PC	Cin	Tex	Met	An	Ori	Sh	Wea
J14 T1	OA	M	S	S	5	B	M	3	n/a	2	n/a	n/a	J	n/a	4
J14 T2	YA	F	S	S	n/a	B	n/a	1	n/a	n/a	n/a	n/a	J	n/a	n/a
J14 T3	IN	n/a	EX	E	n/a	n/a	M	4	n/a	n/a	n/a	n/a	J	n/a	n/a
J14 S1	OA	F	S	N	5	n/a	n/a	4	n/a	2	n/a	3	J	n/a	n/a
J25 T1	YA	M	S	N	1, 2	B	S	1	n/a	n/a	n/a	n/a	J	n/a	n/a
J25 T2	NEO	n/a	EX	E	n/a	A	S	n/a	n/a	n/a	4	n/a	J	n/a	n/a
J25 T3	CH	n/a	S	W	2, 3	F	S	4	n/a	n/a	n/a	n/a	J	n/a	n/a
J25 T4	IN	n/a	EX	E	2	A	S	1	n/a	n/a	n/a	n/a	J	1	n/a
J25 T5	IN	n/a	S	E	n/a	B	S	1	n/a	n/a	n/a	n/a	J	1	n/a
J25 T6	MA	M	S	N	5	B	S	3	n/a	n/a	4	n/a	OC	1	n/a
J25 T7	MA	F	S	N	5	A	S	5	n/a	n/a	n/a	n/a	J	1, 2	4
J25 T8	YA	F	S	S	n/a	A	S	2	n/a	n/a	n/a	n/a	J	1, 2	5
J25 T9	YA	F	S	N	n/a	A	S	2	n/a	n/a	n/a	n/a	OC	n/a	3
J25 S1	YA	M	S	E	n/a	A	S	n/a	n/a	n/a	n/a	n/a	J	2	n/a
J25 S2	OA	F	S	N	n/a	A	S	5	n/a	n/a	n/a	n/a	J	n/a	4
J25 T1A	CH	n/a	S	W	n/a	A	M	3	n/a	n/a	n/a	n/a	J	n/a	n/a
J26 T1B	JUV	n/a	S	W	n/a	F	n/a	n/a	n/a	n/a	4	n/a	J	1	n/a
J26 T2	NEO	n/a	EX	E	n/a		S	1	n/a	n/a	n/a	n/a	J	n/a	n/a
J26 T3	JUV	n/a	S	W	5	F	S	4	n/a	n/a	4, 7	n/a	J	2	n/a
J26 S1	MA	F	S	N	n/a	B	S	4	n/a	n/a	n/a	n/a	J	n/a	1, 2, 6
	n/a	n/a	n/a	n/a	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JO S1	OA	F	n/a	n/a	1, 4	D	S	22	n/a	2	8	n/a	OC	n/a	2, 4

Table key

Burial: Burial designation number.

Age: NEO=neonate (0–0.9 years), IN=infant (1–2.9 years), CH=child (3–5.9 years), JUV=juvenile (6–11.9 years), AD=adolescent (12–19.9 years), YA=young adult (c. 20–29 years), MA=mid-adult (c. 30–years), and OA=old adult (c. 40+ years).

Sex: F=female, M=male, N/A=not available.

Pos: Burial position, S=seated, EX=extended.

Ort: Seated orientation of the body, based on which way pelvis is facing; extended orientation is based on head direction only.

Org: Organics, 1=seed, 2=maize, 3=fruit, 4=fish, 5=gourd, 6=Nectandra seed necklace, 7=wooden figurine.

CM: Head modifications A–G, see Nelson, Chapter 2, Figure 2.1).

S/M: Tomb configuration, S=single, M=multiple individuals.

PC: Quantity of ceramics directly associated with an individual, rather than a communal offering.

Cin: Presence of cinnabar on the bones.

Tex: 1=textile bag, 2=other textiles, 3=shroud.

Met: Presence of metal, 1=discs, 2=beads, 3=rings, 4=folded copper pieces, 5=silver beads, 6=copper spindle, 7=copper tweezers, 8=other silver object, 9=silver-plated copper rattle, 10=copper tumi, 11=other copper

An: Animal remains, 1=feline, 2=llama, 3=guinea pig.

Ori: Individual originally from J=the Jequetepeque Valley, OC=other coastal valley, or H=the highlands.

Sh: Shell, 1=shell beads, 2=whole Spondylus shell, 3=mixed media with other material.

Wea: Weaving equipment, 1=spindle whorl, 2=weaving swords, 3=weaving basket, 4=needles, 5=chalk, 6=unspun wool.

Table 4.1. Cemetery J and Tomb JO, primary and secondary burial data (n=21).

<i>Individual</i>	<i>Age/Sex^a</i>	<i>Stature Estimate</i>	<i>Health and Other Disease Observations</i>	<i>Isotope Values^b</i>	<i>Cranial Modification</i>
J14 T1 Level 2	Old adult male (40+ years)	Medium (155.5 cm)	<ul style="list-style-type: none"> Severe degenerative changes throughout the spine and skeleton Wedging of T5 and L4-5, fusion of T6-8 Very poor dental health 		Form B ^c (CI=91.8) ^d
J14 T2 Level 2	Young adult female (20–30 years)	Medium (144.7 cm)	<ul style="list-style-type: none"> Poor dental health 	$\delta^{18}\text{Op}$ Bone=16.4	Form B (CI=92.8)
J14 T3 Level 3	Infant (1 yr)	n/a	n/a	n/a	n/a
J14 S1 Level 3	Old adult female (40+ yrs)	Medium	n/a	n/a	n/a
J25 T1 Level 1	Young adult male (20–30 yrs)	Medium (158.3 cm)	<ul style="list-style-type: none"> Collapse of T6-T10 Schmorl's nodes in T11 and T12 Very poor dental health 	n/a	Form B (CI=85.2)
J25 T2 Level 1	Neonate (.75 yrs)	n/a	n/a	n/a	Form A (CI n/a)
J25 T3 Level 2	Child (4 yrs)	n/a	<ul style="list-style-type: none"> Destructive osteomyelitis of left femur and acetabulum 	n/a	Form F (CI=81.9)
J25 T4 Level 2	Infant (1.5 yrs)	n/a	<ul style="list-style-type: none"> Probable bacterial meningitis 	n/a	Form A (CI n/a - but probably long-headed)
J25 T5 Level 2	Infant (2 yrs)	n/a	<ul style="list-style-type: none"> Very poor dental health 	n/a	Form B (CI=95.6)
J25 T6 Level 2	Mid-adult male (30–40 yrs)	Medium (158.1 cm)	<ul style="list-style-type: none"> Degenerative changes of thoracic and lumbar vertebrae Collapse of T6 and T7 Degeneration and osteophytes Probable pyogenic osteomyelitis Very poor dental health 	$\delta^{18}\text{Op}$ tooth (I2)=17.5 $\delta^{18}\text{Op}$ Bone=16.9 $\delta^{13}\text{C}$ = -9.6 $\delta^{15}\text{N}$ =11.5	Form B (CI=91.7)
J25 T7 Level 3	Mid-adult female (30–40 yrs)	Tall (151.8 cm)	<ul style="list-style-type: none"> Mild degeneration of lumbar spine Very poor dental health 	n/a	Form A (CI=87.1)
J25 T8 Level 3	Young adult female (20–30 yrs)	Medium (144.6 cm)	<ul style="list-style-type: none"> Poor dental health 	n/a	Form A (CI=77.5)
J25 T9 Level 3	Young adult female (20–30 yrs)	Medium (146.0 cm)	<ul style="list-style-type: none"> Slight wedging of T6 Scheuermann's Kyphosis Good dental health 	$\delta^{18}\text{Op}$ tooth (I1)=17.2 $\delta^{13}\text{C}$ = -10.5 $\delta^{15}\text{N}$ =8.3	Form A (CI=81.8)
J25 S1 Level 3	Young adult male (20–30 yrs)	Medium (159.7 cm)	<ul style="list-style-type: none"> Degenerative changes from high thoracic to lumbar Collapse of L2 and L4 Schmorl's node on L2 Very poor dental health 	$\delta^{18}\text{Op}$ tooth (I1)=16.9 $\delta^{18}\text{Op}$ Bone=15.6 $\delta^{13}\text{C}$ = -11.2 $\delta^{15}\text{N}$ =9.1	Form A (CI=81.2)
J25 S2 Level 3	Old adult female (40+ yrs)	Medium (146.9 cm)	<ul style="list-style-type: none"> Degenerative changes throughout spine Collapse of T12 Poor dental health 	n/a	Form A (CI=75.9)
J26 T1A Level 2	Child (3–4 yrs)	n/a	n/a	n/a	Form A (CI n/a)

/...continued

<i>Individual</i>	<i>Age/Sex^a</i>	<i>Stature Estimate</i>	<i>Health and Other Disease Observations</i>	<i>Isotope Values^b</i>	<i>Cranial Modification</i>
J26 T1B Level 2	Juvenile (7 yrs)	n/a	n/a	n/a	Form F (CI=85.1)
J26 T2 Level 2	Neonate (x<1 yr)	n/a	n/a	n/a	N/A
J26 T3 Level 2	Juvenile (6–7 yrs)	n/a	n/a	n/a	Form F (CI=77.3)
J26 S1 Level 3	Mid-adult female (30–40 yrs)	Medium (147.1 cm)		$\delta^{18}\text{Op}$ tooth (I2)=15.3 $\delta^{18}\text{Op}$ Bone=15.2 $\delta^{13}\text{C}$ =-10.4 $\delta^{15}\text{N}$ =10.5	Form B (CI=90.1)

Notes:

a Unsexable subadult individuals do not have a sex assigned.

b $\delta^{18}\text{Op}$ =oxygen, $\delta^{13}\text{C}$ =carbon, $\delta^{15}\text{N}$ =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

d CI=cranial index.

Table 4.2. Cemetery J (n=20).

<i>Individual</i>	<i>Age/Sex^a</i>	<i>Stature Estimate</i>	<i>Health and Other Disease Observations</i>	<i>Isotope Values^b</i>	<i>Cranial Modification</i>
JO S1	Old adult female	Medium (146.8 cm)	<ul style="list-style-type: none"> • degenerative changes throughout the spine • destruction of the right articular facets of C1 and C2 • spondylolysis of 5th lumbar vertebra • anterior and lateral collapse of 11th thoracic and 2nd lumbar vertebrae leading to kyphosis and scoliosis • no evidence of infectious disease • very poor dental health • tooth loss, abscesses, calculus, severe periodontal disease, heavy wear 	$\delta^{18}\text{Op}$ Bone=16.2	Form D (CI=91.1)

Notes:

a Unsexable subadult individuals do not have a sex assigned.

b $\delta^{18}\text{Op}$ =oxygen, $\delta^{13}\text{C}$ =carbon, $\delta^{15}\text{N}$ =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

d CI=cranial index.

Table 4.3. Western addition JO.

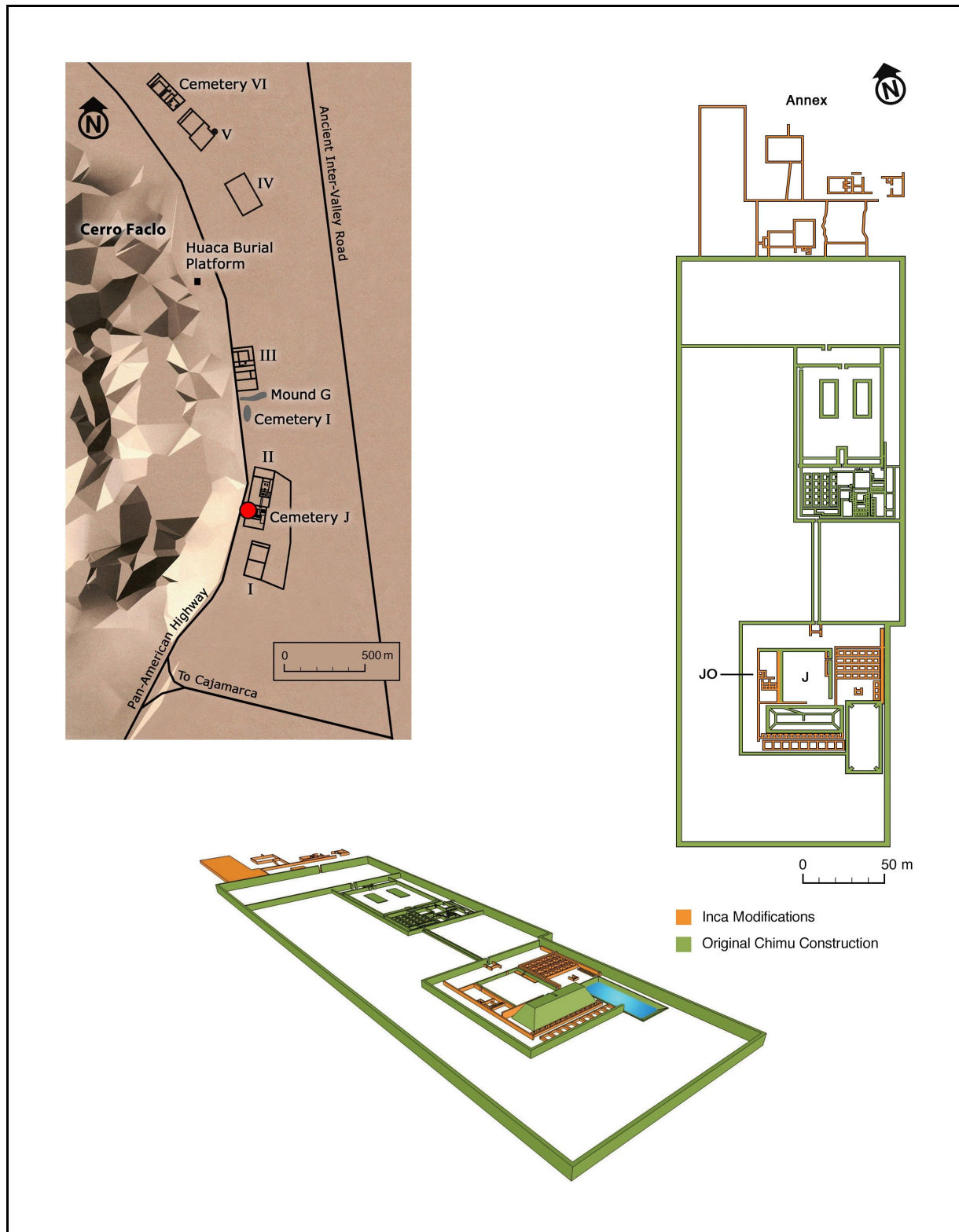


Figure 4.1. Overview of Farfán's compounds, showing the location, plan, and perspective view of Compound II. Compound II encompasses Cemetery J and Tomb JO (not marked on plan view).

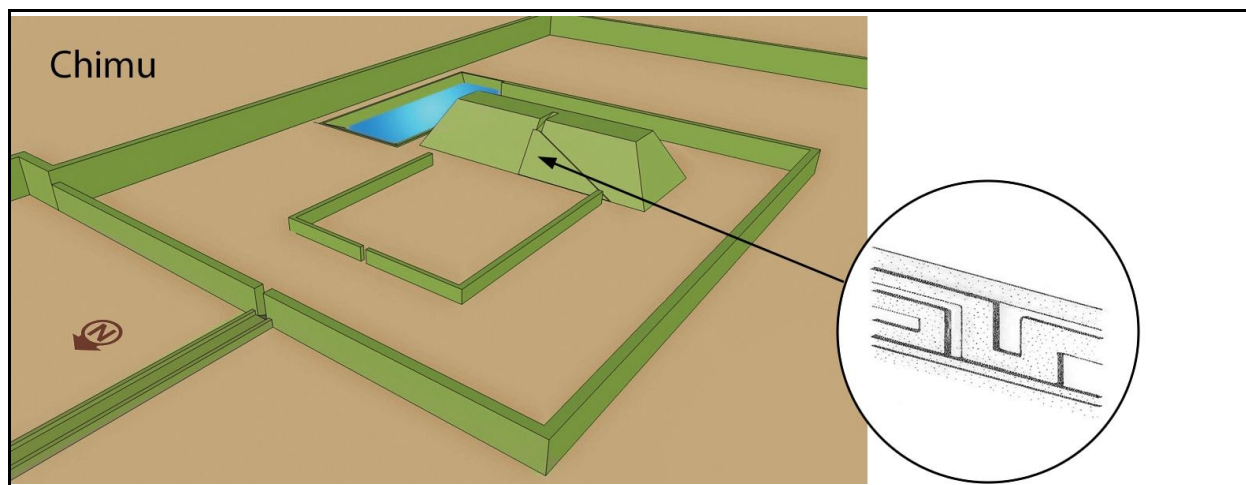


Figure 4.2. Perspective view of Farfán's Chimu burial platform with inset showing frieze and its location.

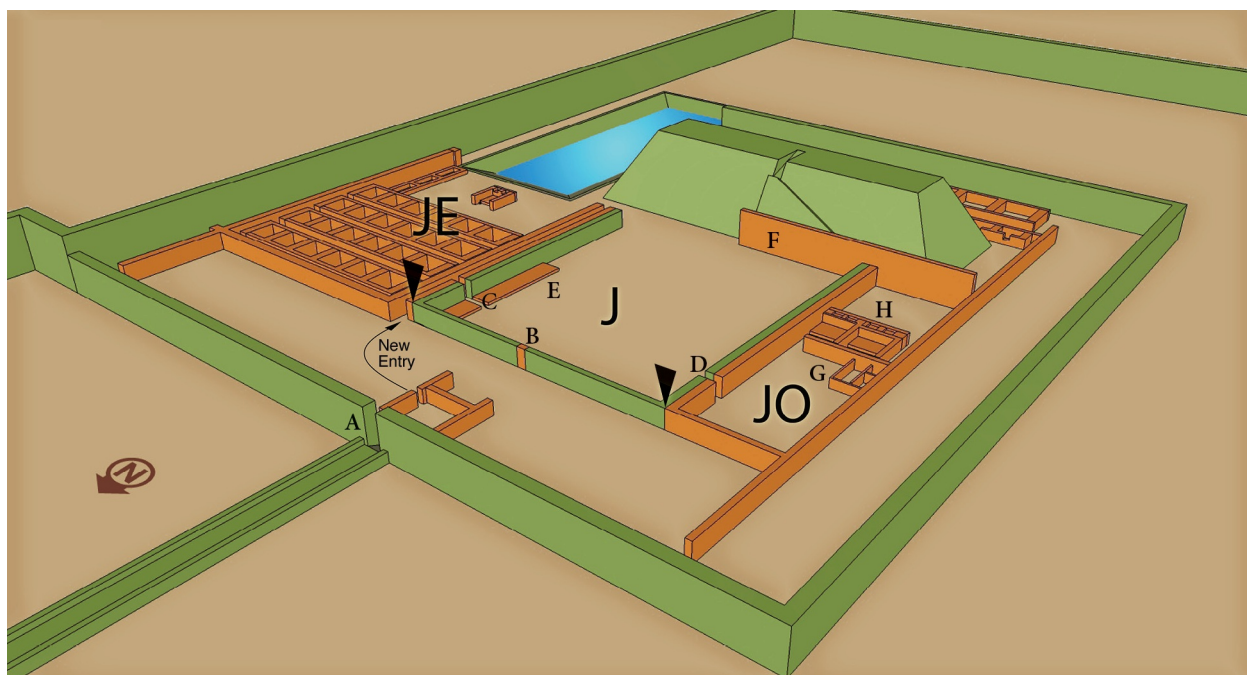


Figure 4.3. Inca architectural modifications to Farfán's Chimú Burial Platform are shown in orange. The original Chimú construction is shown in green. Arrows point to the original Chimú wall as well as to the abutting wall constructed by the Inca.

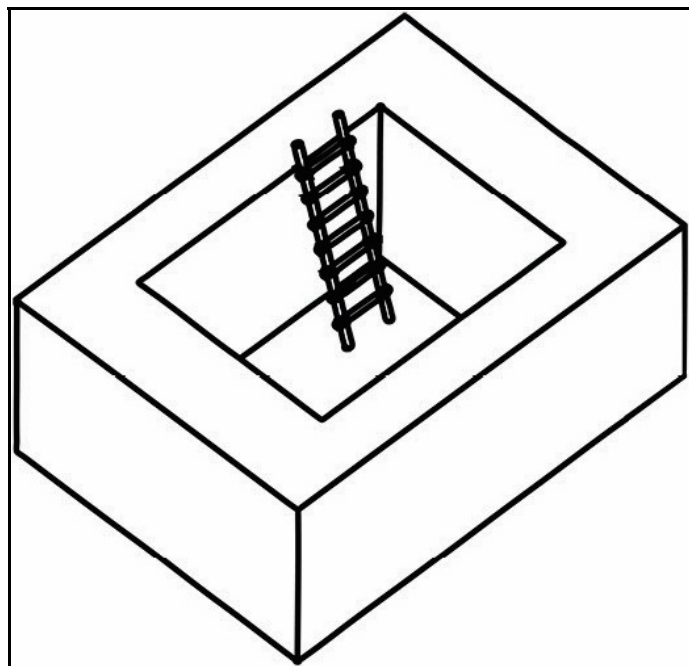


Figure 4.4. Drawing of an Inca style store-room with the entry assumed to be from above, although a ladder was not found (two by two meters).

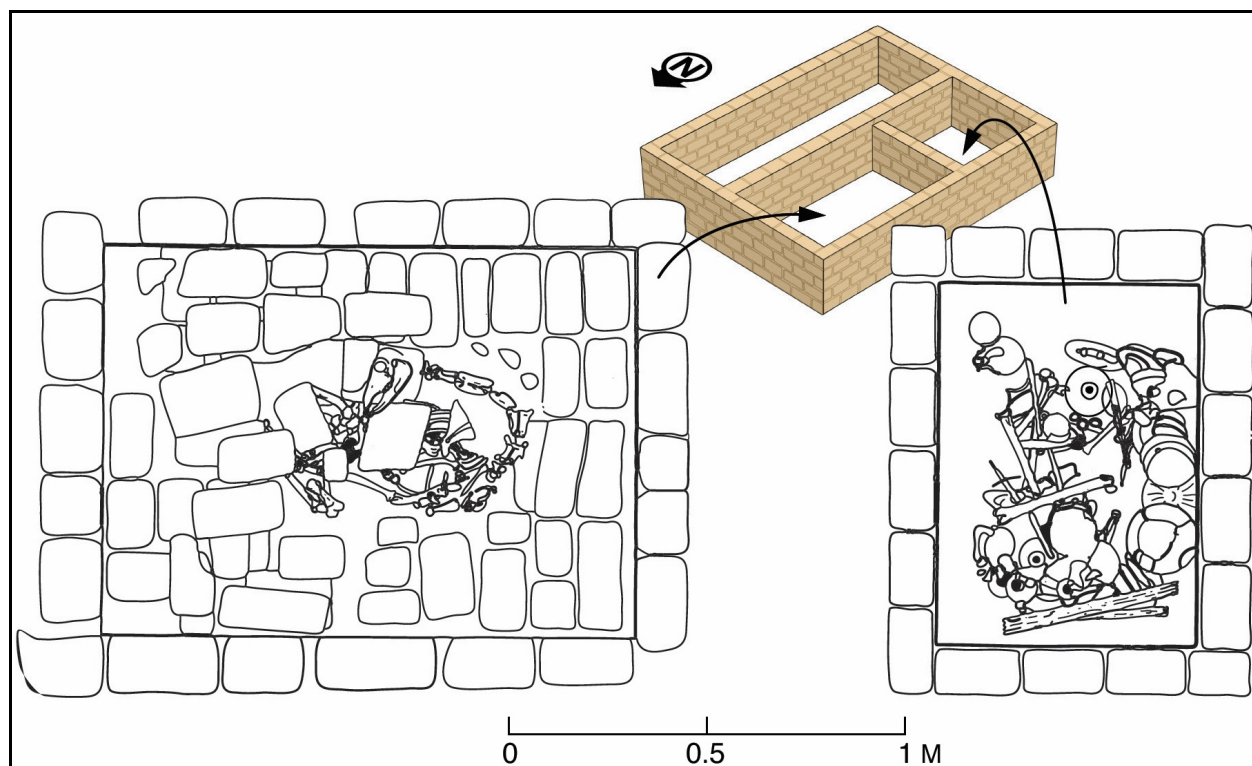


Figure 4.5. (JO S1) Aboveground tomb in addition JO, with a plan view of Level I showing the disarticulated elderly female on the right and llama burial on the left. Tomb is one meter high.

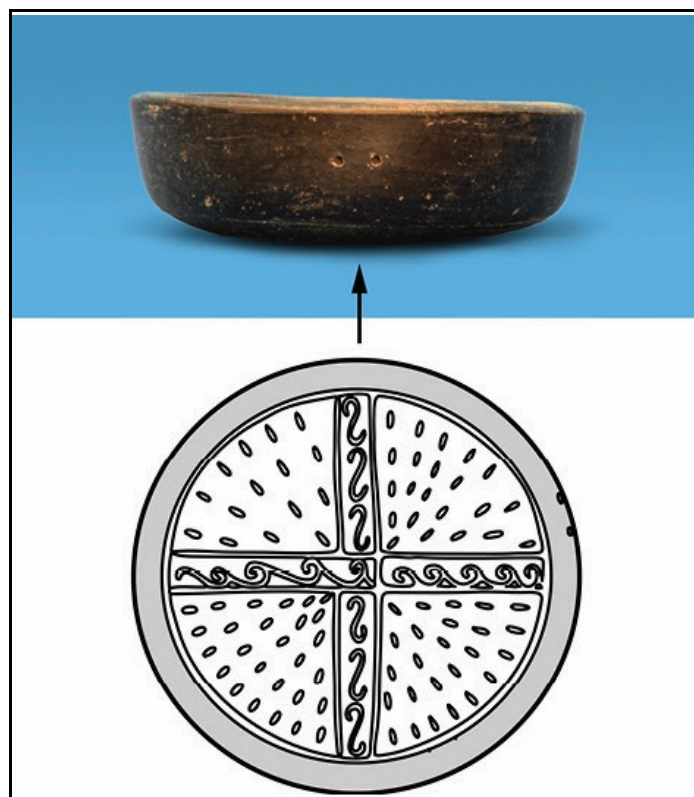


Figure 4.6. Plate with decoration on bottom exterior, JO S1. Height: 4 centimeters.



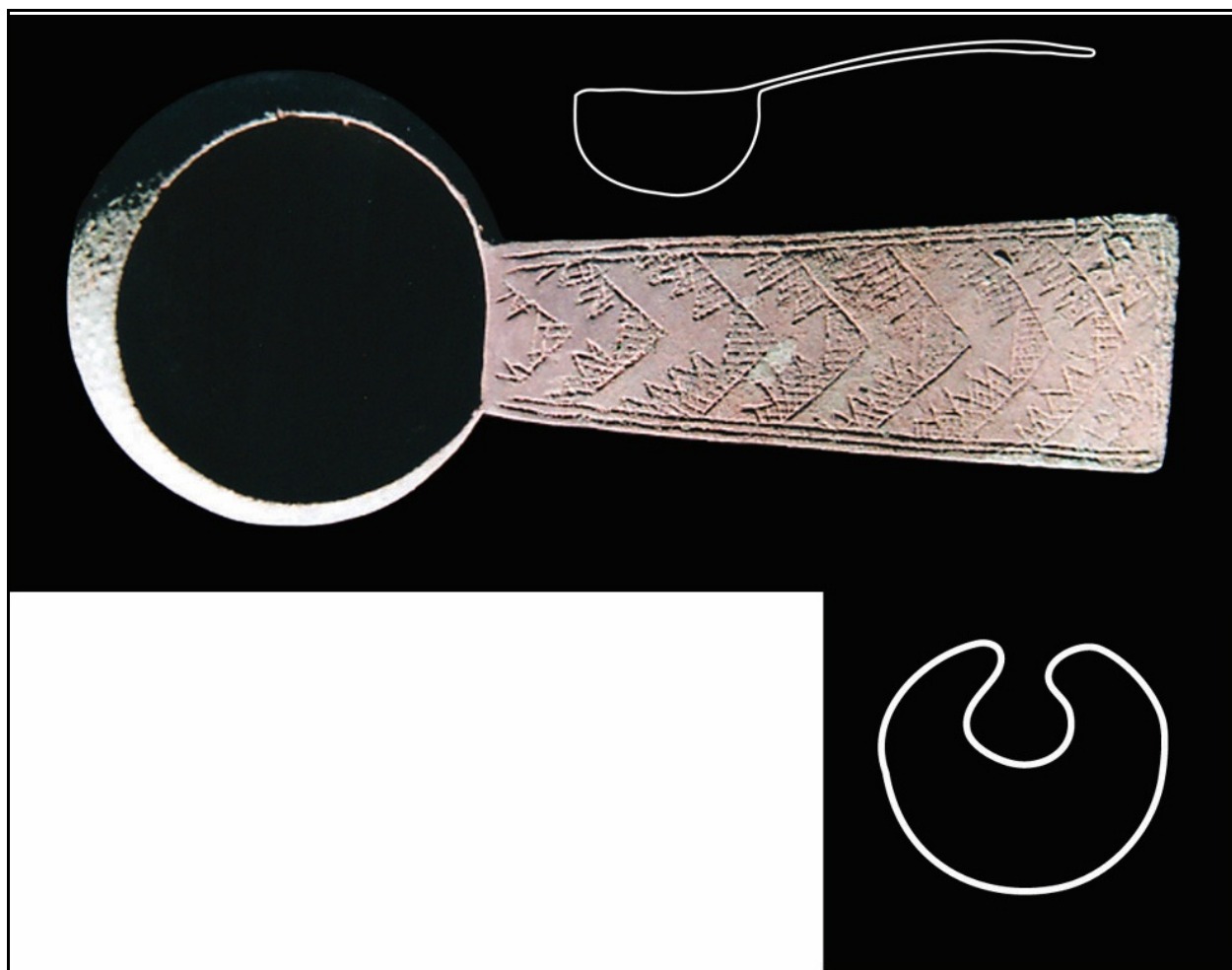
Figure 4.7. Three-dimensional monkey head vessel, JO S1. Height: 17.2 centimeters.



Figure 4.8. Jar with molded llama head, JO S1. Jar neck broken; unknown vessel height.



Figure 4.9. Blackware goblet with Janus-style heads on the handle, JO S1.
Height: 16.3 centimeters.



*Figure 4.10. Silver plated spoon (length: 8.5 centimeters)
and nose ring (diameter: 2.1 centimeters) JO S1.*

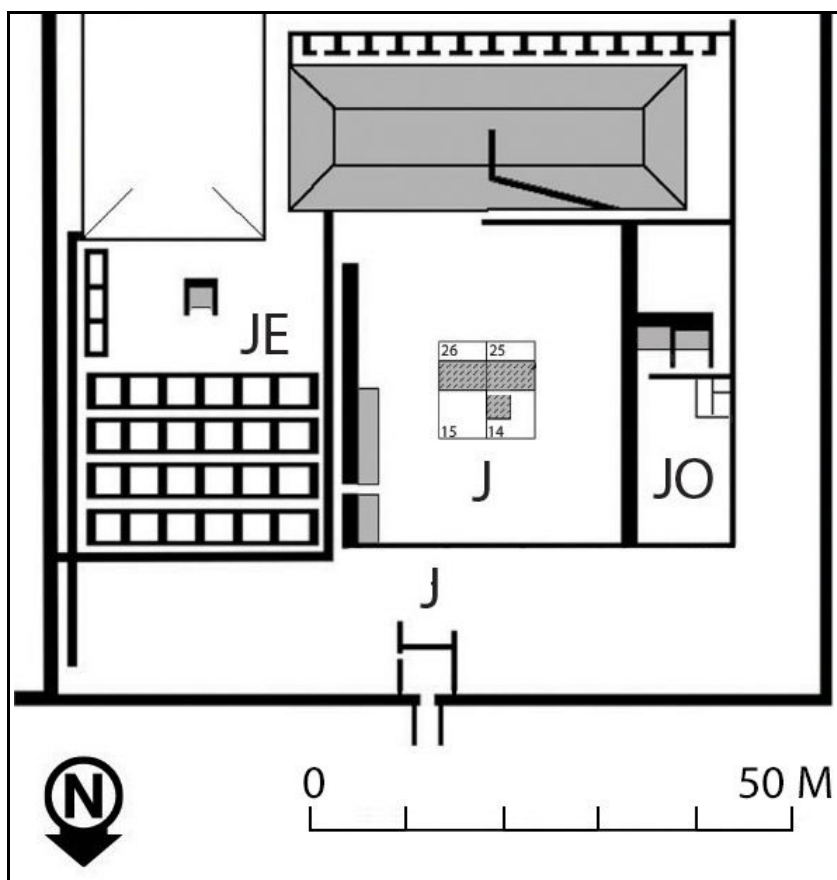


Figure 4.11. Cemetery J in its context.



Figure 4.12. Excavation of the subterranean Cemetery J in its initial stage.

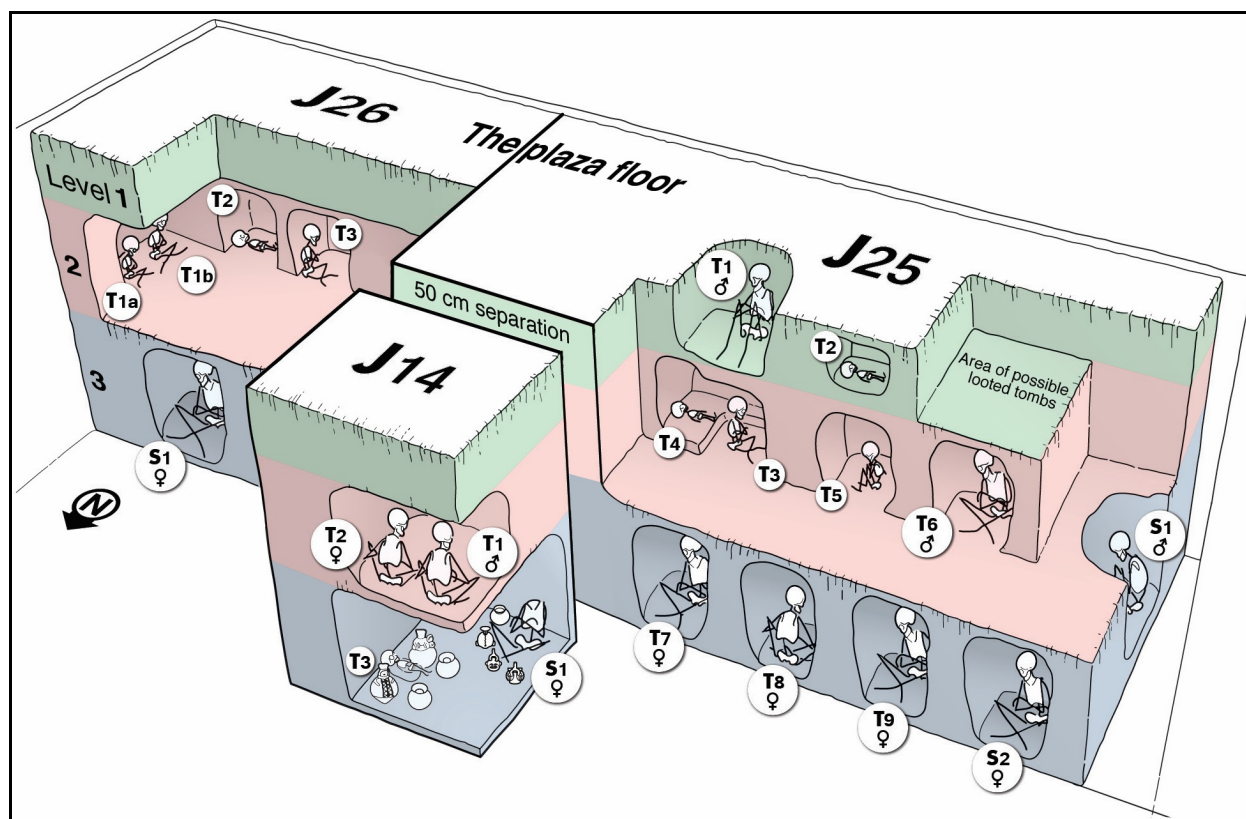


Figure 4.13. Reconstruction of Cemetery J, indicating the placement of the skeletal remains in multiple levels. T indicates a primary tomb and S indicates a secondary, partial burial.

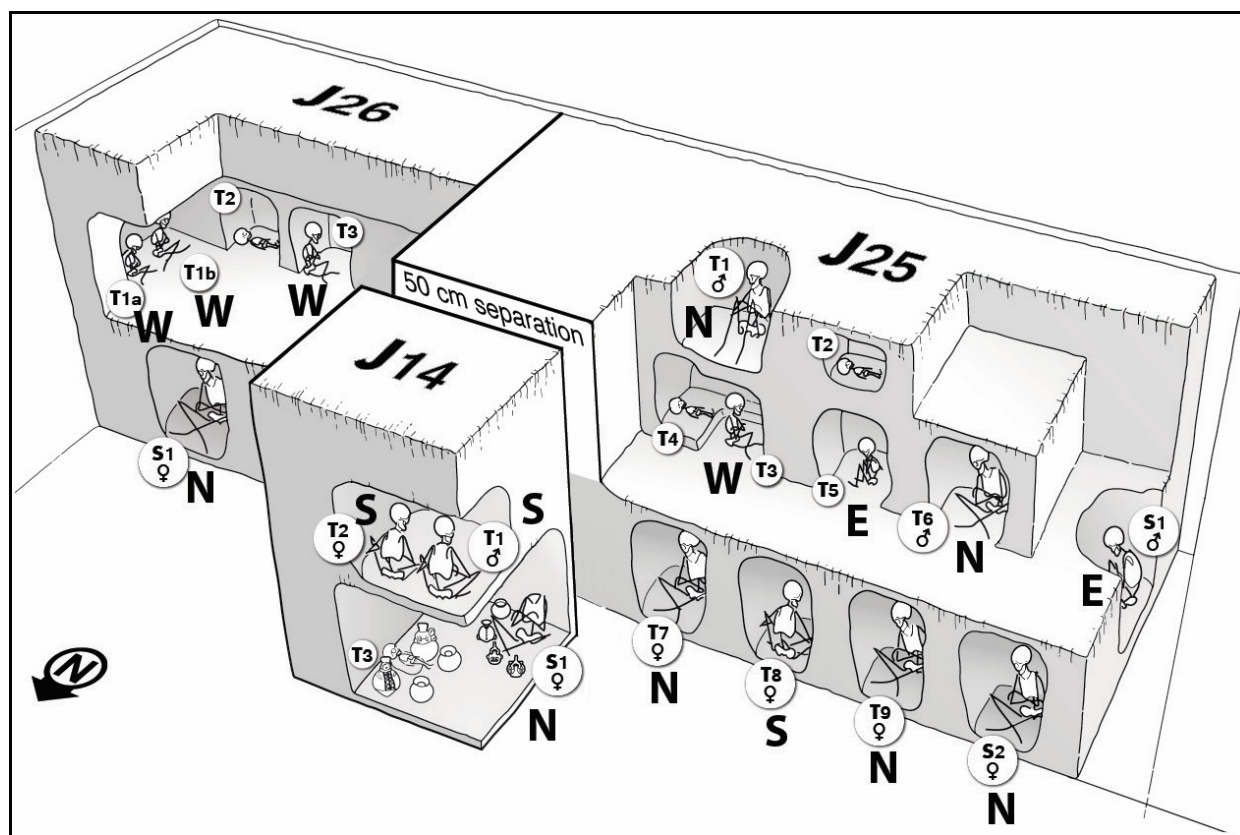


Figure 4.14. Reconstruction of Cemetery J indicating the orientation of the bodies.

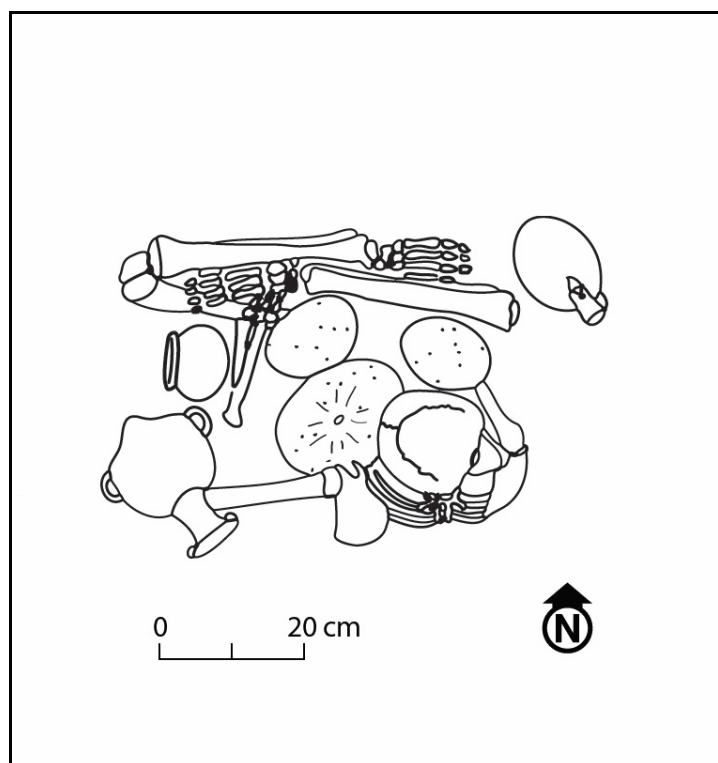


Figure 4.15. In situ drawing of adult male in J25 T6. The thorax and pelvis are oriented to the north while the remainder of the body faces west.



Figure 4.16. Redware aryballo included in the burial of J25 T6. Height: 21.8 centimeters.



Figure 4.17. Blackware spout bottle included in the burial of J25 T6. Height: 20 centimeters.

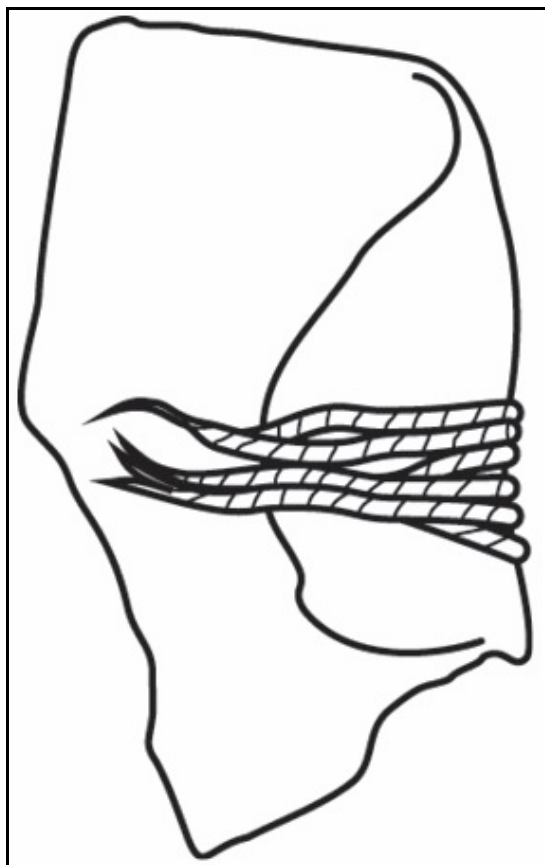


Figure 4.18. Piece of copper folded and tied with thread included in the burial of J25 T6.

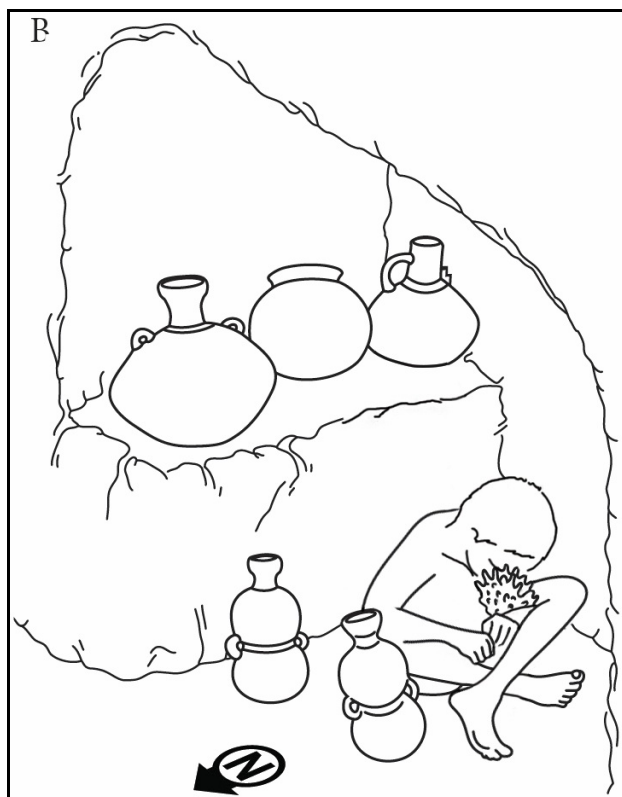


Figure 4.19. A reconstruction of the burial position of juvenile J26 T3.



Figure 4.20. Excavation of the tomb of juvenile J26 T3.



*Figure 4.21. One of the two twin vessels placed to the left of J25 T3.
Height: 19.3 centimeters.*



Figure 4.22. A bird neck jar placed above J25 T3 and to its left. Height: 17.4 centimeters.

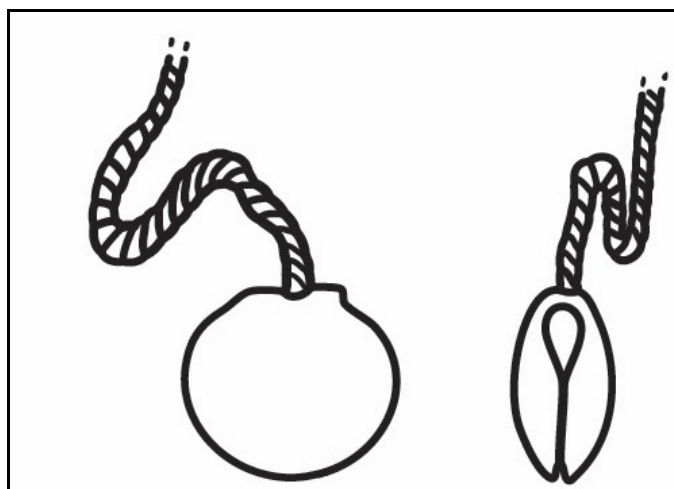


Figure 4.23. On of two copper tweezers found in the lap of J25 T3, as seen in frontal and lateral views. Diameter: 2 centimeters.

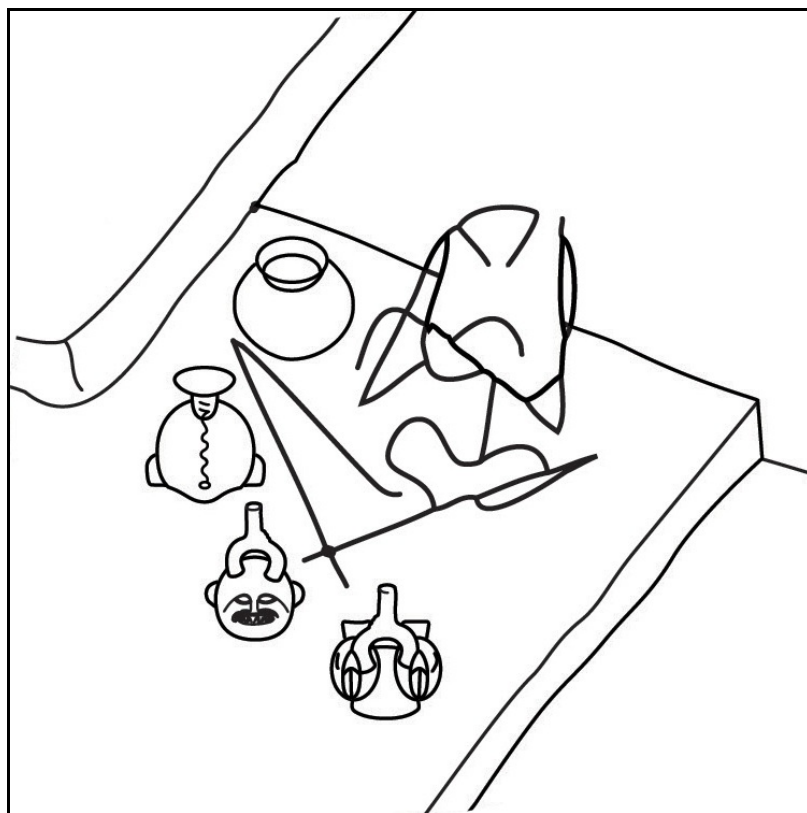


Figure 4.24. Partial skeleton of old woman J14 S1 and her associated vessels.



Figure 4.25. Blackware aryballo (paccha) placed in front of the right leg of J14 S1 illustrated in Figure 4.25.
Height: 23.3 centimeters.



Figure 4.26. Blackware stirrup spout vessel with a body in the form of a feline head found in front of both legs of J14 S1 illustrated in Figure 4.24. Height: 21.8 centimeters.

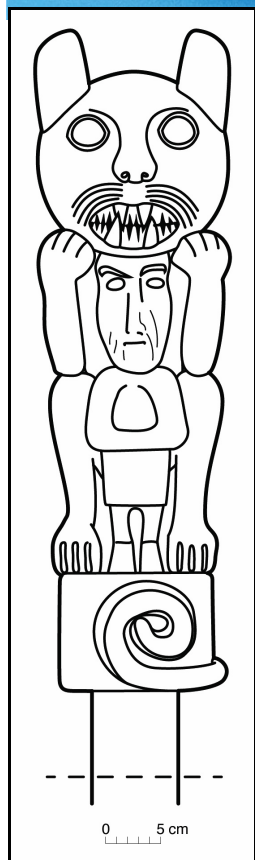


Figure 4.27. The carved wooden post from the entry to Compound II shows a very similar feline face (after Keatinge and Conrad 1983:271, figure 9).

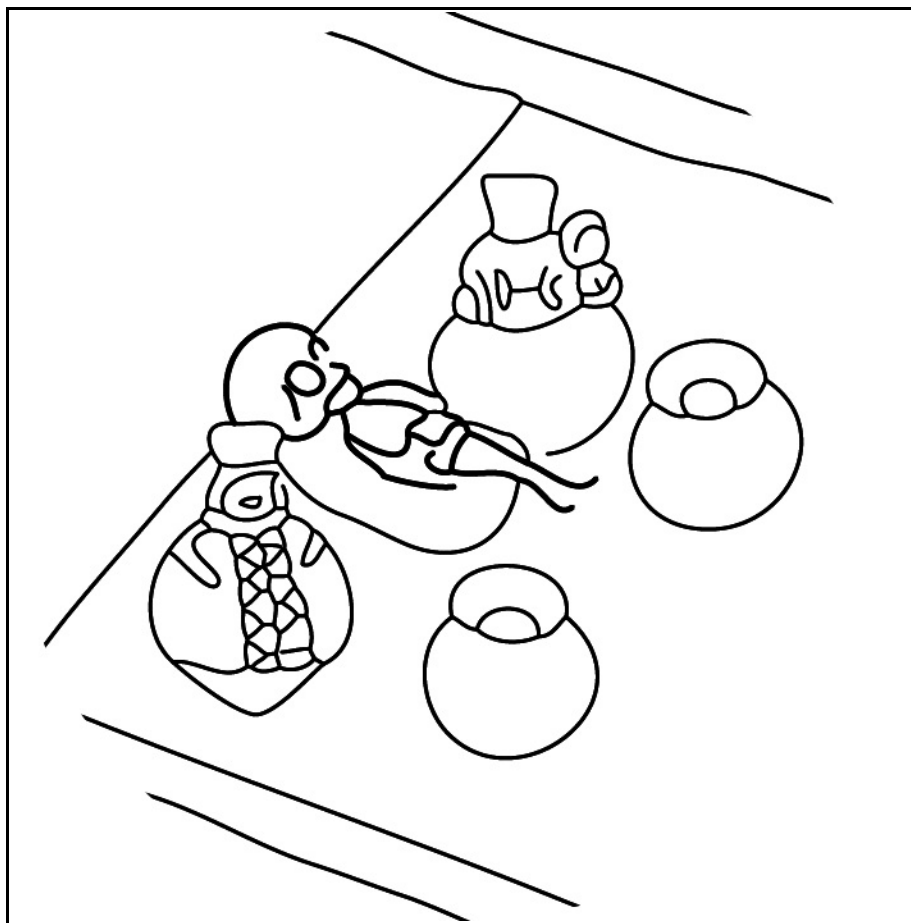


Figure 4.28. Infant J14 T3 placed on its back in a supine position on an oblong stone.



Figure 4.29. Painted redware aryballo of a hunchback found with J14 T3.

Height: 20 centimeters.



Figure 4.30. Jar showing a copulating couple with inset details found with J14 T3.
The zig-zag lines indicate pattern burnishing. Height: 26.4 centimeters.



Figure 4.31. J14 T1 was buried with three vessels, one of which was a stirrup spout vessel that depicts a front-facing figure wearing a crescent shaped headdress (see insert drawing). Height: 25 centimeters.



Figure 4.32. J14 T2, was buried with the blackware olla shown above. The press molded design shows an anthropomorphized wave motif, an image unique to Farfán. Height: 15.2 centimeters.



Figure 4.33. Left femur and acetabulum of individual J25 T3, a four year old child. This destruction of the left hip represents an osteomyelitis, leading to septic arthritis.

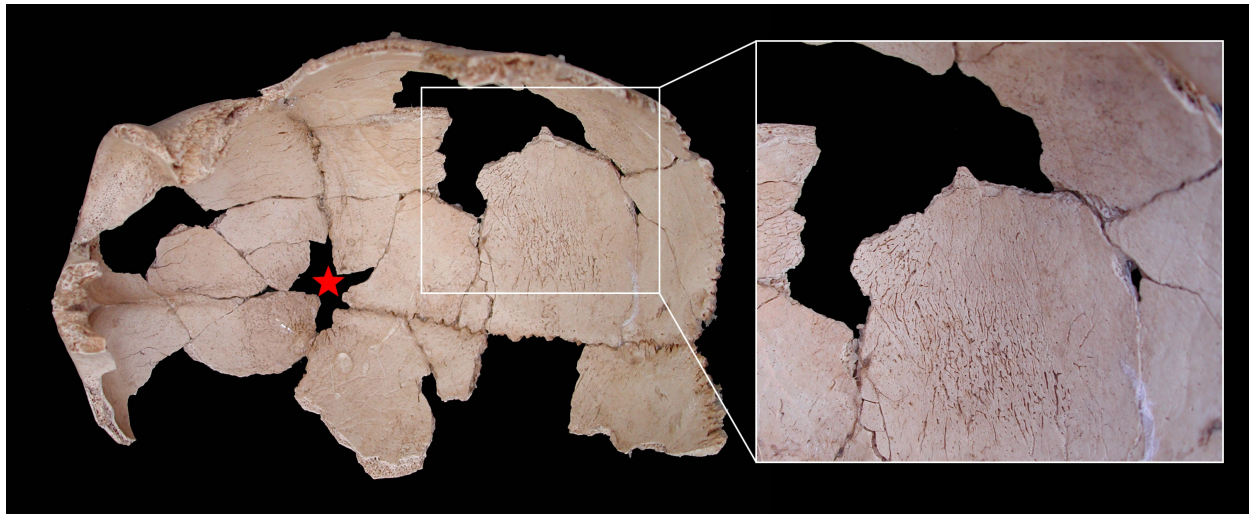


Figure 4.34. Endocranial surface of individual J25 T4, a 1.5 year old infant. Note the porous bone around the anterior fontanelle (marked by a red star) and the vascular impressions on the left parietal (magnified on the right).



Figure 4.35. Mid-level rib of individual J26 T1B, showing osteomyelitis.
Top: external surface of rib; below: the internal surface.

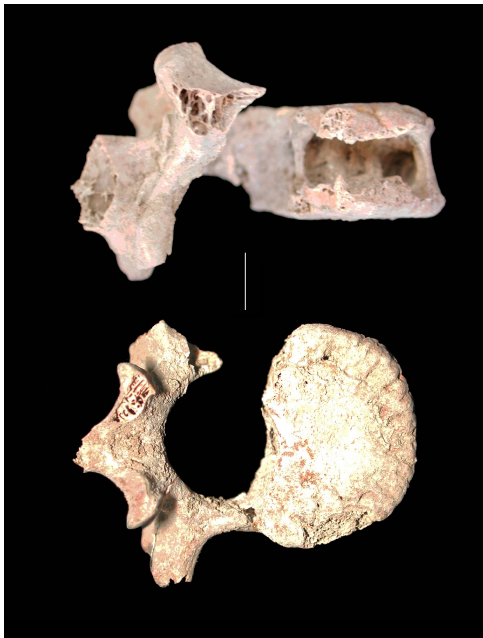


Figure 4.36. First lumbar vertebra of individual J26 T1B, showing osteomyelitis. Top: lesion in the vertebral body; below: the destruction of the right posterior margin of the vertebral body and arch.



Figure 4.37. Individual J25 T6, a mid-adult male. Note the collapse of the sixth thoracic vertebra.



Figure 4.38. Individual J25 T6, a mid-adult male. Note the fractured left first rib, including the fracture callous (note: the image is of the inferior surface of the rib).



Figure 4.39: First and second cervical vertebrae show the degeneration of the interarticular surfaces and the lateral angulation of C1. Individual JO S1.

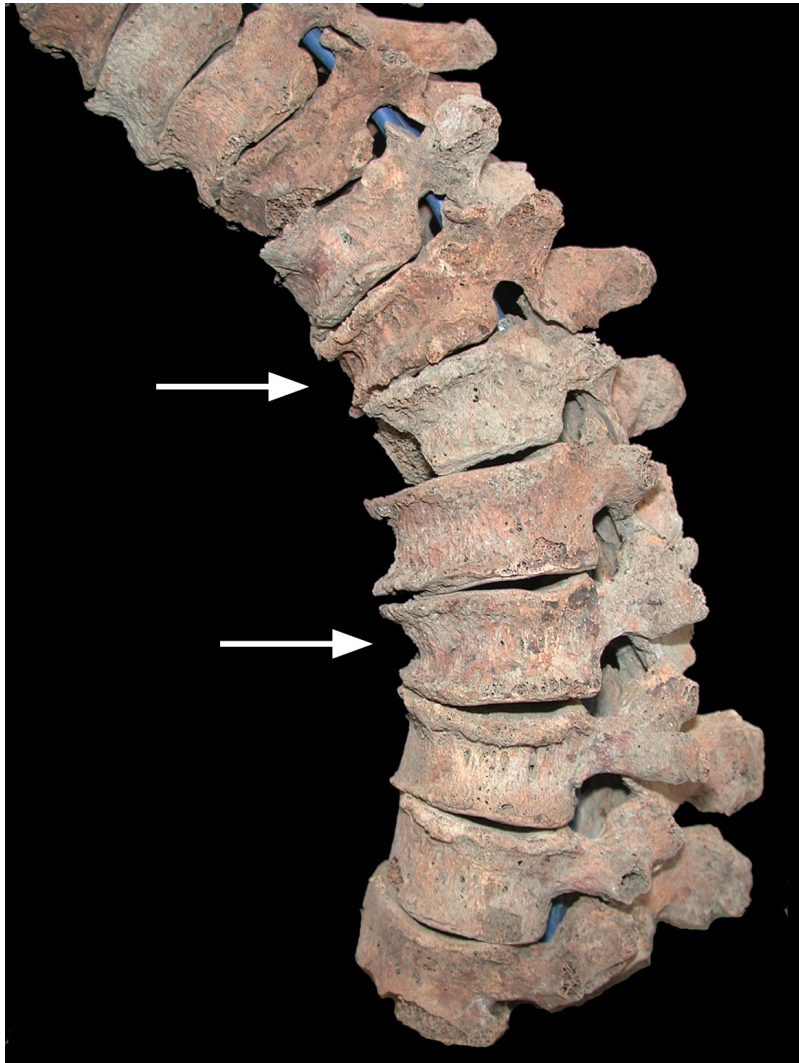


Figure 4.40. Lower thoracic and lumbar vertebrae show anterior collapse. Individual JO S1.



Figure 4.41. The fifth lumbar vertebra show separation of the posterior part of the arch, an example of spondylosis. Individual JO S1.



Figure 4.42. The cranium of individual JO S1 demonstrated fronto-occipital Form D cranial modification. Individual JO S1.

CHAPTER 5

CEMETERY I: A DIVIDED MORTUARY FACILITY

Carol J. Mackey and Andrew J. Nelson

INTRODUCTION

Cemetery I is composed of two sectors that are spatially segregated according to their ethnic affiliation. Individuals associated with the Inca were buried in Sector A in the northern portion of the cemetery, while individuals of Lambayeque affiliation were interred in Sector B, to the south. This is one of the longest mounds at Farfán, though only the northern portion was used as a cemetery. This cemetery, like the others at Farfán, consisted of three distinct levels. The ceramic styles reflect the ethnic affiliation of each sector, with Hybrid-Inca vessels present in Sector A and Lambayeque style vessels in Sector B. The first part of this chapter will highlight the tombs in both sectors and their cultural material remains.

This cemetery consists of both primary and secondary burials. Primary burials are those that were interred in their original position in their tomb, while secondary, partial bodies had been warehoused elsewhere, then reburied in one of Farfán's cemeteries. The total interments in the cemetery number five primary burials, including one adult male with an associated infant, one adult female, and two children. The secondary burials consist of eight individuals, including five adult females, one adult male, one adolescent, and one adult of undetermined sex. The cranial modification of these individuals is largely consistent with the ethnic divisions of the cemetery. The second part of this chapter will present the bioarchaeological details of these individuals and

will examine how these features correlate within the two sectors.

CHAPTER 5A: TOMBS AND BURIAL GOODS

Carol J. Mackey

The burial mound, Cemetery I, lies between the Inca co-opted Compound II and Mound G, an early burial mound built by Farfán's first inhabitants, the Lambayeque (Figure 5.1). This cemetery stands apart because the individuals within it are spatially segregated according to their cultural affiliations (Figure 5.2). Bioarchaeological and ceramic evidence supports this conclusion. However, no other mortuary facility at Farfán is so dramatically divided by culture. This cemetery is a manifestation of the Inca imperial strategy of permitting conquered groups the autonomy to maintain their ethnic identities, while, at the same time, unifying disparate peoples under the umbrella of Inca political hegemony.

Description of Cemetery I

The oblong, unfaced earthen mound, oriented north-south, measures 120 meters long by 55 meters wide. The area where interments were placed in the northern portion of the mound measures 35 meters long by 40 meters wide (Figure 5.2). At its highest point, the mound once stood more than two meters, but human and environmental factors have eroded the surface, so that it now varies in height. Cemetery I, in common with Mound G, is freestanding,

and not enclosed within a compound, or surrounded by retaining walls. Further, like Mound G it also has a Lambayeque component, and is the second largest mound at the site, after Mound G. Unlike Mound G, the northern portion of Cemetery I was intentionally divided into two cultural sectors, Lambayeque and Inca affiliated, separated by a five meter swath containing no burials. In spite of intensive testing, there were no burials found in the southern portion of the mound (Figure 5.2).

The excavations in the northern portion of Cemetery I resulted in the recovery of thirteen individuals interred in multiple irregular levels (Figure 5.2). Sector B may have had four levels, as the layers there are not completely aligned with the three levels in Sector A. As in Cemeteries J and VI (Chapters 4 and 7, this volume), there was some attempt to stagger the burials in the top levels to provide purchase to dig the lower tombs.

The Tombs and Grave Goods

The Tombs

The majority of the thirteen burials in Cemetery I were single interments, with the exception of I3 T1A and B and I19 S1A and B. All of the adults were found in a seated position, with knees apart (Figure 5.2). One of the children, I10 T3, was buried in an extended position on his back. Each individual was originally wrapped in a textile, although these have all but disappeared, leaving only fragments adhering to hair or bone.

The thirteen burials excavated in Cemetery I exhibit two noteworthy characteristics. First, the cemetery contains the largest number of secondary burials of any at Farfán. Many of the partial secondary burials are found below other burials, or in the cemetery's deepest levels (*e.g.* I5 S1; Figure 5.2) indicating that—like other sec-

ondary burials at Farfán—these are intentional burials and not the result of looting. An exception may be the partial burials in I19; this placement may have been the result of looting activity, because the southeast corner of Sector B is the lowest and most destroyed part of the cemetery. Second, among the sexable individuals, the burials contain more women ($N=7$) than men ($N=2$), which is typical for all of the cemeteries at Farfán, except Compound VI. The only age class not represented is neonates.

Differentiation in cranial modification between Sector A and Sector B was one of the strongest indications that interment in either sector was based on cultural affiliation. The individuals in Sector A display three cranial types, designated here as Form A, non-modified; Form B, a subtle type of fronto-occipital modification that produces a short, broad skull; and Form F, a form of fronto-occipital modification with flattening of the frontal and occipital bones. Form B is the most common Late Period cranial modification form found on the North Coast and at Farfán. Form F, uncommon at Farfán, is represented by two individuals in Sector A and is likely associated with individuals from the highlands (Chapter 2, this volume). In contrast to the diversity of cranial types found in Sector A, four out of the total six people interred in Sector B display the Form C modification associated with the Lambayeque ethnic tradition. This is the greatest percentage of individuals in a Farfán cemetery displaying this form of cranial modification.

Although individuals in Cemetery I stand out for their tall stature and robust build, taken as a whole, they do not exhibit good health: many individuals show evidence of infectious disease and trauma (see Nelson, Chapter 5B, this volume). Although the sample is small, osteological analysis demonstrates that the individuals in Sector A, affiliated with the Inca, are in

poorer health than those of Lambayeque affinity in Sector B.

In addition to cultural differences in cranial modification and overall health and activity patterns, Sectors A and B differ in terms of tomb form and orientation. Sector B of Cemetery I is the only cemetery at Farfán that contains tombs with specially prepared floors. Layers of fine sand, some fifteen to eighteen centimeters deep, had been laid down prior to placement of the bodies in two tombs in Sector B: I10 T3 and I10 S1 (Figure 5.2). It is of interest that I10 S1, a secondary burial, was one of the individuals whose tomb received this treatment, possibly indicating that she was an offering for the child interred above her. The orientation of the bodies in Cemetery I also varied, primarily by sector. The individuals in Sector A were oriented to the north or west, while the bodies in Sector B were mainly oriented to the west. The child was placed on its back in a supine position with the head oriented to the south.

Sector A Tombs

Ceramic Grave Goods in Sector A. In the Inca-affiliated burials in Sector A, the two adult males had the greatest number of ceramics placed on either side of their bodies: five vessels in I3 T1A and four in tomb I16 S4. These vessels exhibit strong Hybrid characteristics, with flaring jar rims, large strap handles, and include an aryballo jar (Figures 5.3, 5.4). The partial burial of an old woman in I16 S3 contained a finely decorated Late Horizon Jequetepeque style blackware olla (Figure 5.5). On the vessel's shoulder is a press-molded design of a Moon Animal wearing a crescent-shaped headdress, a traditional mythical motif of the North Coast (Bruhns 1976; Mackey and Vogel 2001).

Non-ceramic Offerings in Sector A. The individuals in Sector A had few non-ceramic offerings. The most common of these were

simple, undecorated gourd bowls, such as found with the male burials in I16 S4 and I3 T1A. These gourds were placed in the individuals' laps. In one tomb, I3 T1A, a whole spondylus shell had been placed in one of the gourds (Figure 5.6). Shell beads were found with the partial burial of the female, I16 S3. Only one individual, I5 S1, was associated with weaving equipment. This secondary burial included a copper needle, two undecorated clay spindle whorls, and chalk.

An Example of a Sector A Tomb

This tomb comprises a middle-aged, seated male (I3 T1A) and an infant (I3 T1B; Figure 5.6). This burial, which was almost three meters below the surface of the mound, is oriented to the west. Although this was not considered a secondary burial, the upper part of the male's body was disarticulated, possibly having been dislodged by the overburden of earth and the lack of burial wrappings that would have held the body together. Included in his tomb was a very intricate Hybrid-style jar with a flaring rim and an incised diamond pattern on the vessel body (Figure 5.7). Also included in the tomb is a redware Hybrid-style flaring-neck jar with pattern burnish (lines of burnishing alternating with the matte finish of the vessel; Figure 5.8). This is the only redware vessel at Farfán decorated with the pattern burnishing technique. Also associated with him (I3 T1A) are three cooking ollas and two gourd bowls, one of which contained a complete spondylus shell.

Above the adult male (I3 T1A) is the body of a one-year-old infant (I3 T1B) found on its back in a supine position with its head to the south (Figure 5.6). Elsewhere at Farfán in Mound G, to the north of this cemetery (Figure 5.1), are two tombs with women associated with infants in niches (Chapter 6, this volume). As these examples are of women, the burial of a male with an infant is unusual. It is also of

interest that the adult male and the infant have different cranial types, Forms B and A, respectively. Since head modification is a cultural trait, occurring on both men and women, it would be expected that the infant, if related to the male, would have had the same cranial form. It may be that as with the infants associated with other adult burials, the infant is an offering.

Sector B Tombs

Ceramic Grave Goods in Sector B. In Lambayeque-affiliated Sector B, a total of six burials were recovered (Figure 5.2). The two secondary burials in I19 in the southeast corner of Sector B had no grave goods, while the tombs in I10 contain from one to five vessels. These vessels are domestic wares that conform to earlier stylistic canons associated with Lambayeque culture (Chapter 1, Figures 5.9, 5.10; see Mackey 2011 [2016]). The vessels are redware, and several are decorated with the typical Lambayeque technique of paddle stamping (*paletteada*). One vessel in an offering context (I22) uses a combination of techniques—paddle stamping on the body of the vessel with white slip. This is a typical trait of the Late Horizon, using white slip superimposed over the stamped design, as is found in this offering (Figure 5.7).

An Example of a Sector B Tomb. The body of a four year-old child (I10 T3), oriented to the southeast, was placed on a specially-prepared sand floor in a supine position on its back (Figure 5.11). The left arm of the child was next to its body, while the right arm was folded with the forearm pointed toward the neck. It is of interest that a portion of a llama was included with this child since, at Farfán, llamas are generally associated with high-status adult burials. The llama's head and front feet were placed next to the child's left shoulder, while the back feet were placed next to the right shoulder (see

Appendix 3, this volume).¹ The child, who was one of the healthiest individuals in Cemetery I, exhibited a flattened occipital area (Form C cranial modification) typically associated with the Lambayeque culture.

The five ceramic vessels included with the child in tomb I3 T1A were mainly domestic wares and follow Lambayeque stylistic canons. These vessels include a redware jar with poorly applied white slip (Figure 5.12). Two ring-base redware bowls were found to either side of the child, one of which has an X painted in white slip on the bowl's interior (Figure 5.13). The other vessels comprised two ollas and a jar-and-handle vessel shown in Appendix 6. In addition, copper fragments, folded and tied with yarn, were placed in the child's hands, and on the feet and chest, which is the traditional placement dating back to the Moche period (Figure 5.14). The inclusion of the llama bones as well as the copper in the tomb suggest an ascribed status for this child.

Non-ceramic Offerings in Sector B. There were few non-ceramic offerings in the tombs in Sector B. These included the llama remains found with the child (I10 T3) described above and a copper spindle whorl found with an old woman (I10 S1). Interestingly, these are the two individuals who had been placed upon a layer of prepared sand.

Summary

This is one of the most intriguing cemeteries at Farfán because of the clear division between two cultures: individuals with Inca ties who were buried in Sector A and those with Lambayeque affiliation interred in Sector B. A similar division into two burial groups has been noted

¹ Llama skulls have been reported with other Lambayeque tombs, generally with adults (see Franco and Galvez 2014:147).

within a high-status Lambayeque tomb at the important site of Batán Grande (Shimada *et al.* 2004:372). These groups had been placed inside Huaca Loro (c. A.D. 1000) and were composed of two ethnic groups of females—those with earlier Moche attributes and those with Lambayeque characteristics. At Huaca Loro the two groups were found facing each other, while in Cemetery I at Farfán most individuals in Sectors A (Inca) and B (Lambayeque) do not face each other. The repetition of this concept of separation at Farfán, some 400 years later, speaks to the continuity of Lambayeque culture on the coast (Mackey 2011 [2016]).

This is the largest mound at Farfán, although only the extreme northern portion was used for interments. Like other mortuary facilities at Farfán, the mound represents a significant labor investment and could continue to be used over time. As in other Late Horizon cemeteries at Farfán, adults predominate in the sample, and it is likely that the individuals buried here lived and worked at this site. Most of the individuals were buried in a seated position with knees apart, which is typical for Late Horizon North Coast burials. Only one infant (I3 T1B) and a child (I10 T3) were found on their backs in a supine position (Table 5.1).

Due to the large number of secondary burials, which comprised over half the sample, it was not always possible to determine the exact orientation of incomplete skeletons. Based on the primary burials, however, some individuals in Sector A were oriented to the north and others to the northwest, while most bodies in Sector B are oriented to the west. There were differences in the forms of cranial modification between the two sectors. All of the individuals in Sector B display the Lambayeque style of head modification (Form C), with the exception of one individual (I10 T1). Those buried in Sector A have three types of cranial forms—A, B, and F—that speak to a more ethnically and geographically

diverse burial population drawn from both the coast and highlands (Table 5.1).

The spatial organization of each sector also differed. Inca-affiliated Sector A appears to have three distinct levels, as do the other Late Horizon cemeteries at Farfán. The levels in Sector B did not correspond with those in Sector A and appear to have been constructed using a different spatial concept. The levels in Sector B are higher on the western side and may have had four—rather than three—levels (Figure 5.2).

Based on the accompanying grave goods, there appears to be one individual in each sector that is of higher status than the others. For instance, among the Inca-affiliated burials in Sector A is a man (I3 T1A) with an associated infant offering (I3 T1B) and Inca-affiliated ceramics. The pattern of an infant offering occurs in other cemeteries at Farfán; however, in them the adult is always a woman. The male in this burial has a whole spondylus shell, a trait also associated with females. In Sector B, the inclusion of llama body parts, copper, and a large number of ceramic vessels in the tomb of an ethnically Lambayeque child, I10 T3, suggests that this child had high ascribed status (Table 5.1).

Despite the poor preservation of this cemetery, each group stands apart and has its own signature in material and biological traits. This division can be assessed across a range of mortuary traits, including the orientation of the bodies in each group, patterns of cranial modification, the spatial organization of the sectors, and the differences in the cultural styles of the mortuary offerings.

CHAPTER 5B: BIOARCHAEOLOGY OF CEMETERY I

Andrew J. Nelson

Cemetery I is composed of both primary and secondary burials arranged in two sectors, A and B (Chapter 5A, Figure 5.2). These appear to represent social and cultural affiliations of the cemetery residents, with individuals of Inca identity clustering in Sector A and those of Lambayeque culture (Chapter 5A, Figure 5.2). This chapter presents a summary of the cemetery's demographic composition, and the skeletal sample's characteristics in terms of stature, growth and early childhood stress, health and disease, cranial modification, and isotopic analysis.

Demographic Composition

Cemetery I has the smallest number of primary burials (N=5) of any of the cemeteries at Farfán, although the individuals given secondary burials (N=8) brings the total number of interments to 13. The primary burial sample in Sector A (Table 5.2) includes one mid-adult male (I3 T1A) and an associated infant (I3 T1B), approximately one year old. The primary burials in Sector B include one mid-adult female (I10 T2) and two children, one aged three years (I10 T1) and the other four years (I10 T3). The secondary sample in Sector A includes a late adolescent female (I16 S1), an old adult female (I16 S3), and an indeterminate-aged (I16 S2), adult female, a single old adult male (I16 S4) and one adult individual of undetermined sex (I5 S1). In Sector B, the secondary sample includes three young adult females (I19 S1A), one middle-aged female (I19 S1B), and old female (I10 S1). The cemetery as a whole is lacking neonates (0–1 years) and juveniles (6–12 years). Among the adults, there is a preponderance of females, outnumbering males

7:2 among the sexable individuals. This is characteristic of all cemeteries at Farfán, except the Compound VI Cemetery (Chapter 7A, this volume), but is particularly pronounced in Cemetery I.

Secondary Burials

There are eight secondary burials in Cemetery I, all represented by partial skeletons. Across the sample, the parts of the skeletons represented are not consistent. Among the Sector A individuals: I16 S1, an adolescent female, has elements of the cranium, right arm, left forearm, and left fibula and foot; I16 S2, an adult female, is represented by a partial cranium only; I16 S3, an old adult female, has elements of both hands, the trunk, pelvis, and feet; and I16 S4, an old adult male, has elements of both arms, the trunk, the right leg, and both feet. I5 S1 has not yet undergone an osteological analysis. Among the Sector B individuals: I10 S1, an old adult female, has a cranium, elements of both arms, and the major bones of the legs; I19 S1A, a young adult female, has a cranium, elements of the trunk, pelvis, and both legs; and I19 S1B, a mid-adult female, has a left humerus, pelvis, and both legs.

Stature, Health and Disease, and Activity Patterns

Body size, generally assessed in archaeological contexts as stature, is a key indicator of health status through the growing years. Body size can also be examined by looking at bone joint and shaft diameters or cross-sectional areas, which are indicators of body mass (weight); (*e.g.* Ruff *et al.* 1991). This can be particularly useful when long bones are not complete.

There are seven individuals in Cemetery I for whom stature could be estimated (Table 5.2). This includes all but one of the adults. The

male mean is 161.9 centimeters (N=2), which exceeds the male average for Farfán (158.8 centimeters, N=14) by 3.1 centimeters. It should be noted that the Cemetery I average is skewed by I16 S4, the tallest male at the site, who measures 166.4 centimeters. The other male, I3 T1A, is slightly under the Farfán average, at 157.4 centimeters. However, I3 T1A is a remarkably robust individual. Despite having a smaller than average stature, he has the highest femoral midshaft cross-sectional area and femoral head diameter, and the second largest humeral midshaft cross-sectional area of all the individuals at the site. Judging by the well-developed muscle markings on his upper arms (see below), much of his mass was probably muscle.

The female stature mean for Cemetery I is 150.3 centimeters (N=4), which also exceeds the site mean (146.0 centimeters, N=32) by a considerable margin. In this case, all individuals fall above the site mean, but one in particular, I10 S1, is one of the tallest three females at the site (152.2 centimeters). The final stature of the adolescent, I16 S1, could not be determined, as her only available long bone, the right humerus, had not finished growing. Despite never having reached its full length, her humerus was already 291 millimeters long, which almost meets the male mean right humerus length (291.5 millimeters, N=6) for the site. She was thus on track to be the tallest female at the site.

In this study, the assessment of health and disease focuses on the detection and interpretation of skeletal lesions caused by infectious or other diseases, degenerative changes of the spine, and dental health. Five individuals in this cemetery, four from Sector A (I3 T1A, I16 S1, I16 S3, I16 S4) and one from Sector B (I19 S1B), display bone lesions characteristic of infectious disease (see Table 5.2). The adolescent female (I16 S1) has two small focal destructive lesions, as does the mid-adult male (I3

T1A). The former (I16 S1) has a small lesion on the proximal articular surface of the right radius. This lesion is likely to be a very early manifestation of degenerative changes to the right elbow. The latter (I3 T1A) has a small lesion lying between the third and fourth metatarsals of the right foot. This probably represents the bony involvement of a localized infection, probably caused by a penetrating injury to the top of that foot. The old adult male (I16 S4) also has evidence of infection on his right knee and foot. In his case, he has a large area of disorganized subperiosteal bone that covers the proximal third of the metatarsal bone shafts. This indicates the presence of periostitis, or inflammation of the connective membrane surrounding the bone, and its extent suggests an infection that affected a larger area than found on the mid-adult male I3 T1A. The secondary burial of the old male, I16 S4, also demonstrates this on his right ankle, indicative of a severe ankle sprain.

An old adult female (I16 S3) demonstrates a sequence of large (3–4 millimeters in diameter) circular lesions in the posterior-medial aspect of all preserved vertebral bodies. These lesions would have been immediately adjacent to the spinal cord. In addition, there is evidence of bone destruction and remodeling around the sacroiliac joint. These lesions are superficially similar to those of tuberculosis, but the distribution throughout the entire vertebral column rules out that diagnosis. Differential diagnoses presented in Buikstra (1976:360) suggest that the most likely cause of these lesions is a fungal infection, such as coccidioidomycosis, which leads to infection of the bone or bone marrow (osteomyelitis) of the spine in individuals with compromised immune systems (Frazier *et al.* 2001). Coccidioidomycosis and related fungal infections are caused by fungi that occur in alkaline soils, and have been reported in the North American Southwest, and Central and South America. In many cases, the condition is asymptomatic. However, in cases where bony

involvement occurs (less than one percent), it is accompanied by back pain and high fevers (Lewicky *et al.* 2004). One other archaeological example of this disease has been reported from the Peruvian South Coast (Gerszten *et al.* 2012).

The adult female from Sector B (I19 S1B) demonstrates periostitis on the shafts of her right humerus, on the shafts of both tibiae, and on the pubis. Unfortunately, the skeleton of this individual is very fragmentary, making it difficult to discern a broader pattern in the expression of this abnormal bone. Periostitis can sometimes be associated with direct bone trauma or bacterial infection (see above), but it is often difficult to be more precise than to say it is a non-specific indicator of infectious disease (Larsen 2015:86–87). This case represents a widespread, probably blood-borne, non-specific infectious disease such as osteomyelitis.

Of the eight individuals with preserved spinal columns in Cemetery I, three (mid-adult female I10 T2, mid-adult male I3 T1A, and old adult female I10 S1) demonstrate age-related degenerative changes of the vertebrae (Table 5.2). In contrast to many other individuals at Farfán, these changes are slight, and there are no collapsed vertebrae. One of the old individuals (the male, I16 S4) shows no degenerative changes at all, and an old female (I16 S3) demonstrates vertebral changes that are related to an underlying pathological condition rather than age. A mid-adult female (I10 T2) demonstrates slight degeneration of her mid-thoracic spine, a slight scoliosis, and a Schmorl's node. A Schmorl's node is a lesion that represents the intrusion of the intervertebral disk into the vertebral body, and is likely caused by compressive trauma. The expression of this node, positioned centrally in the vertebral body, has been associated in the clinical context with chronic back pain (Faccia and Williams 2008). Even though the degeneration of this individual's

spine is only slight, she would likely have experienced a great deal of discomfort.

The individuals in Cemetery I are in very poor dental health (Table 5.2). There are five individuals who preserve dental remains, and only one of them, a four-year-old child I10 T3, is in good dental health. The other child, I10 T1, had seven carious lesions and periodontal disease, despite the fact that this individual was only about three years old at the time of death. The adult individuals (a mid-adult female I10 T2, a mid-adult male I3 T1A, and an old adult female I10 S1) had lost many teeth, and demonstrated calculus accumulation, numerous carious lesions, abscesses and heavy wear. The mid-adult female (I10 T2) also had indications of having suffered from temporo-mandibular joint disease and carious lesions on the buccal surface of an upper premolar, loss of the first molar beside it, and a large lesion in the second molar. The temporo-mandibular joint disease was likely caused by the pronounced facial asymmetry produced by her Form C cranial modification. Buccal caries are much less common than lesions on other surfaces of the teeth, and have been associated with coca chewing in Andean populations (Indriati and Buikstra 2001).

Activity patterns are assessed here by examining the attachment sites for muscles on bones (musculo-skeletal stress markers or MSMs), by looking for other indicators of habitual activity, and by assessing patterns of trauma (*e.g.* Kennedy 1989).

In general, the individuals in Cemetery I appear to have been very well muscled. This observation is in keeping with the earlier observations that they were also very robust, as this bone robusticity probably developed as a response to biomechanical, muscular stress. Habitual squatting is indicated in all of the primary burials except I10 T3, the four-year-old child, and in all observable secondary burials except

I19 S1A, a young adult female. All primary burials except I10 T3 and I3 T1B, the four- and one-year-old subadults respectively, have well-developed MSMs in the upper and lower arm. A mid-adult female (I10 T2) has well-developed MSMs for the muscles on the thumb and fifth finger that bring those digits into opposition. This pattern has been described in another sample from the Jequetepeque Valley, and it has been associated with the habitual spinning of thread using the drop-spinning method (Nelson, Nelson, Castillo, and Mackey 2000:39). An old adult male (I16 S4) also demonstrated the lesions associated with spinning, which is quite unusual for a male individual. The Inca, however, are known to have instituted a special category of male weavers, known as *qumpi-kamayuc* (Costin 1998:135; Spurling 1992:221). The expression of MSMs in the arms of the secondary burials is somewhat more variable, ranging from unremarkable (I16 S1, I19 S1A and I19 S1B) to upper arm only (I10 S1) to upper and lower arm (I16 S4).

Three individuals in this sample demonstrate evidence of trauma (Table 5.2). Two adult males (I3 T1A and I16 S4), discussed briefly above, presented localized infections of the right foot, possibly related to penetrating wounds to the top of the foot. As noted above, the old adult male (I16 S4) also has evidence of an ankle sprain on the right side. Mid-adult male I3 T1A demonstrates a compression fracture with subsequent fusion of the phalanges of the fifth toe of his left foot. This indicates one or more incidences of violent toe stubbing. His coccyx was also fused to his sacrum. This fusion is not related to age and may be related to environmental factors, such as trauma (Saluja 1988).

The mid-adult female, I10 T2, demonstrates bilateral fractures of her second ribs, a rib fracture commonly associated today with an automobile accident, involving compression of the chest against the steering wheel or severe blunt

force trauma to the middle of the chest (Fermanis *et al.* 1985; Love and Symes 2004). This kind of injury is extremely painful and is often associated with nerve and arterial damage in the area (Fermanis *et al.* 1985), something that would have been difficult to manage in ancient times. The fractures are well healed, however, so the individual clearly survived the incident. This individual also demonstrates a Schmorl's node (see above), indicative of compressive trauma to the spine.

Cranial Form

Cranial modification is a permanent marker imposed upon a newborn infant by its parents, and is thought to reflect aspects of social organization and/or social identity (Gerszten and Gerstzen 1995; Torres-Rouff 2003). Eight of the nine individuals with preserved crania in Cemetery I demonstrate some sort of cultural cranial modification (see Table 5.2). In Sector A, two individuals, an adolescent female (I16 S1) and a female of indeterminate age (I16 S2), demonstrate Form F modification, which is fronto-occipital modification performed on a very long skull, likely belonging to someone derived from the highlands (*cf.* Ross *et al.* 2008). Only Cemetery I and Cemetery J contain individuals that demonstrate this form of modification (Chapters 4B and 5B, this volume). The infant I3 T1B's cranium was not modified.

Two individuals, a child in Sector B (I10 T1) and a mid-adult male in Sector A (I3 T1A), demonstrate Form B, fronto-occipital modification, while four individuals (an adult female I10 T2, a child I10 T3, an old adult female I10 S1, and a young adult female I19 S1A) demonstrate Form C, tabular fronto-occipital modification. In the Jequetepeque Valley, Form C has been associated with people affiliated with the Lambayeque culture, and is displayed by only seven crania out of the whole Farfán burial sample. Cemetery I thus contains the largest number of

crania with this modification form found in any of the Inca period cemeteries at Farfán. The child I10 T3 has the highest cranial index at Farfán at 127.0 (ratio of the maximum breadth to the maximum length of the skull multiplied by 100; Figure 5.15). The skull of adult female I10 T2 is also quite asymmetrical.

Isotopes

Two individuals from Cemetery I, a child in Sector B (I10 T3) and a mid-adult male (I3 T1A), were tested for carbon and nitrogen isotopes in order to reconstruct the outlines of their diet (Appendix 5:Table 5.2, this volume). The child, I10 T3, did not yield sufficient collagen, the major protein component of bone, for reliable results. The most likely reason for the poor yield is loss of collagen by long-term exposure to water. The isotopic results for the mid-adult male, I3 T1A, were $\delta^{13}\text{C}$ -10.2 for carbon and $\delta^{15}\text{N}$ 11.0 for nitrogen. These results suggest a significant maize component to his diet, accompanied by higher than average (compared to the entire burial population of Farfán) protein intake, likely from marine sources.

Four individuals, one from Sector A (mid-adult male I3 T1A) and three from Sector B (I10 T2, I10 T3, and I10 S1) were analyzed for their oxygen isotope signature. Values for the mid-adult male (I3 T1A) and mid-adult female I10 T2 (Sectors A and B respectively) fell within the local range for the site ($\delta^{18}\text{O}$ 15–17), indicating that the individuals inhabited the Jequetepeque Valley for at least the last ten years of their lives. The child, I10 T3 (Sector B), fell at the upper end of the local range of variation for its bone value, ($\delta^{18}\text{O}$ 17.0), but also demonstrated an elevated value on its dental enamel ($\delta^{18}\text{O}$ 17.9). This offset may represent a recent geographic shift for this child to the Jequetepeque Valley, or it may represent a physiological process—such as weaning—that leads to an offset in signature in children of this age. This phenomenon is cur-

rently under investigation. An old adult female from Sector B (I10 S1) had an elevated value of $\delta^{18}\text{O}$ 17.9 for her second molar, indicating that she grew up on the coast, but in a different area of the coast. No bone value was available for this individual to elucidate her more recent residence.

Comparison of Sectors A and B

A few osteological variables can be seen to differentiate Sectors A and B. The only males in this cemetery are found in Sector A, mid-adult male I3 T1A and an old adult male I16 S4, while Sector B contains only females or subadults. The only non-modified individual (Form A), the infant I3 T1B, is found in Sector A. The four Lambayeque-style, Form C modified crania are found in Sector B (I10 T2, I10 T3, I10 S1 and I19 S1A). Finally, four of the individuals from Sector A demonstrate evidence of infectious disease (I3 T1A, I16 S1, I16 S2, and I16 S4), while only one from Sector B does (I19 S1B). Despite these differences, individuals in both sectors are tall or medium statured, and display signs of infectious diseases and indicators of strenuous physical activity.

Summary

Cemetery I is striking in terms of its high representation of tall and robust, well-muscled individuals. At the same time, the individuals in Cemetery I appear to have had very stressful early childhoods. It is clear that this stress did not affect their final growth outcome, probably because it preceded the adolescent growth spurt. It is possible that the peak stress time, between thirty and forty-eight months, represents the time of weaning. In addition, there are several cases of infectious disease and several individuals who bear evidence of trauma, probably interpersonal in nature (e.g., Walker 2001). These individuals are in relatively good health from the perspective of spinal degeneration. The

individuals examined here are similar to those from other areas of the site in terms of overall poor dental health and activity patterns that include squatting. This analysis indicates that some osteological characteristics may differentiate the two sectors, most particularly cranial modification and the prevalence of infectious disease, although there is also some overlap in other traits. The argument, based on artifactual associations, that Sector B represents people more closely affiliated with the Lambayeque ethnic group (Chapter 5A, this volume) is supported by the concentration of crania with Form C modification. The high-status individual from Sector A, I3 T1A, buried with artifacts indicating an Inca affiliation, had a local oxygen isotopic signature. However, two females demonstrated a Form F modification, indicating they were from the Highlands. The individuals tested for oxygen isotopes from Sector B demonstrated more variability in their geographic origins. Such mobility appears to have been typical on the coast for quite some time (White *et al.* 2009).

Burial	Age	Sex	Pos	Ort	Org	CM	S/M	PC	Cin	Tex	Met	An	Ori	Sh	Wea
Sector A															
I3 T1A	MA	M	S	W	5	B	M	5	n/a	n/a	n/a	n/a	J	2	n/a
I3 T1B	IN	M	EX	S	n/a	A	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
I5 S1	n/a	F	S	NW	n/a	n/a	S	3	n/a	n/a	n/a	n/a	n/a	n/a	1, 4, 5
I16 S1	AD	F	S	N	n/a	F	S	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
I16 S2	YA	F	S	N	n/a	F	S	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
I16 S3	OA	F	S	N	n/a	n/a	M	1	n/a	n/a	n/a	n/a	n/a	1	n/a
I16 S4	OA	M	S	N	5			4	n/a						
Sector B															
I10 T1	CH	N/A	S	NW	n/a	B	S	5	n/a	n/a	n/a	n/a	J	n/a	n/a
I10 T2	MA	F	S	W	n/a	C	S	4	n/a	n/a	4	2	n/a	n/a	n/a
I10 T3	CH	N/A	EX	S	n/a	C	S	5	n/a	n/a	n/a	n/a	OC	n/a	1
I10 S1	OA	F	S	W	n/a	C	S	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
I19 S1A	YA	F	S	W	n/a	C	M	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
I19 S1B	MA	F	S	W	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table key

Burial: Burial designation number.

Age: NEO=neonate (0–0.9 years), IN=infant (1–2.9 years), CH=child (3–5.9 years), JUV=juvenile (6–11.9 years), AD=adolescent (12–19.9 years), YA=young adult (c. 20–29 years), MA=mid-adult (c. 30–39 years), and OA=old adult (c. 40+ years).

Sex: F=female, M=male, N/A=not available.

Pos: Burial position: S=seated, EX=extended.

Ort: Seated orientation of the body, based on which way pelvis is facing; extended orientation is based on head direction only.

Org: Organics: 1=seed, 2=maize, 3=fruit, 4=fish, 5=gourd, 6=*Nectandra* seed necklace, 7=wooden figurine.

CM: Head modifications A-G (see Nelson, Chapter 2, this volume, Figure 2.1).

S/M: Tomb configuration: S=single, M=multiple individuals.

PC: Quantity of ceramics directly associated with an individual, rather than a communal offering.

Cin: Presence of cinnabar on the bones.

Tex: 1=textile bag, 2=other textiles, 3=shroud.

Met: Presence of metal: 1=discs, 2=beads, 3=rings, 4=folded copper pieces, 5=silver beads, 6=copper spindle, 7=copper tweezers, 8=other silver object, 9=silver-plated copper rattle, 10=copper tumi, 11=other copper.

An: Animal remains: 1=feline, 2=llama, 3=guinea pig.

Ori: Individual originally from J=the Jequetepeque Valley, OC=other coastal valley, or H=the highlands.

Sh: Shell: 1=shell beads, 2=whole *Spondylus* shell, 3=mixed media with other material.

Wea: Weaving equipment: 1=spindle whorl, 2=weaving swords, 3=weaving basket, 4=needles, 5=chalk, 6=unspun wool.

Table 5.1. Cemetery I burial data.

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
<i>Sector A</i>					
<i>Primary Individuals</i>					
I3 T1A	Mid-adult male (30–40 yrs)	Medium (157.4 cm)	<ul style="list-style-type: none"> Focal destructive lesion in right metatarsal changes in mid-thoracic and lumbar spine Very poor dental health 	$\delta^{18}\text{Op}$ Bone = 16.8 $\delta^{13}\text{C}$ = -10.2 $\delta^{15}\text{N}$ = 11.0	Form B ^c (CI=87.6) ^d
I3 T1B	Infant (1 yr)	n/a	n/a	n/a	Form A (CI=n/a)
<i>Secondary Individuals</i>					
I5 S1					N/A
I16 S1	Late adolescent female (14–20 yrs)	Tall (based on current length of growing humerus)	<ul style="list-style-type: none"> Focal lesion on right radius 	n/a	Form F (CI=83.1)
I16 S2	Adult female (20+ yrs)	n/a	n/a	n/a	Form F (CI=82.5)
I16 S3	Old adult female (40+ yrs)	n/a	<ul style="list-style-type: none"> Large lesions on all preserved vertebrae Lesions in sacroiliac joint Coccidioimycosis 	n/a	n/a
I16 S4	Old adult male (40+ yrs)	Tall–tallest individual at Farfán (166.4 cm)	<ul style="list-style-type: none"> Periostitis on right foot Small lytic lesion on distal right femur 	n/a	n/a
<i>Sector B</i>					
<i>Primary Individuals</i>					
I10 T1	Child (3±1 yrs)	n/a	<ul style="list-style-type: none"> Very poor dental health 	n/a	Form B (CI=91.4)
I10 T2	Mid-adult female (30–40 yrs)	Medium (149.9 cm)	<ul style="list-style-type: none"> Degenerative changes of thoracic spine and Schmorl's node at T6 Accessory facets for TMJ and poor dental health 	$\delta^{18}\text{Op}$ Tooth (M3) = 16.4	Form C (CI=98.1) (very asymmetrical)
I10 T3	Child (4±1 yrs)	n/a	n/a	$\delta^{18}\text{Op}$ Tooth (M1) = 17.9 $\delta^{18}\text{Op}$ Bone = 17.0	Form C (CI=127.0) (highest at Farfán)
<i>Secondary Individuals</i>					
I10 S1	Old adult female (40+ yrs)	Tall—one of the tallest females at Farfán (152.2 cm)	<ul style="list-style-type: none"> Mild degenerative changes to thoracic spine Very poor dental health 	$\delta^{18}\text{Op}$ Tooth (M2) = 17.9	Form C (CI=100.0)
I19 S1A	Young adult female (20–30 yrs)	Medium (149.6 cm)	n/a	n/a	Form C (CI=n/a)
I19 S1B	Mid-adult female (30–40 yrs)	Medium (147.9 cm)	<ul style="list-style-type: none"> Changes suggestive of osteomyelitis around the nutrient foramen on the tibiae, pubis, and right humerus 	n/a	n/a

Notes:

a Unsexable subadult individuals do not have a sex assigned.

b $\delta^{18}\text{Op}$ =oxygen, $\delta^{13}\text{C}$ =carbon, $\delta^{15}\text{N}$ =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1.

d CI=cranial index.

Table 5.2. Cemetery I Primary and Secondary Burial Data.

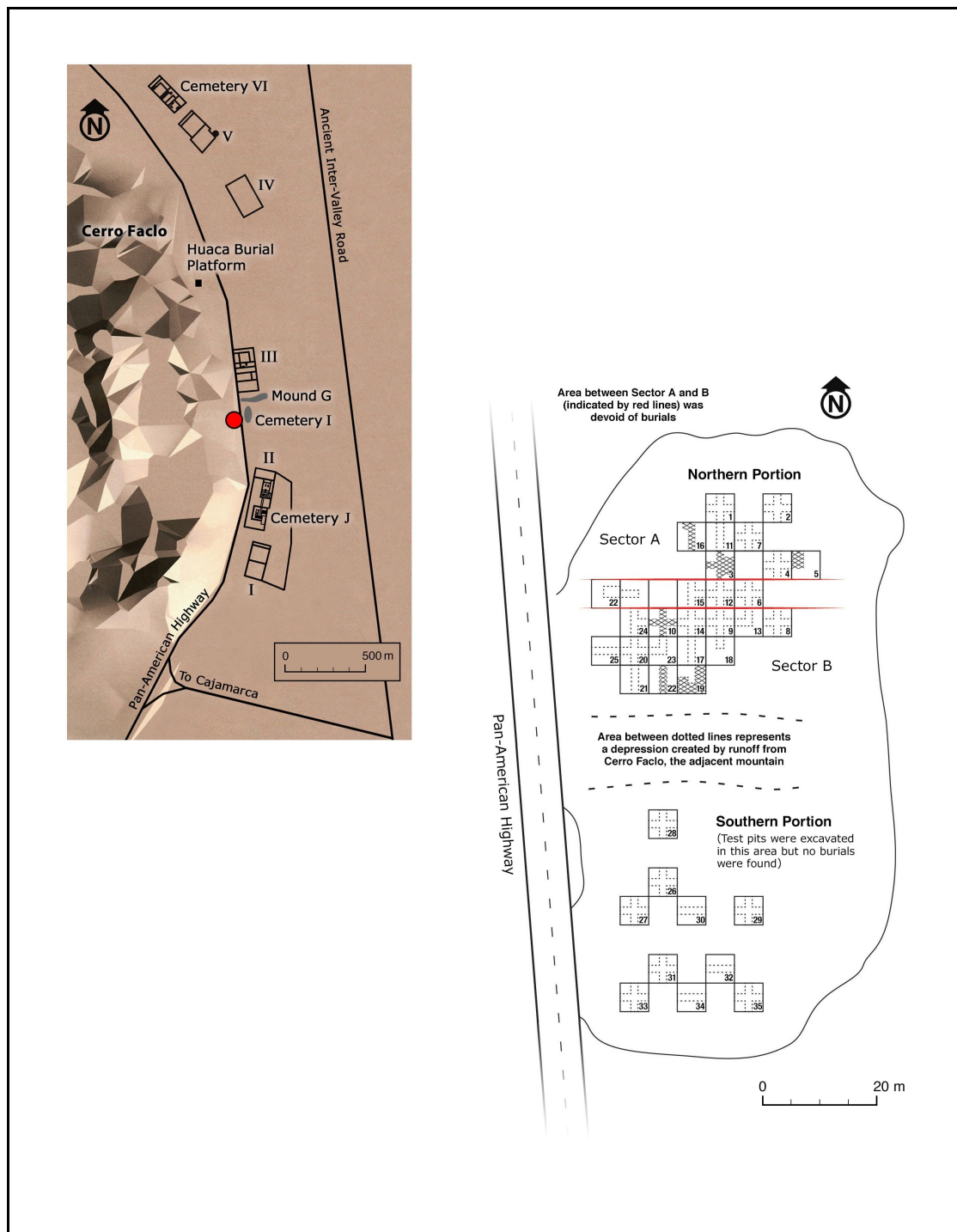


Figure 5.1. Overview of Farfán's compounds, showing the location of Cemetery I. The complete Cemetery I mound measures 120 meters by 55 meters. Interments were placed only in the northern portion of the mound, and this cemetery measures 35 meters by 40 meters. Dotted lines in each sector indicate excavation trenches and the cross-hatching indicates the location of the burials.

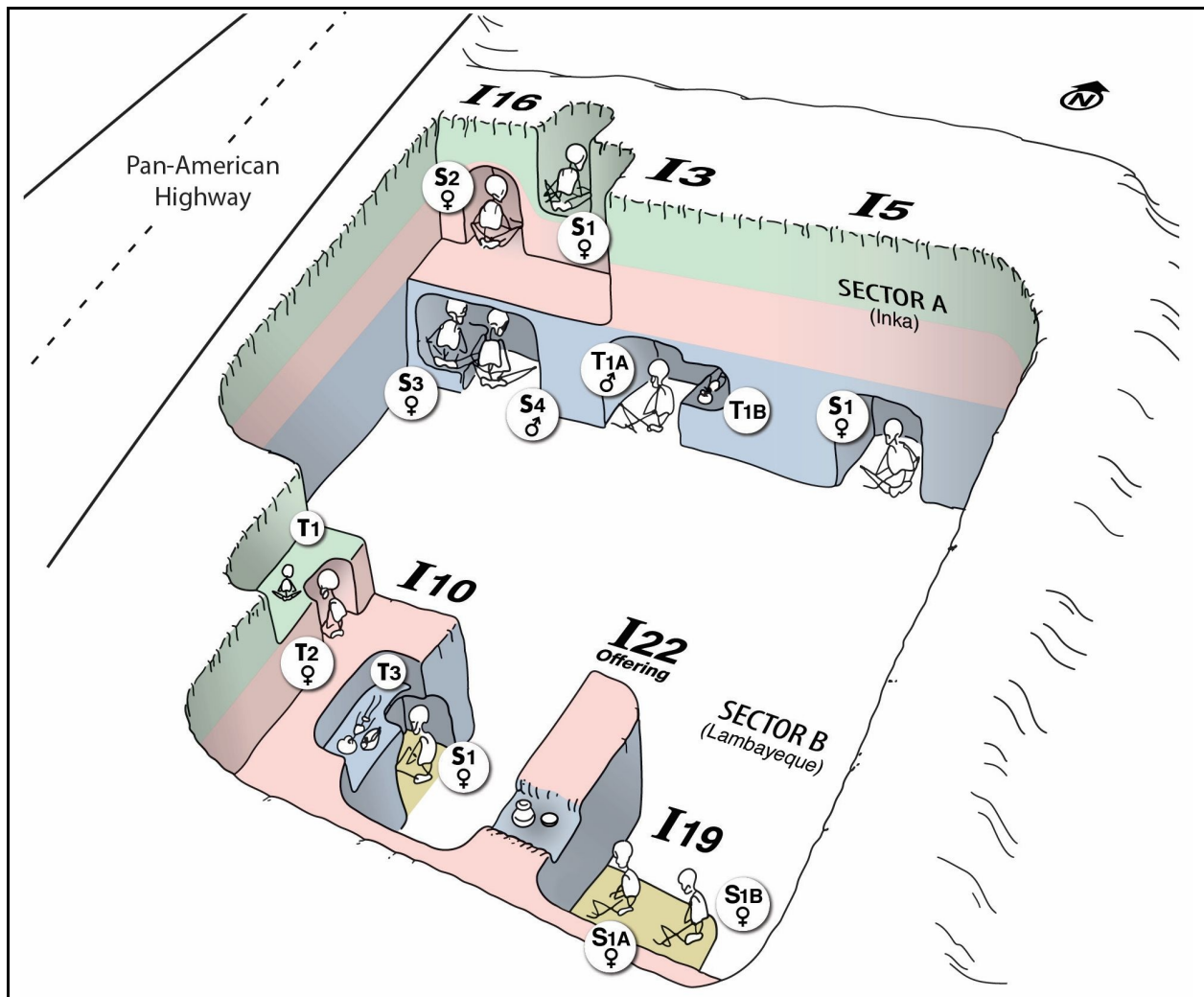


Figure 5.2. Cutaway view of Cemetery I showing the placement of the burials by level and the division of the cemetery by cultural affiliation into Sectors A and B.

The cemetery itself in the northern portion of the mound measures 35 meters by 40 meters.

T indicates a primary burial. S indicates a secondary, partial burial.



Figure 5.3. Blackware Hybrid aryballo from the Tomb of individual I16.
Drawing shows bird motif. Height: 18 centimeters.

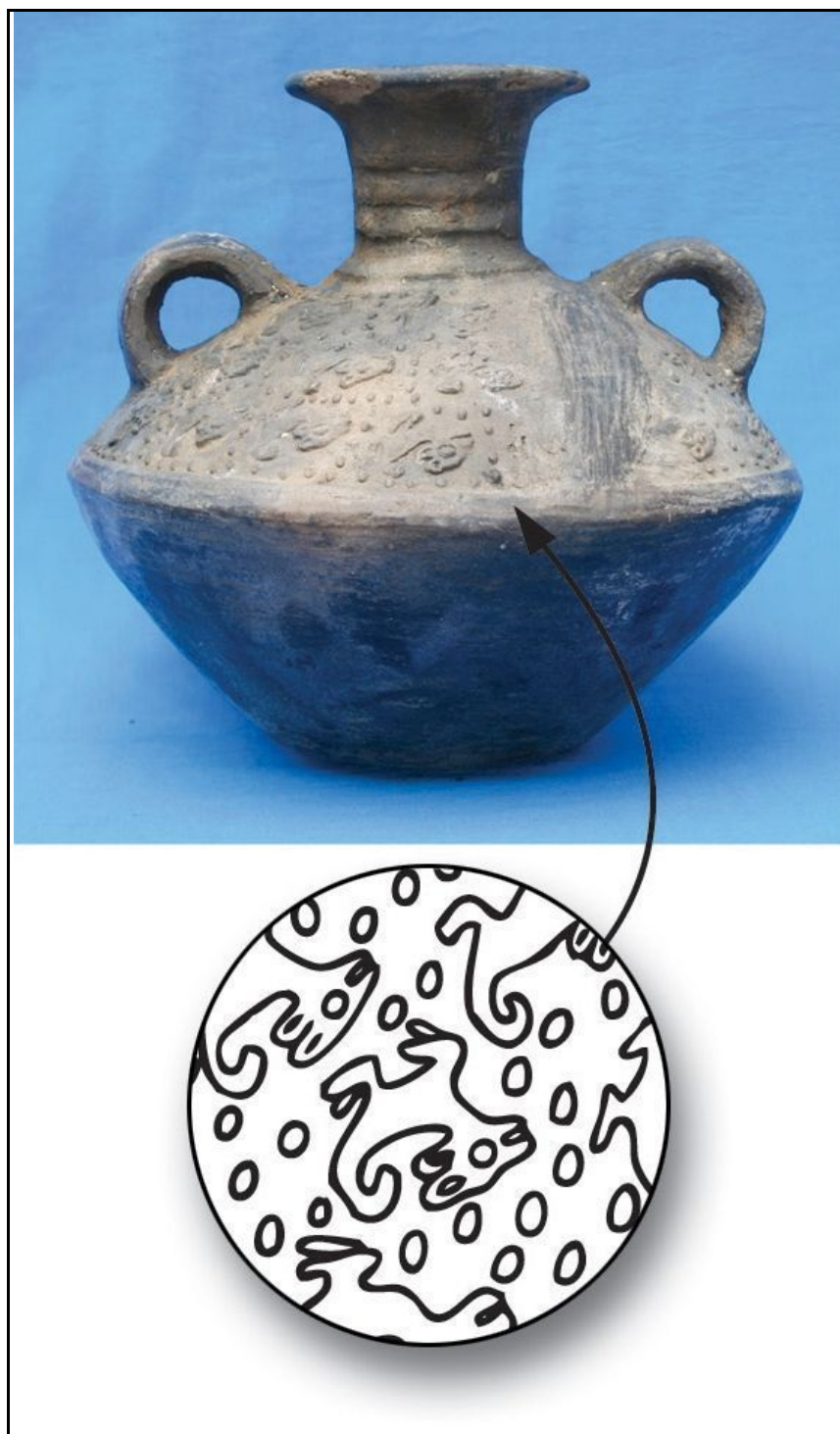


Figure 5.4. Blackware Hybrid vessel from the Tomb of individual I16. Stylized drawing of an animal, possibly a fox. Height: 14.8 centimeters.



Figure 5.5. Blackware olla from the tomb of individual I16 S3 showing a press-molded design of the moon animal. Height: 9.5 centimeters.

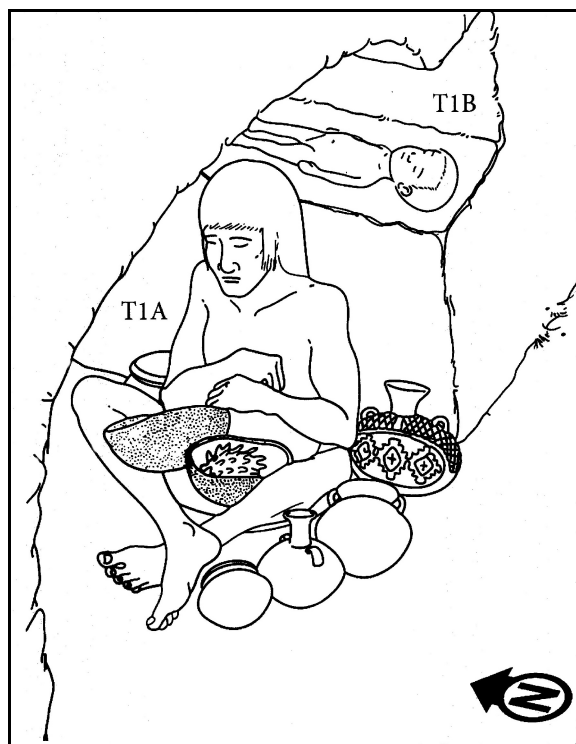


Figure 5.6. Tomb of a seated male with an associated infant. One of the gourds in his lap contains a spondylus shell.



Figure 5.7. Hybrid jar with flaring rim included in the tomb of individual 13 T1A.
Drawing shows diamond motif.



Figure 5.8. Hybrid jar included in the tomb of individual I3 T1A. This is the only redware vessel decorated by the pattern burnishing technique.



Figure 5.9. Example of Lambayeque style olla from an offering in Sector B.



Figure 5.10. Example of Lambayeque style bowl excavated from an offering in Sector B.

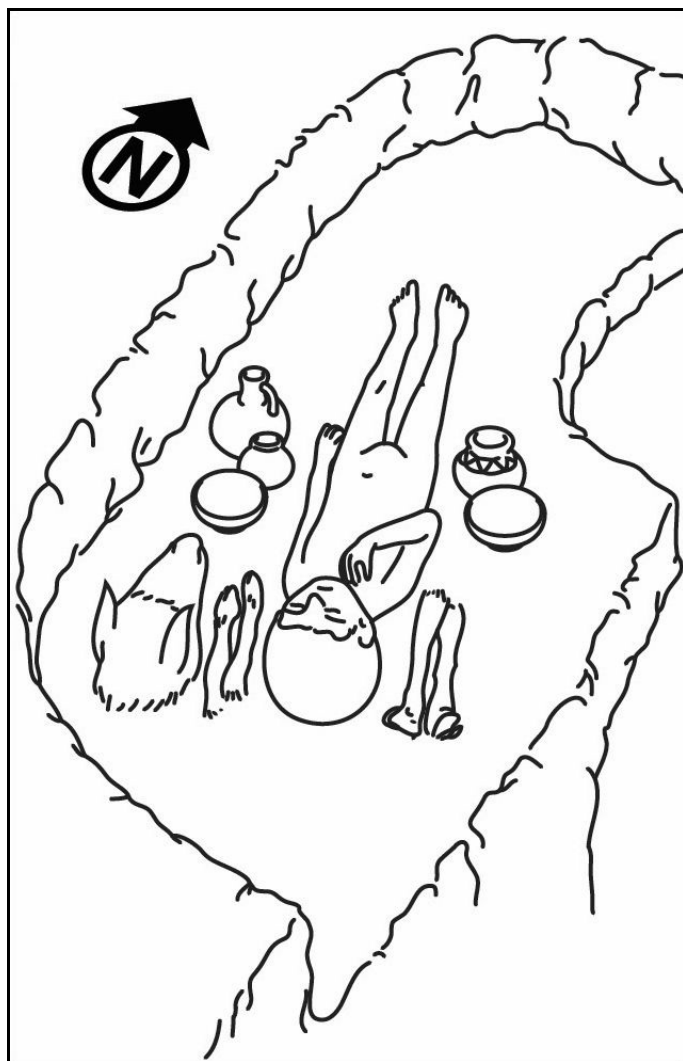


Figure 5.11 Supine body of a four year old child in Sector B with body parts of a llama included in the tomb (I10T3).



Figure 5.12. Redware jar found with the body of a four year old child, individual I10 T3. It shows a continuation of Lambayeque stylistic traits.



Figure 5.13. Redware Lambayeque style ring-base bowl found with the body of a four year old child, individual I10 T3. It shows a continuation of Lambayeque stylistic traits.

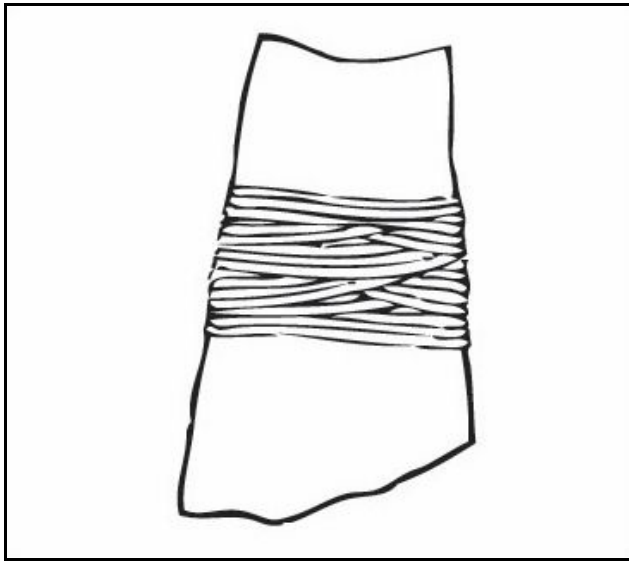
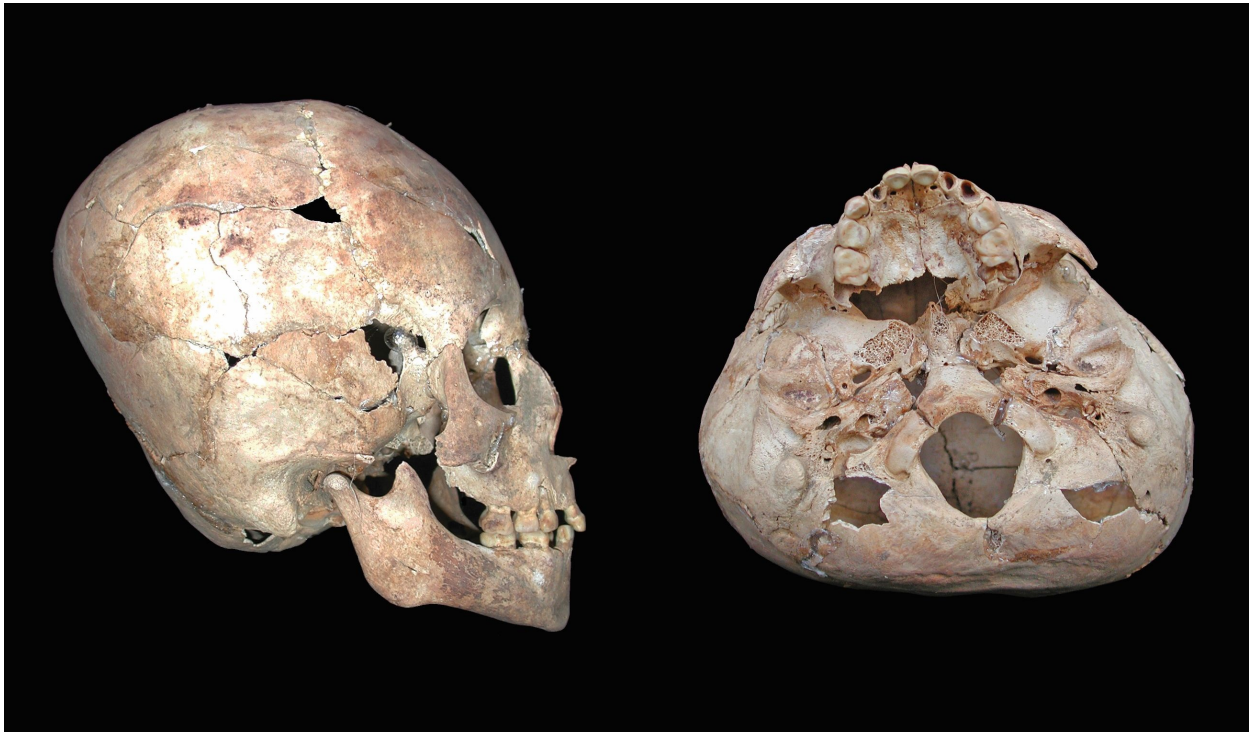


Figure 5.14. One of four folded pieces of copper (3.4 by 2 centimeters) tied with yarn that were placed in the hands, on the chest, and on the left foot of I10 T3.



*Figure 5.15. Cranium of I10 T3.
Cranial modification Form C is expressed in these lateral and basal views.*

CHAPTER 6

MOUND G: LATE HORIZON BURIALS IN AN EARLIER LAMBAYEQUE CEMETERY

Carol J. Mackey and Andrew J. Nelson

INTRODUCTION

The Inca Mound G cemetery intrudes into an earlier Lambayeque (A.D. 1100–1350) earthen mound (Figure 6.1). The cemetery is composed of three parts, and was defined by a path leading to the principal burials on the summit (Figure 6.2). The grave goods in this cemetery date to the Late Horizon, and many reflect their Lambayeque affiliation during the Inca period (Appendix 6).

This cemetery is the smallest one at Farfán. In addition, it is one of several burial places that are structured around a principal high-status female. Part A of this chapter details the tombs and their material contents, while Part B presents the bioarchaeological evidence for these individuals.

CHAPTER 6A: TOMBS AND BURIAL GOODS

Carol J. Mackey

The Late Horizon Burials in Mound G

Mound G, the largest solid earthen mound at Farfán, is a sinuous construction 190 meters long that stood three meters tall at its highest point (Figure 6.2). To create the Late Horizon cemetery within this older mound, the Inca built an eighty centimeter wide pathway up the side of the mound that was cleared, brushed, and compacted (Figures 6.2, 6.3). The sides of the

path were lined with stones and adobe bricks (Figure 6.3).

Seven individuals were interred in this small cemetery. The burials at the summit consist of a high-status woman (Tomb 11), a female retainer (G T4), and an infant (G T12). The middle section of the mound consists of two child burials, one on either side of the path. At the foot of the path is the burial of a woman and child. These burials do not represent a complete demographic sample of the population. Rather, they appear to have been chosen, and most likely sacrificed, to accompany the high-status female at the summit. Furthermore, these burials follow a pattern observed in other cemeteries/tombs at Farfán (e.g. the East and North tombs in the Huaca Burial Platform) of individuals structured around a principal high-status female. The high-status female is the only adult at Farfán buried in an extended position, perhaps reflecting the pathological condition that rendered her immobile.

Burials 3A and B

At the bottom of the path is an unlined tomb, measuring one hundred by eighty centimeters that contained the burial of a female adult and a neonate (G T3A and B; Figure 6.3). The middle-aged woman (G T3A) was seated on a compacted floor with her knees apart and her body oriented to the north. She may have been covered in a shroud, since bits of textile adhered to her bones. Her tomb contained five

vessels, including a blackware stirrup spout vessel (broken in antiquity) in the form of a squash, a blackware spout and handle vessel, and three redware ollas (Appendix 7). In addition, her tomb included two undecorated stone spindle whorls, several copper beads, and a piece of copper wrapped in a deteriorated cotton and camelid textile. A body of a neonate (G T3B) was placed in a niche, cut into the mound, above the woman's left shoulder. The head of the neonate is oriented to the east, and the niche contained no offerings.

Burial 5

Continuing up the path one encounters an unlined tomb (G T5), ninety by forty-five centimeters, that contained the body of a child in a supine position, three to five years of age, whose head was oriented to the southeast. On the child's chest was a beautifully worked seed from the native fruit lucuma (*Pouteria lucuma*), depicting an Inca-style face, carved Janus-like on both sides of the seed. This is a typical Inca-style motif that continues into the Colonial Period (Figure 6.4).

Burial 6

An unlined tomb, approximately the same size as G T5, was placed on the east side of the path. T6 contained the body of an infant, approximately one-to-three years old (Figure 6.3). The body was lying in a supine position with its head, displaying Form B cranial modification, oriented to the southeast. The symmetry of the children's tombs, and their proximity to the path, strongly suggests that the child, G T6, was part of this cemetery, even though the tomb had no burial goods.

The Multiple Burials at the Mound's Summit

An L-shaped area was dug into the mound's summit, leaving a southern and western portion

of the mound intact. This space, measuring 1.90 meters long by 1.80 meters wide, was cleared and leveled, but not plastered, for the interment of three individuals (Figure 6.5).¹ A single row of bricks was placed around the edge to delineate the area to the west and south. The south earthen wall rose some 55 centimeters and a niche was added. The burial area contained the bodies of two adult females and a neonate, G T4 to the east, G T11 to the west, and G T12 in the niche on the south side, respectively. The elderly woman in Tomb 11 is one of the highest-status individuals of the Late Horizon burials at Farfán, based on the number and diversity of her grave goods. She was most likely the principal occupant of this small Inca-period cemetery on Mound G, and the middle-aged woman buried next to her in Tomb 4 may have been her attendant (Figure 6.5).

Tomb 11

The elderly woman who was the principal burial (G T11) was forty or more years old, and suffered from a severe physical handicap, congenital hip dysplasia, which is consistent with a diagnosis of cerebral palsy (Chapter 6B, this volume). As a result, she had limited locomotive capabilities and needed daily assistance. The fact that she reached an age considered to be elderly in Inca times indicates she had some daily care. On each side of her body we uncovered two algarroba wood poles, each a meter in length. These poles did not serve as roof beams for this burial area, because the grave goods on the east side partially covered one of the poles (Figure 6.5). Instead, they may have formed part of a litter used to carry the woman. Although fragments of cloth were found under her body, the evidence for a cloth sling for a litter remains inconclusive.

¹ This is one tomb; however, individuals have separate T numbers which were assigned at the time of excavation.

The elderly woman in Tomb 11 shows evidence of a variety of pre-burial treatments. Although she does not appear to have been wrapped in a shroud, her body had been encased from head to toe with a fine clay cover some 5–7 centimeters thick (Figure 6.6). This clay covering is similar to that described by Donnan from a Moche burial (c. A.D. 300–600) at the site of Dos Cabezas in the lower Jequetepeque Valley (Donnan 2007:72–75, figures 5.8, 5.10, 5.11). Although this burial was not roofed, pieces of *caña brava* (*Gynerium* sp.) near her head may indicate that there was a lean-to built over her upper body. The skull of the woman in G T11 displayed traces of cinnabar, which indicates that her face had been rubbed with this bright red mineral before interment (Figure 6.6).

The elderly woman (G T11) was placed in a supine position, with her head oriented to the south. However, as Andrew Nelson notes, muscles around her hips and knees were shortened, and her knees were habitually flexed, similar to the seated position assumed by the majority of the adults in Late Horizon burials at Farfán (Figure 6.5). Nelson also adds that stress indicators show that she used her arm muscles actively, perhaps as a result of her limited mobility (Chapter 6B, this volume). Oxygen isotope values indicate that she spent her life in the Jequetepeque Valley and her carbon isotope values show she had a high level of maize consumption (Chapter 6B, this volume). Her cranial modification, Form D, is rare at Farfán, and indicates her affiliation with earlier Moche individuals. This cranial form is shared by another high-status elderly female (JO S1) who was buried in the aboveground adobe tomb on the west side of Cemetery J (Chapter 4A, this volume).

The grave goods in Tomb T11 show the greatest diversity of any of the high-status females buried at Farfán. Among these were ceramics, metal objects, and weaving imple-

ments. The tomb contained twenty-seven ceramic vessels, some buried under others, and, therefore, not visible in the tomb drawing (Figure 6.5, Appendix 7, this volume). The fineware vessels were primarily clustered around her head and along her right side. Six of the vessels were jars. One jar had an uncommon surface treatment: fugitive, post-fired black slip lines on a redware vessel (Figure 6.7). This jar and one other are oversized, taller than twenty-five centimeters (Appendix 7, this volume).

Monkey effigy jars are also represented by three of the six jars in her tomb; two are redware and one is reduced blackware. There are several features that distinguish these jars. First, the jars show three-dimensional deck figures, those placed on top of a vessel. Second, two jars are redware, while the majority of vessels with monkey heads at Farfán are blackware (Figure 6.8). Third, several of the jars have a rim profile that is very similar to what Tschauner (2001: 668, figure A.9, shape OXHUGE<=1) has designated as a Chimu-Inka, that is, a Late Horizon, rim form. Fourth, the facial features on the monkeys are distinct from those described for the Jequetepeque monkey-jar types found at Farfán (Appendix 4, this volume). In sum, the distinctive features of these monkey vessels hearken to styles usually observed north of the Jequetepeque Valley, supporting the likely Lambayeque affiliation of the elderly woman.

Over half of the vessels in G T11 are cooking ollas (N=15). Ollas are defined as vessels with a wide mouth opening, a short rim, and a round-to-ovoid body. Other forms include plates (N=4) or bowls (N=2). These three forms are associated with food, either for serving or preparation (Appendix 6, this volume). One of the ollas was decorated using the combined techniques of paddle stamping (*paletteada*) and poorly applied white slip, a characteristic of Late Horizon Lambayeque burials in Cemetery I (Chapter

5A, this volume). Two other ollas are decorated only with white slip.

Several vessels do not conform to the olla definition presented above, and appear to be a new form. Although they have the typical short rim, they have a much larger mouth opening, sixteen to eighteen centimeters, rather than the usual twelve to fourteen centimeters. Additionally, this new olla form exhibits a flattened, ovoid shape. Such ollas also often have incised strap handles, a technique that is common in the Late Horizon Jequetepeque Style (Figure 6.9, Appendix 6). The ceramics in this tomb appear to have a mixture of characteristics, some associated with Late Horizon ceramics of the Jequetepeque Valley, and some affiliated with the Lambayeque region to the north. This tomb also contained a significant number of miniature ollas (N=6), which range from six to eight centimeters in height. Three have the same press-molded design on the vessel's shoulder: geometric motifs alternating with a representation of a lizard (Figure 6.10).

The elderly woman in Tomb 11 is one of a small group of females at Farfán who were buried with rings.² Her six rings are, however, quite different from those found with the other women at the site. The rings consist of either one or two thin strips of copper that had been twisted into a rope-like form. Two rings were found on her fingers, one on her left hand and the other on her right hand (Figures 6.6, 6.11). In addition, round disks of copper were found enclosed in her hands (5.3 by 4.7 centimeters; Figure 6.6), while small pieces of folded copper were placed on her fingers and thorax (3.5 centimeters by 2.4 centimeters). The placement of metal on these body parts is a long-standing

North Coast tradition dating to Moche times, and continued by the Lambayeque culture. Her tomb also contained one silver bead, a feature that she shares with the elderly woman in the Huaca Burial Platform's East Tomb 7 (Chapter 3A, this volume).

The woman in Tomb 11 was also buried with a range of weaving implements and accessories. These consist of six weaving swords of algarroba wood, approximately forty centimeters long, placed above her head, and the remains of a weaving basket found on her left side (Figure 6.5). The latter was in such poor condition that we could only identify two copper needles and some spindle whorls. Despite her immobility, she was, according to Nelson's analysis, able to sit upright (Chapter 6B, this volume). The evidence of active use of arm muscles, coupled with the weaving implements, implies that she had been a weaver.

An interesting arrangement of ceramics and gourds was found next to G T11's lower right calf. These five containers had been placed on their sides, alternating between gourds and ceramic plates. The first is a gourd (Figure 6.12A) that held fish bones belonging to an unidentified river species, while ceramic plate B held maize kernels. C1 is a gourd, inside of which is a ceramic plate, C2, that held seeds of the native fruit *guanabana* (*Annona muricata* or soursop). Ceramic plate D contained maize kernels (Figures 6.5, 6.12).

Her burial contained the greatest number of gourds (N=20) of any burial at Farfán. The gourds varied in size and shape. Although in many cases their fragmentary state prevented measurement, one of the partially intact gourds with a diameter of thirty centimeters had a number of smaller gourds stacked inside. Some of the gourds held animal remains. The gourd next to the woman's (G T11) right shoulder, for instance, contained four llama feet. These may

² Other women with rings are found in Cemetery VI, II T2; Huaca Burial Platform, Center Tombs 2 and 11, and North Tomb 1; and Tomb JO S1 in Cemetery J.

have come from the partial llama found with the woman next to her, G T4 (Figure 6.5). Another gourd held guinea pig bones (*Cavia porcellus*).

Although most of the gourds were undecorated, some examples from Tomb 11 display the finest workmanship in pyro-engraving known from the Late Horizon on the North Coast. Fragments from at least six intricately decorated gourds were identified. All of these gourd vessels have a scalloped rim and a corresponding scalloped lid. One gourd shows a bird design, with a secondary motif of waves and step-frets (Figure 6.13). The second example shows similar elements, without the bird motif, arranged in a different pattern (Figure 6.13 upper left and upper right). Another decorated gourd, while not pyro-engraved, is embellished with a wave design comprised of small *Donax* bivalve shells affixed to its exterior (Figure 6.14).

Tomb 12

Directly above the head of the elderly woman (G T11) is a niche, forty centimeters long and thirty centimeters wide that contained the body of a neonate (Figure 6.5). The body of this c. 9-month-old neonate, with the head oriented to the east, was most likely an offering. The neonate's tomb (G T12) contained three ceramic vessels, two ollas, and a jar, all redware (Figure 6.15). One of these vessels has a rim profile associated with the Late Horizon Lambayeque style (Tschauner 2004:668, figure A9 OSHUge<+1). Folded pieces of copper had been placed on the neonate's thorax and legs.

Tomb 4

Next to the elderly woman (G T11) was the third occupant of this multiple tomb, a middle-aged woman (G T4). She was found in a seated position with her legs bent, but not crossed, and with her body oriented to the northwest (Figure

6.5). This healthy individual was the tallest woman found at Farfán, at 152.8 centimeters. She exhibits musculoskeletal stress markers on her upper body, suggesting that she engaged in strenuous use of her arms (Chapter 6B, this volume). Because she is not associated with any weaving implements, this upper body strength suggests that she may have attended to the elderly invalid woman in G T11. This middle-aged woman's (G T4) carbon isotope value showed an average consumption of protein, while the value for maize ingestion was low. Her oxygen isotope values indicate that she spent some part of the last ten years of her life on the coast, but outside the Jequetepeque Valley. Since her cranial modification, Form C, is a trait characteristic of Lambayeque ethnicity, she may have been from the Lambayeque heartland to the north.

The remains of three llamas were found in direct association with this middle-aged woman (G T4). One of the complete llamas to her right (L1) was a subadult aged between 6 and 9 months, and because of the young age, it was impossible to determine the sex of the animal. In front of the woman's legs was a llama fetus (L2) whose bones had not fully formed, and whose deciduous teeth show no signs of wear. The llama skull (L3) found under the woman's body was that of a young adult, three to four years old, and most likely a female. The four camelid feet found near the shoulder of the elderly woman (G T11) may have been associated with this llama skull (Figure 6.5 and Appendix 3). The offerings with the mid-adult female (G T4) did not display the diversity or richness observed with the principal female burial (G T11). For example there were no metal objects, decorated gourds, or weaving implements. It is possible that the middle-aged woman, like the neonate in G T12, was an offering accompanying the elderly woman. Nevertheless, the middle-aged woman (G T4) is in direct contact with the sacrificed llamas

(Figure 6.5), a trait that only appears with high-status individuals at Farfán.

We excavated nine ceramic vessels in Tomb 4, including *ollas* (N=4), jars (N=3), a jar and handle vessel (N=1), and a stirrup spout vessel (N=1) that had been broken in antiquity as indicated by its occurrence in an undisturbed tomb. Like the ceramic offerings with the elderly woman in Tomb 11, these vessels exhibit a mixture of styles, including local as well as Lambayeque-influenced decoration. The jars are all blackware and two are oversized. The largest jar is decorated with the Late Horizon Jequetepeque Style technique of pattern burnishing in lateral bands that cover the entire body of the vessel (Appendix 7, this volume). Another jar is embellished with a variation of the North Coast Staff God, a standing, front-faced figure wearing a lunate or *tumi*-shaped headdress (Figure 6.16; Mackey 2001; Moore and Mackey 2008:798–800). A three-dimensional monkey head is present on another jar. The monkey's face is similar to those found on vessels with the elderly woman (G T11). The facial characteristics do not fall into Levine's types of monkey faces for Farfán (Figure 6.17 and Appendix 4, this volume). The *ollas* are all redware, and one showed a combination of techniques—paddle stamping (*paletteada*) and poorly applied white slip—associated with Late Horizon Lambayeque ceramics in Cemetery I (Chapter 5A, this volume).

Lucuma seeds were placed around the woman's right side. These were not decorated, but their presence may link her to the child in Tomb 5 (Figure 6.3), located along the pathway, whose tomb also contained a carved lucuma seed.

Summary

The Mound G Cemetery is unique for four reasons. First, this is the smallest cemetery at Farfán. Second, this Late Horizon cemetery is

intrusive into an earlier Lambayeque burial mound. Third, the configuration of burials along a pathway is unusual. Lastly, the burial on the summit honors an elderly invalid woman (G T11) who is accompanied by her attendant (G T4). Her high status is supported by many funerary features including preparation of the body prior to interment and the diversity of offerings. Her face had been rubbed with cinnabar and her body encased with a covering of fine mud, features found with earlier high-status Moche burials. Her tomb contained burial offerings similar to those found with other elite women at Farfán, including copper rings and disks (Table 6.1). She also shared the same rare cranial modification (Form D) as the high-status woman buried in JO S1 in Cemetery J, a cranial modification observed with earlier Moche individuals (Chapter 4A, this volume). Her burial goods differed from other female burials at Farfán in the number of richly decorated gourds. Although many of the individuals in Farfán's cemeteries have vessels with a three-dimensional monkey head, the monkey vessels found with this elderly woman (G T11) are clearly not the same type as the others. These vessels differ in the characteristics of the animal's face and body from those defined by Levine (Appendix 4, this volume) and they display Lambayeque-style rims.

The second female (G T4) in the summit's tomb may have been a retainer of the elderly woman (G T11), given that the latter was an invalid and needed constant care. The burial goods of the middle-aged woman, G T4, were not as varied as those of the elderly woman or of as high a quality (Table 6.1). Her oxygen isotope values (those of G T4) indicate she had spent time outside of the Jequetepeque Valley. This factor combined with her Form C cranial modification, associated with the Lambayeque culture, may signify that she was from the Lambayeque heartland to the north. This woman has partial remains of three llamas

associated with her. The llamas and the female retainer may have been part of an offering to the principal elderly woman. This pattern in Late Horizon Mound G is strikingly similar to North Tomb 1 in the Huaca Burial Platform that contains an elderly woman with a neonate, a younger woman, and three llamas (Chapter 3A and Appendix 3, this volume).

Other burials were placed downslope from the summit along a pathway in roughly two levels; an infant and a child midway and a multiple burial at the bottom. The child (G T5) had one of the most delicate and finely-carved pieces found at Farfán: a lucuma seed carved in the Janus style typical of many Inca ceramic vessels. The possession of the seed ties the child to the female retainer (G T4), who had a circle of lucuma seeds placed on her east side (Table 6.1). The multiple tomb at the foot of the pathway, G T3A and B, mirrors the tomb at the summit because it contains a woman with a neonate in a niche. This woman does not, however, appear to be of high status.

This small intrusive cemetery, placed in an earlier Lambayeque mound, is a unique configuration. It consists of burials along a prepared pathway leading to the principal tomb of a Lambayeque-affiliated female and her retainer. The burial and grave goods illustrate the Inca provincial political strategy of creating strong bonds with both the past and the present. Continuity with the past is shown by the many Moche funerary traits such as a mud casing for the body, the use of lucuma seeds, and the presence of cranial modification Form D. This tomb points to the importance placed on maintenance of strong ties with individuals who continued to identify with the earlier Moche and Lambayeque cultures and with the Lambayeque lords who shared rule with the Inca at Farfán.

Burial	Age	Sex	Pos	Ort	Org	CM	S/M	PC	Cin	Tex	Met	An	Ori	Sh	Wea
G T3A	MA	F	S	N	n/a	n/a	M	5	n/a	3	2, 4	n/a	n/a	0	1
G T3B	NEO	N/A	EX	E	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	0	n/a
G T4	MA	F	S	N	1	C	M	9	n/a	n/a	n/a	2	J	0	n/a
G T5	IN	N/A	EX	SE	1	n/a	S	0	n/a	n/a	n/a	n/a	n/a	0	n/a
G T 6	CH	N/A	EX	SE	n/a	B	S	0	n/a	n/a	n/a	n/a	n/a	0	n/a
G T 11	OA	F	EX	SE	5, 6, 8	D	n/a	27	X	2	1, 3, 4, 5	2, 3	J	0	1, 2, 3, 4
G T12	NEO	N/A	EX	E	n/a	n/a	n/a	3	n/a	n/a	4	n/a	n/a	0	n/a

Table key

Burial: Burial designation number.

Age: NEO=neonate (0–0.9 years), IN=infant (1–2.9 years), CH=child (3–5.9 years), JUV=juvenile (6–11.9 years), AD=adolescent (12–19.9 years), YA=young adult (c. 20–29 years), MA=mid-adult (c. 30–39 years), and OA=old adult (c. 40+ years).

Sex: F=female, M=male, N/A=not available.

Pos: Burial position: S=seated, EX=extended.

Ort: Seated orientation of the body, based on which way pelvis is facing; extended orientation is based on head direction only.

Org: Organics: 1=seed, 2=maize, 3=fruit, 4=fish, 5=gourd, 6=*Nectandra* seed necklace, 7=wooden figurine.

CM: Head modifications A–G (see Nelson, Chapter 2, Figure 2.1, this volume).

S/M: Tomb configuration, S=single, M=multiple individuals.

PC: Quantity of ceramics directly associated with an individual, rather than a communal offering.

Cin: Presence of cinnabar on the bones.

Tex: 1=textile bag, 2=other textiles, 3=shroud.

Met: Presence of metal: 1=discs, 2=beads, 3=rings, 4=folded copper pieces, 5=silver beads, 6=copper spindle, 7=copper tweezers, 8=other silver object, 9=silver-plated copper rattle, 10=copper *tumi*, 11=other copper.

An: Animal remains: 1=feline, 2=llama, 3=guinea pig.

Ori: Individual originally from: J=the Jequetepeque Valley, OC=other coastal valley, or H=the highlands.

Sh: Shell: 1=shell beads, 2=whole spondylus shell, 3=mixed media with other material.

Wea: Weaving equipment: 1=spindle whorl, 2=weaving swords, 3=weaving basket, 4=needles, 5=chalk, 6=unspun wool.

Table 6.1 Mound G burial data.

CHAPTER 6B: THE BIOARCHAEOLOGY OF MOUND G

Andrew J. Nelson

First constructed by the Lambayeque during the earliest occupation of Farfán, Mound G was later used as a cemetery for Lambayeque-affiliated individuals during the Inca occupation of the site (Chapter 6A, this volume). This Late Horizon burial sample is made up of seven primary burials. There were no secondary burials recovered in the excavation of the mound. This chapter will present a summary of the individuals' characteristics in terms of demographic composition, stature, health and disease, cranial modification, and isotopic analysis.

Demographic Composition

The Late Horizon sample from Mound G consists of three adult females (two middle-aged females, (G T3A and G T4), and one elderly female, (G T11), one child (G T6), one infant (G T5), and two neonates (G T3B and G T12); Table 6.2). While a preponderance of females is noted in all cemeteries from Farfán, only Mound G and the primary burials from the Burial Platform are made up exclusively of females. There are no juvenile or adolescent subadults and no young adults in this sample.

Stature, Health and Disease, and Activity Patterns

Stature was estimated for the three adult individuals (Table 6.2), two of whom were classified as being medium statured and one as tall. There were no short individuals. The stature of the tall individual, G T4, is estimated to be 152.8 centimeters, making her the tallest female at the site.

Six of the seven individuals in this sample demonstrate healed periostitis indicating the

presence of a widespread, blood-borne infection that cannot be definitely identified (the lesions are a non-specific indicator of infectious disease); (cf. Larsen 2015:86). These lesions, which occur mostly on the borders of their tibiae, are noted on all three adults, as well as on the two neonates (G T3B and G T12), and on an infant (G T5). The neonate, G T3B, also had a thin layer of disorganized, porous bone on the endocranial surface of its cranium, possibly indicating that the infection manifested as meningitis. The fact that these individuals demonstrate bony responses to these infections suggests that the infectious agent was not extremely virulent, or they would have died before developing the lesions. Furthermore, all except the infant survived the infection, as demonstrated by the healed presentation of the lesions. Unfortunately, without a more specific diagnosis of the cause, it is impossible to speculate whether this represents one or several distinct disease episodes, although the presence of similar presentations on different individuals does suggest a common underlying cause.

The adult female, G T11 (Chapter 6A, this volume, Figure 6.5), presents a striking series of lesions on her legs. The acetabulae on her hips are heavily remodeled along their posterior-superior margins, taking on an elliptical shape, and there is partial fusion of the right iliosacral joint—meaning that she could not rotate her hips. Both femora demonstrate collapse of the femoral neck which has greatly decreased the head/neck angle of the proximal femur. Both femoral heads are flattened and elliptical in shape, like the acetabulae. Both distal femora demonstrate erosive lesions on the lateral condyles indicating that the knees were held habitually in a hyperflexed position (Figure 6.18). This woman's right tibia was heavily remodeled, such that the nutrient foramen had rotated to the lateral surface and it had a well-developed attachment site for the soleus muscle (principal action is extending the foot). The left tibia is of

normal morphology, with squatting facets at the distal end. There are indications that there were healed stress fractures to both distal fibulae. The upper limbs are normal in appearance, with well-developed muscle markings on the right clavicle and both humeri and forearms.

The appearance of the elderly woman's (G T11) hips is suggestive of bilateral developmental dysplasia of the hip (DDH), in which both hips were chronically incompletely dislocated. This condition normally appears early in childhood and has a variety of possible causes, including heritable factors, breech birth positioning, neuromuscular abnormalities, as well as unknown, idiopathic etiologies (Coleman 1978; Shapiro 2001:193–194). Unfortunately, the clinical literature has little information on the expression of this condition in the adult, as it is normally treated at a very young age in modern populations. However, isolated reports indicate that the condition can go undetected into mid-adult years, with affected individuals experiencing hip pain, lower back pain, and osteoarthritis in later years (Fairbank 1930). The elliptical shape of the acetabulae and the femoral heads suggests an interlocking joint position that would have made movement of the hip very difficult, with both hips being predominantly in a flexed position. The lesions on the distal femora suggest that the knees were also habitually flexed, as was the left ankle. These chronic flexed positions are consistent with joint contracture, an abnormal contraction of muscles around the joints leading to chronic joint flexion.

The association of bilateral developmental dysplasia of the hip with joint contracture is consistent with a diagnosis of cerebral palsy for this elderly woman (G T11). Cerebral palsy is a neuromuscular disorder caused by a lesion in the brain that can be produced by a variety of congenital, neonatal, or postnatal factors (Miller 2005:5). While a definitive diagnosis of cerebral

palsy requires the associated brain lesion, and is therefore difficult to make on the basis of osteological remains alone, it does provide a model for what life might have been like for this woman. The locomotor capabilities of individuals with dysplastic hips and joint contracture range from none to those who are able to walk with an unsteady, waddling gait (Shapiro 2001: 161).

Individuals with cerebral palsy require a great deal of family care with hygiene, provisioning, and daily activities (Miller 2005:4–5). The joint surfaces of this particular elderly woman (G T11) suggest that she had been somewhat mobile in the past, but the interlocking hip joints and the lesions on the knees suggest that she was probably not ambulatory at the time of her death, with her hips and knees permanently flexed (see Figure 6.19 for a possible configuration of her legs in life). The musculo-skeletal stress markers on her arms and arthritic degeneration of her left elbow and shoulder indicate that she did use her arm muscles actively, perhaps to assist in shuffling across the ground. The stress fractures of her fibulae are probably related to unusual distribution of weight as she tried to move around.

It is important to note that this elderly woman (G T11) was buried in an extended position, despite the fact that in life she would have habitually approximated a flexed position. Since hip dysplasia and joint contracture are typically associated with permanent tightening of the muscles around the hip (Shapiro 2001: 196), the tendons at those joints would have had to have been cut in order to achieve extension (although no cut marks were observed on the bones).

Compared to many of the other individuals from Farfán, these individuals from Mound G enjoyed quite good spinal health. There are minor degenerative changes in the lower spine

for all three adult females and no incidences of vertebral collapse. These adult females also enjoyed relatively good dental health. By mid-adulthood, many others from Farfán suffered from tooth loss, cavities, and multiple abscesses. Only the elderly woman (G T11) had an abscess. She and the middle-aged female (G T3A) had lost teeth. Both adult women on the summit (G T4 and G T11) had periodontal disease.

The activity patterns for the elderly female (G T11) are discussed above, as they were relevant to her hip dysplasia. The other two middle-aged females (G T3A and G T4), had squatting facets, indicating that they habitually adopted a squatting posture. However, only G T4 had any other notable musculo-skeletal stress markers (MSMs). This woman had well-developed MSMs on the upper and lower bones of both arms, indicating that she engaged in repetitive, strenuous use of those arms. She also had well-developed MSMs for her hip extensors. This is likely related to her squatting facets. The only indications of trauma observable in this sample are the healed stress fractures of the distal fibulae in the elderly female (G T11) discussed earlier.

Cranial Modification

Only three of the individuals from this sample could be assessed for their form of cranial modification. The mid-adult female (G T4) demonstrates Form C modification, a form that is typically associated with Lambayeque contexts in the Jequetepeque Valley (Figure 6.20; Nelson, Lichtenfeld, Conlogue, Toyne, and Pool 2000; Nelson, Nelson, Castillo, and Mackey 2000). Only seven other individuals from Late Horizon contexts at Farfán demonstrate this form of modification. The child (G T6) demonstrates Form B modification, the globular modification form that is very common at Farfán. The elderly female (G T11) demonstrates Form D modification, a fronto-occipital oblique form

that is quite rare at Farfán and is associated with earlier Moche culture (Figure 6.21). The only other individual with this form of modification was found next to Cemetery J, individual JO S1, also an elderly female.

Isotopes

Two individuals from Mound G were available for isotopic analysis: the middle-aged female (G T4) and elderly woman (G T11). Oxygen isotope values are available from teeth and bones of both individuals. The oxygen $\delta^{18}\text{O}$ values for the mid-adult female (G T4) for bone and dental enamel are 17.5 and 16.7 respectively. The tooth value is above the 15–17 local range, indicating that this mid-adult female (G T4) grew up elsewhere on the coast. However, the bone value of 16.7 is above that range, indicating that she spent some part of the last ten years in this area. The elderly female's (G T11) $\delta^{18}\text{O}$ values for dental enamel and bone are 16.6 and 16.4 respectively, both falling within the 15–17 local range, indicating that this elderly female grew up and lived locally.

The carbon and nitrogen isotope values for the mid-adult female (G T4) are $\delta^{13}\text{C} = -12.3$ and $\delta^{15}\text{N} = 10.4$. This carbon value is the most negative value recorded at the site, indicating that she had the lowest level of maize consumption (but still in the C^4 plant range). Her nitrogen value is close to the mean (mean = 10.9), indicating a fairly typical level of protein consumption. The elderly female (G T11) had carbon and nitrogen isotope values of $\delta^{13}\text{C} = -10.2$ and $\delta^{15}\text{N} = 12.1$. The carbon value is close to the overall mean for the site (mean = -10.8), indicating a fairly typical level of maize consumption. The nitrogen value is somewhat higher than the overall mean (mean = 10.9), indicating that the elderly female (G T11) had an elevated level of protein consumption. However, the value is not extreme.

Summary

The sample of individuals from Mound G cemetery is composed of seven individuals, three adults and four subadults. All sexable individuals were female. Individual G T4 is the tallest female from Farfán with a stature of 152.8 centimeters. Five of the seven individuals from this cemetery demonstrate lesions that indicate the presence of a blood-borne infection. Unfortunately, the cause of the infection is unknown, but it does appear to have been chronic and attacked all age groups.

The elderly woman (G T11) has a series of traits indicating developmental dysplasia of the hip, possibly due to a neuromuscular condition such as cerebral palsy. Again, a specific diagnosis cannot be made, but she was probably non-ambulatory, and would have required a great deal of care and support. The other two adults (G T3A and G T4) adopted a habitual squatting posture and the tall middle-aged woman, G T4, engaged in an activity that involved strenuous and repetitive use of the muscles of her upper limbs. Two of the females from this cemetery (G T4 and G T11) demonstrated forms of cranial modification (Forms C and D, respectively) that are rare at Farfán. Finally, the two individuals sampled for isotopic analysis show some dietary variability and the mid-adult woman (G T4) probably spent some time in the last ten years of her life in another coastal valley.

The fact that the elderly woman (G T11) was so highly revered in death suggests that she was highly regarded in life; in fact hers is one of the highest-status burials at Farfán. However, she clearly suffered from a debilitating illness that created a physical deformity and likely caused pain and other coping difficulties in life. Thus, it would appear that these two realities—high status and physical deformity/difficulty—were not incompatible in the mindset of the occupants of Farfán. This is

consistent with ceramic representations and other burials on the North Coast (e.g. Merbs and Cordy-Collins 2011).

Mound G is a construction dating to the Lambayeque occupation of Farfán, although the burials in this small cemetery were intrusive and date to the Late Horizon. Many of the ceramics found in these tombs indicate some continuity with Lambayeque ethnicity, as does the cranial modification of the mid-adult woman (G T4). However, the child (G T6) is not modified in this fashion, nor is the high-status elderly woman (G T11). The latter demonstrates a form of modification associated with earlier Moche culture, Form D, only noted in one other elderly woman at Farfán (JO S1). This form of modification is not consistent with cradle-boarding, as the board on the occiput is very oblique to the plane on which the child would have lain, as opposed to being perpendicular to it (see Form D in Chapter 2, this volume, Figure 2.2). Thus, this could not be a Lambayeque, Form C, modification “gone wrong”. The rarity of this form suggests a motivation other than ethnicity or status (as not all high-status individuals at Farfán expressed this form). The choice of form must have come before any knowledge of the physical manifestations of this individual’s disease.

<i>Individual</i>	<i>Age/Sex^a</i>	<i>Stature Estimate</i>	<i>Health and Other Disease Observations</i>	<i>Isotope Values^b</i>	<i>Cranial Modification</i>
G T3A	Mid-adult female (30–40 years)	Medium (143.8 cm)	<ul style="list-style-type: none"> • healed periosteal reaction on anterior tibiae • slight degenerative changes to lower lumbar vertebrae • good dental health, although erosion of right TMJ 	n/a	n/a
G T3B	Neonate (3–9 months)	n/a	<ul style="list-style-type: none"> • endocranial periostitis • periostitis on anterior tibiae, femoral and humeral shafts 	n/a	n/a
G T4	Mid-adult female (30–40 years)	Tall (152.8 cm)	<ul style="list-style-type: none"> • healed periosteal reaction on anterior tibiae • minor degenerative changes of knees • minor osteophytes on lumbar and lower thoracic spine • moderate dental health 	$\delta^{18}\text{Op}$ tooth=17.5 $\delta^{18}\text{Op}$ bone=16.7 $\delta^{13}\text{C}$ =-12.3 $\delta^{15}\text{N}$ =10.4	Form C ^c (CI=93.3) ^d
G T5	Infant (1–3 years)	n/a	<ul style="list-style-type: none"> • periosteal reaction on anterior tibiae 	n/a	n/a
G T6	Child (3–5 years)	n/a	n/a	n/a	Form B (CI=n/a)
G T11	Old adult female (40+ years)	Medium (145.9 cm)	<ul style="list-style-type: none"> • congenital hip dysplasia and resultant immobility • healed periosteal reaction on anterior tibiae • mild lumbar and thoracic degeneration • degenerative changes of the left shoulder and elbow • moderate dental health • possible healed fractures to the distal end of the right and left fibulae 	$\delta^{18}\text{Op}$ tooth=16.6 $\delta^{18}\text{Op}$ bone=16.4 $\delta^{13}\text{C}$ =-10.2 $\delta^{15}\text{N}$ =12.1	Form D (CI=88.9)
G T12	Neonate (c. 9 months)	n/a	<ul style="list-style-type: none"> • healed periosteal reaction on anterior tibiae 	n/a	n/a

Notes:

a Unsexable subadult individuals do not have a sex assigned.

b $\delta^{18}\text{Op}$ =oxygen, $\delta^{13}\text{C}$ =carbon, $\delta^{15}\text{N}$ =nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

c For definitions of cranial modifications see Nelson, Chapter 2, this volume, Figure 2.1.

d CI=cranial index.

Table 6.2: Mound G Burial Data.

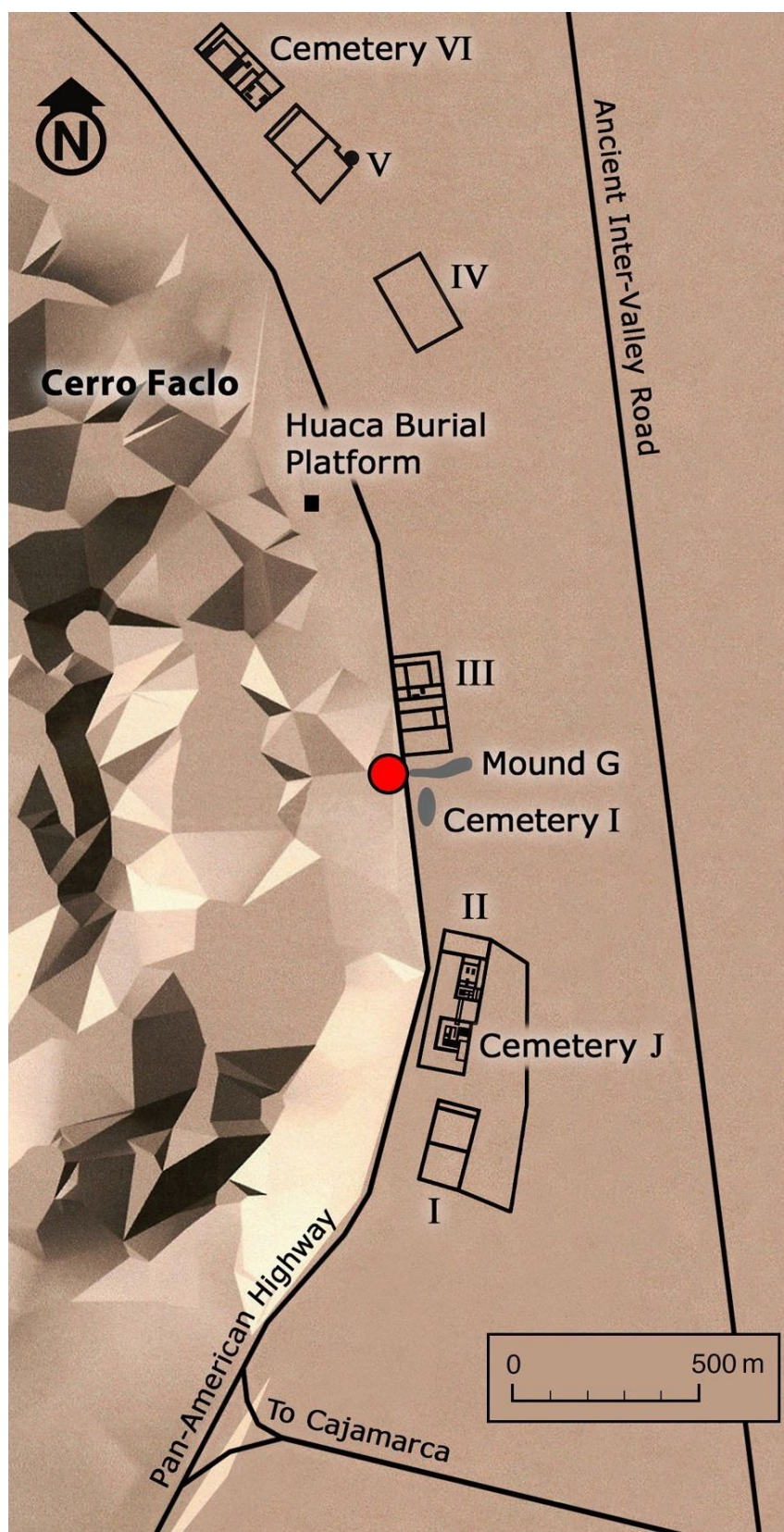
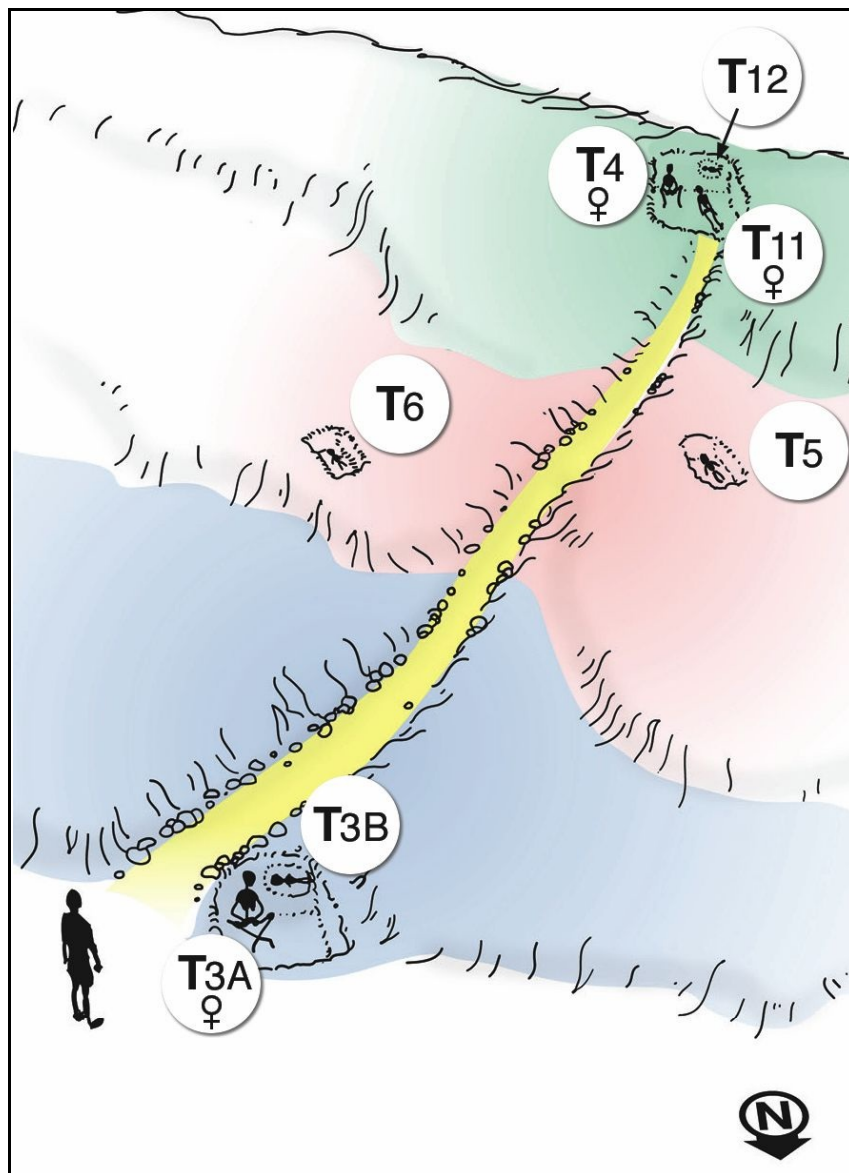


Figure 6.1. Overview of Farfán's compounds, showing the location of Mound G.

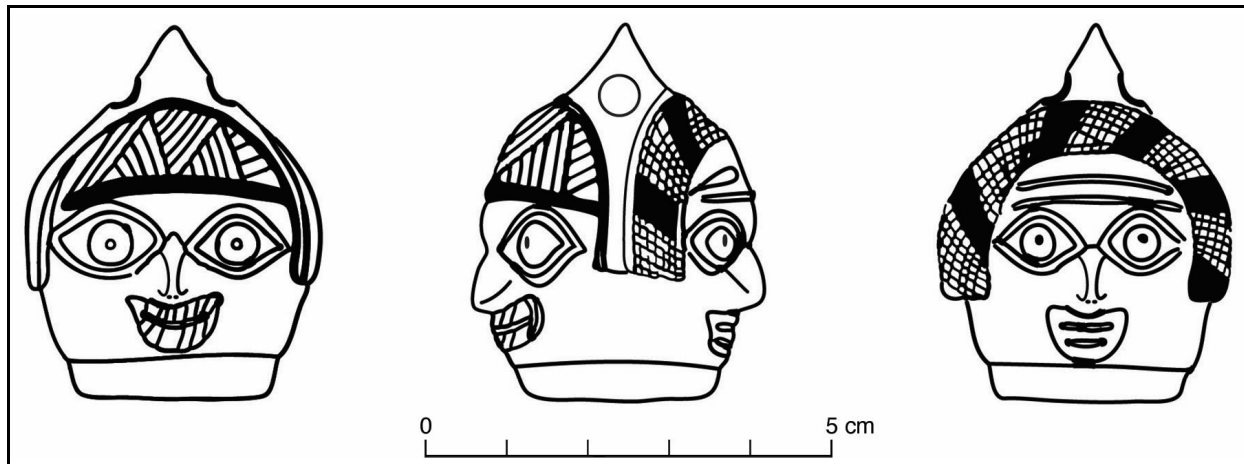


Figure 6.2. View of Mound G indicating the pathway on the north face to the summit where the principal tomb is located. The earthen mound is 190 meters long and 3 meters high.



6.3. Drawing of burials on either side of the pathway leading to the summit of Mound G.

Note: Primary tombs are designated with a T.



Figures 6.4. Perforated carved lucuma seed in the Janus style, Mound G Tomb 5. The headdresses and faces on each side of the seed exhibit different characteristics.

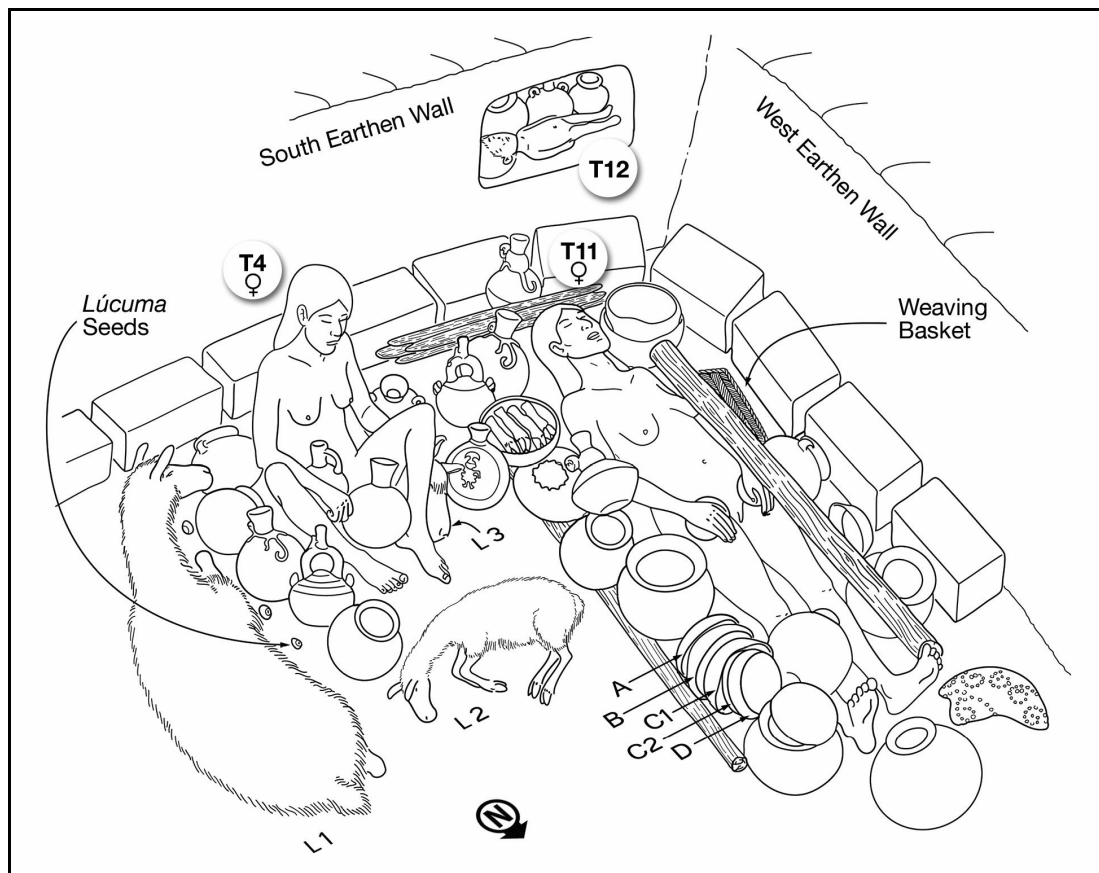


Figure 6.5. Drawing of the principal burials on the mound's summit. Not all the offerings are shown, as some are located under other remains. Tomb size is 1.90 meters by 1.80 meters.



Figures 6.6. The insert shows the traces of mud and cinnabar on the elderly woman's face. The positions of her rings and copper discs are indicated, Mound G Tomb 11.



Figure 6.7. An unusual redware jar with black post-fired paint applied to the body, Mound G Tomb 11. Height: 28 centimeters.



Figure 6.8. Monkey-style blackware vessel found in Mound G Tomb 11 that shows Lambayeque rather than Farfán characteristics. Height: 21 centimeters.



Figure 6.9. New olla form that has a short round rim, a wide mouth opening, and a flattened ovoid body with an incised handle, Mound G Tomb 11. Height: 11 centimeters.



Figure 6.10. Miniature redware vessel with a press-molded design showing geometric motifs and a lizard, Mount G Tomb 11. Height: 7 centimeters.

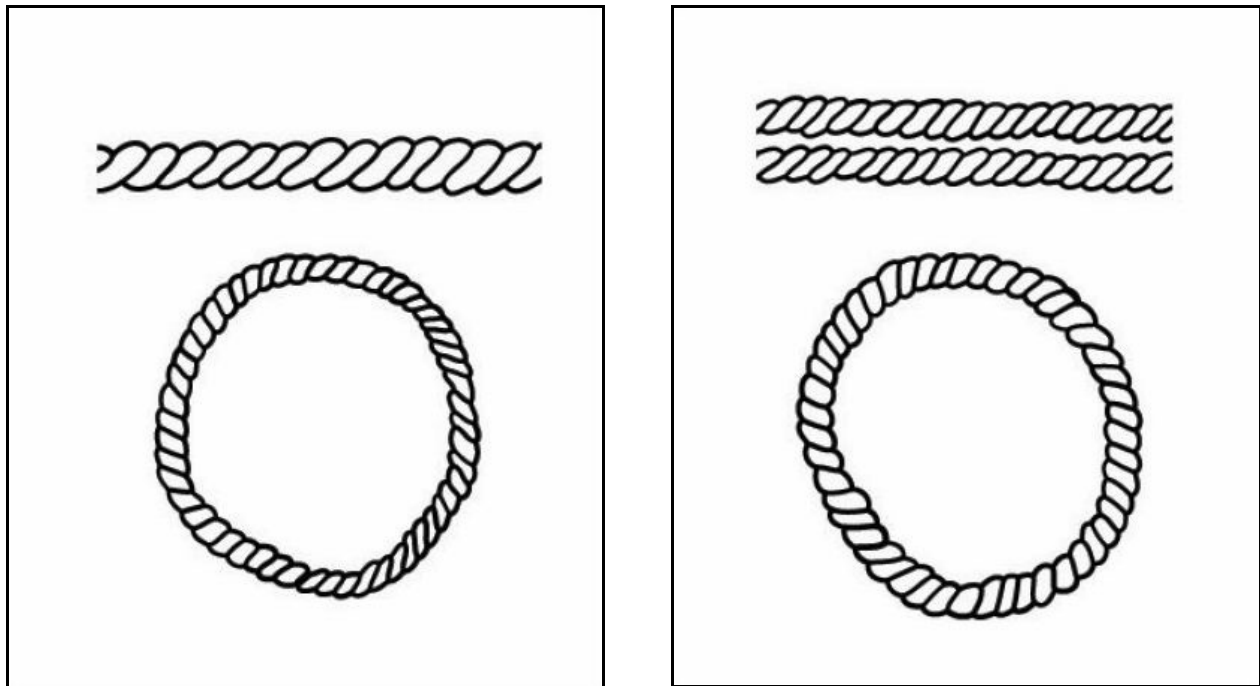


Figure 6.11. These examples show that the rings are made of twisted copper in either single three millimeter (A) or double five millimeter width bands, Mound G Tomb 11.

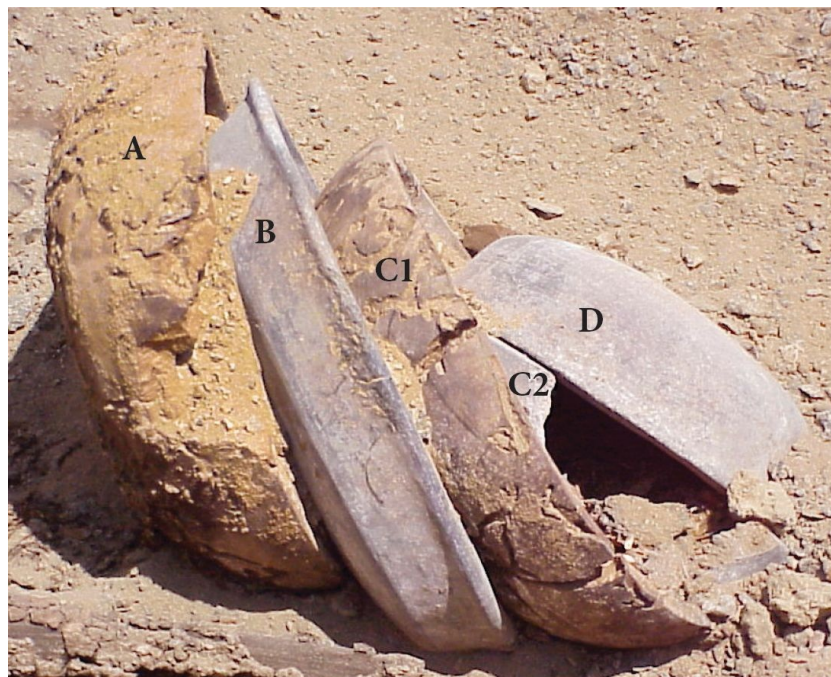


Figure 6.12. (A) Gourd bowl that held fish bones of an unidentified river species; (B) a ceramic plate that held maize kernels; (C1) a gourd, inside of which is a ceramic plate (C2) that held seeds of the native fruit guanabana (*Annona muricata*); (D) Ceramic plate that contained maize kernels, Mound G Tomb 11.

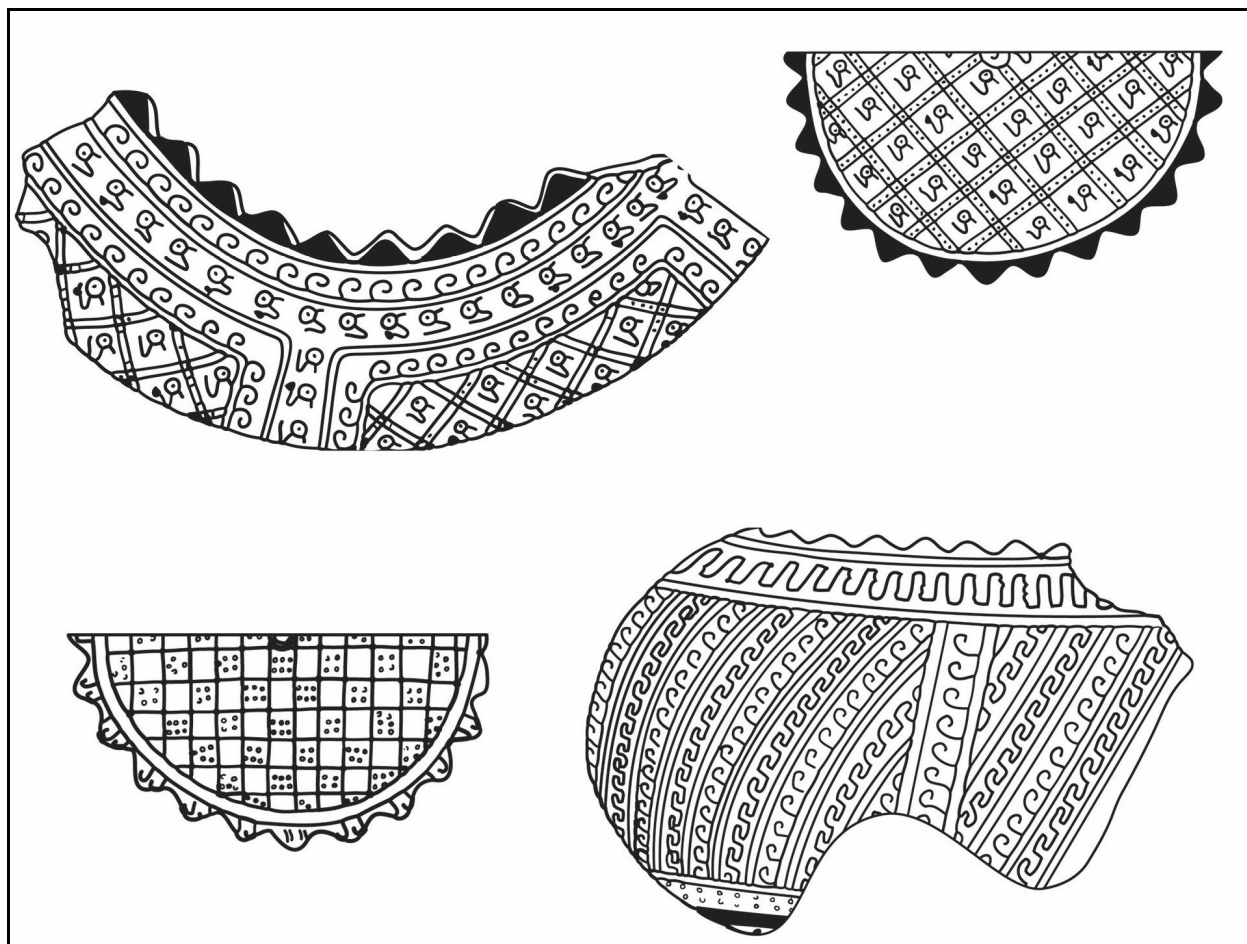


Figure 6.13. Fragments of two of the intricately-carved, pyro-engraved gourds with their associated lids, Mound G Tomb 11.



Figure 6.14. Gourd fragment with a wave motif made of Donax shells affixed to the gourd's exterior, Mound G Tomb 11.



Figure 6.15. Crew member Pedro Ibarrola excavating the burial of a neonate (Tomb 12), showing two of the three pots found in the niche above the elderly woman in Tomb 11.



Figure 6.16. Blackware jar that depicts a variation of the North Coast Staff God wearing a tunic and a tumi-shaped headdress, Mound G Tomb 4. Height: 23.8 centimeters.



*Figure 6.17. Blackware monkey-style jar whose facial characteristics, as seen in the inset, differ from the majority of vessels of this style found at Farfán, Mound G Tomb 4.
Height: 25 centimeters high.*



Figure 6.18. Femora of G T11 show shortening of the femoral necks and erosive lesions on the distal lateral condyles.

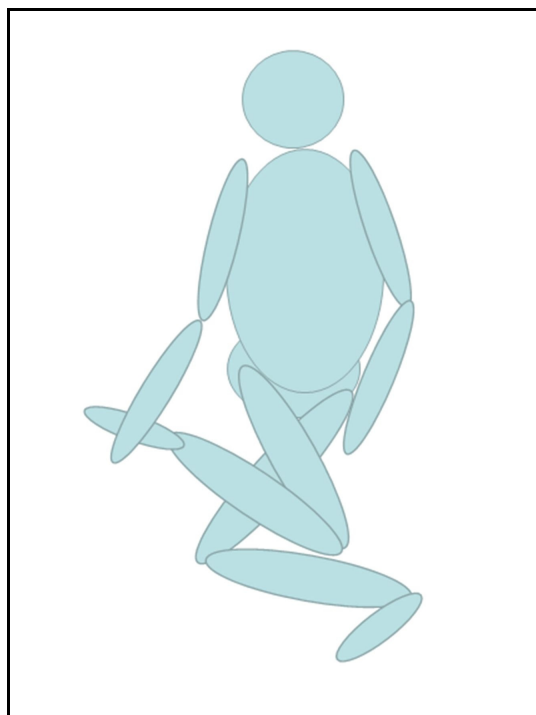


Figure 6.19 Possible configuration of G T11's legs in life showing the flexion of the hips, knees and left ankle.

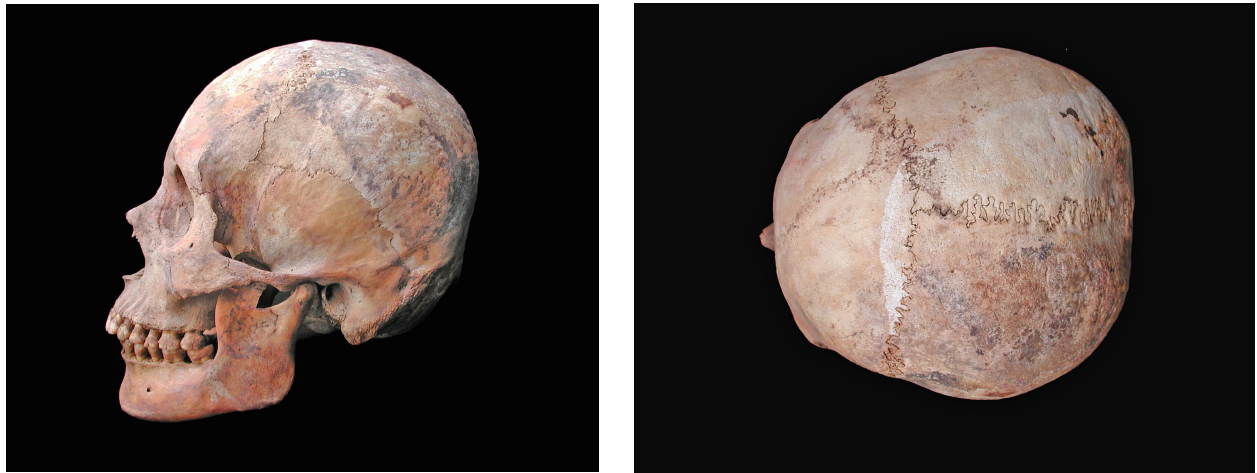


Figure 6.20. Note flattening on the occiput of G T4 with a slightly bilobate appearance from above, typical of the Form C, Lambayeque form skulls.



Figure 6.21. Skull of G T11. Note the fronto-occipital oblique cranial Form D, which is associated with the earlier Moche culture.

CHAPTER 7

THE COMPOUND VI CEMETERY: BURIALS OF FARFÁN'S ADMINISTRATORS

Carol J. Mackey and Andrew J. Nelson

Introduction

During the Inca occupation, Compound VI, the northernmost compound at Farfán, was significantly modified to include rooms, patios, and a burial facility, the Compound VI Cemetery (Figures 7.1, 7.2). With only eleven interments, the burials represent a subset of individuals who had lived and worked within the compound. The burials contained fine ceramics in the Late Horizon Jequetepeque Style, as well as jewelry and metal, attesting to the occupants' status. Part A of this chapter will present an overview of the cemetery, highlighting specific interments.

Since these individuals were most likely associated with the administration of the center, the demographic composition of the cemetery differs from others at Farfán, having more males than females. The individuals from this cemetery appear to belong to a fairly homogeneous group, sharing features that include activity patterns, the lack of infectious diseases, and a common diet. Part B will present the bioarchaeological evidence arranged by biological categories.

CHAPTER 7A: TOMBS AND BURIAL GOODS

Carol J. Mackey

Architectural Features of Compound VI

Compound VI, like Compound II (Cemetery J), displayed extensive remodeling during the Inca occupation (Figure 7.1). The majority of the architectural modifications in Compound VI

were aimed at expanding quarters for the administrators who governed Farfán (Mackey 2004, 2010:228), as well as adding ceremonial and mortuary facilities (Mackey 2004, 2010:228, 248–249, 257). Based on their size, construction, and architectural detail, three types of residences have been identified in Compound VI: Types A, B, and C (Mackey 2010:228–237). Residence Types A and B are both found inside the walls of Compound VI and are constructed of adobe brick. The Type A residence is the largest and most complex, while Type B residences consist of only two rooms. Type C residences are the only ones found outside of the compound, are generally communal, built of tapia and/or adobe brick, and abut the compound's outer western wall.

The large Type A Residence was built anew, whereas Type B Residences are remodeled from earlier Chimu structures, generally storerooms. Type C Residences are also built anew, but use different construction materials and a different configuration. In general, they do not adhere to Inca architectural cannons, but two features are noteworthy. First, the Type A and C residences contain built-in beds, a feature noted at the Inca center of Tambo Colorado on the South Coast (Morris 2004:314–317). Secondly, the small plaza at Farfán, associated with the Type B residences, contains an *ushnu*, a platform used for both civic and ceremonial functions. These structures are often features of Inca provincial administrative centers (Figure 7.1; Hyslop

1990:69–101; Mackey 2006:321, 2010:343; Staller 2008).

Spanning the northern portion of Compound VI and the adjacent Annex, the Inca built two earthen mounds intended for mortuary use: the Annex Mound to the West and Compound VI Cemetery to the East (Figure 7.1). The Annex Mound was constructed in the northern portion of the Annex. This low, unfaced earthen mound measured some 25 meters long and 16 meters wide. Although bones and ceramics were found on the surface, the Annex Mound has been so heavily looted that no intact burials were recovered within it. Since it abutted the Type C residences, it is likely that this cemetery was intended for the inhabitants of the Annex.

The Compound VI Cemetery

The Compound VI Cemetery was constructed just to the north of the main plaza. This unfaced, earthen mound utilized pre-existing walls built by the Chimú: Wall A of the main plaza and Wall B, the original exterior wall of the compound (Figure 7.2). The complete Compound VI Cemetery mound measured 30 meters in length by 15 meters in width. The burial area itself measures 8.5 meters in length by 7.5 meters in width. Its height varied from 2 to under 1 meter because of the terraced nature of its eastern portion (Figure 7.2).

The construction of the Compound VI Cemetery entailed a major earth moving project. Earth was deposited between pre-existing Wall A and Wall B forming a 30 by 15 meter solid mound (Figure 7.2). In addition, the area surrounding the cemetery was remodeled, a task involving several construction episodes and a large investment of labor. An addition to the compound, north of Wall B, beyond the Cemetery VI mound, extended the entire compound's length by 23 meters (Figure 7.1). The construction of this northern extension rendered the

original Chimú principal entry unusable, and the Inca built a new, pilastered entry on the eastern perimeter wall. Subfloor offerings of spondylus shell and guinea pig (*Cavia porcellus*), similar to those found in the newly constructed residences within the compound (Types A and B residences), were placed on either side of the new entry (Mackey 2006:331).

The Compound VI Cemetery had two areas: the first is an elevated area with an earthen floor that was used for food and drink preparation, and the second is the cemetery (Figure 7.2). The elevated area was the largest and included a hearth and six *in situ* vessels or tinajas embedded in the earth. The tinajas, each with a diameter of over forty centimeters, were most likely used to hold maize beer (chicha). The ashes within the hearth contained burnt maize kernels and fish bones, as well as sherds of ceramic cooking vessels or ollas. Given its location, size, and food service capacity, this food preparation area was well suited to serve both the Annex Mound and the Compound VI Cemetery (Figure 7.1).

The Burials Within the Compound VI Cemetery

Only a small portion of the Compound VI Cemetery mound contained burials. This area comprised the lower portion of the eastern part of the mound, an area 8.5 meters in length by 7.5 meters in width. The cemetery slopes toward its eastern end due to the fact that it was constructed on three levels or terraces (Figure 7.2). Excavations revealed a total of eleven individuals placed in three levels, with four in each of the two top levels and three in the lowest.

It is obvious that, like the other cemeteries at Farfán, this facility was well planned. For example, the horizontal distance between each tomb was fairly consistent, especially on the two upper levels, where it ranged from thirty to forty

centimeters (Figure 7.2). The alignment in each row varied only slightly; however, one individual on the bottom level (III T2) was placed in the forefront of his row, at least thirty centimeters in front of the other two burials. This is reminiscent of Cemetery J, which also has several individuals placed in a forward position (Chapter 4A, this volume).

The height of the levels in the cemetery was relatively consistent—the top two levels were each 1.5 meters high; the lowest level measured 2 meters; and each level included a walkway some 50 to 70 centimeters wide. In each of the levels of the Compound VI Cemetery, the interred individuals face east. Once the bodies were in place, grave goods were arranged on either side of the legs or on an earthen ledge at shoulder height. These individuals presumably died of natural causes; there is no indication that they were sacrificed. Like Cemetery J (Chapter 4A, this volume), some amount of time may have lapsed until all the bodies were placed in their respective levels, because the bones of several individuals show evidence of having been exposed to the elements. It is also possible that mortuary rituals took place during the time that the bodies were exposed.

The Tombs and Grave Goods

The Tombs

Although this is a sample of only eleven individuals, all ages and both sexes are represented, with adults and older adults comprising just over half the sample (Table 7.1). There appears to have been a preferential order in the placement of the bodies within the levels. For example, females are primarily clustered on the south side, while males are found to the north (Figure 7.2).

This was a generally healthy group of people with little indication of stress, anemia, or infec-

tious disease (Chapter 7B, this volume). In contrast with Cemetery J and Cemetery I (Chapters 4A and 5A, this volume), there is no evidence of spatial grouping by cranial type. Form A (unmodified) and Form B (modified frontal-occipital), the most common types of modification at Farfán, predominate in the Compound VI Cemetery. It is interesting to note that the person at the forefront of Level III has a Form C cranial modification, common to people affiliated with the Lambayeque ethnic group. Oxygen isotope values (Chapter 7B, this volume) for this male indicate that he was not local to the Jequetepeque Valley. His central position and Lambayeque cranial modification may indicate an effort to honor an individual from outside the valley (Figure 7.2).

All of the bodies in this cemetery were single interments and, except for a child in Level 1 (I T4), were placed in a seated position with the knees apart (Figure 7.2). The orientation of the bodies, as indicated by the placement of the pelvis, was generally to the east; however, some individuals show a slight inclination either to the northeast or southeast. Fragments of textiles adhered to the bones, indicating that the bodies were wrapped in shrouds. One tomb of an infant (I T2) had cloth adhering to a ceramic vessel, suggesting that it had been placed next to the body and then both had been wrapped in the shroud.

Grave Goods

With one exception, all of the burials in the Compound VI Cemetery contained between one and six ceramic vessels. One burial, that of a four-year-old child (I T1), did not have pottery vessels, but did include shell beads scattered around the body, possibly the remains of a necklace. In the tombs, the grave goods were generally placed around the shoulders and at either side of the legs. The most common vessels were cooking ollas (Appendix 6, this volume);

most were hearth blackened on the sides and bottoms, indicating use over a fire. However, no visible food residues were apparent in the interiors.

All of the ollas in this cemetery are redware, rather than the reduced blackware common in the other cemeteries of Farfán. Indeed, all the ceramics found with the older woman in Level II T2, for instance, were redware. The emphasis on redware ceramics in the Compound VI Cemetery may indicate its position in the chronological sequence—*i.e.* the Inca-influenced redwares allow us to infer that this cemetery is later than other cemeteries at Farfán—or points to group affiliation of the people buried here (Appendix 6, this volume).

The second most common ceramic form in the Compound VI Cemetery is a blackware jar with a three-dimensional monkey head on the vessel's shoulder. In each row of the cemetery one or two individuals have a jar with a monkey motif (in Level I: Tombs 2 and 3; in Level II: Tomb 3; and in Level III: Tombs 1 and 2). The monkey head vessels have been analyzed to determine their common features and placed into types (Appendix 4, this volume). Monkey vessels Types A and B predominate in the Compound VI Cemetery and are also common to the Huaca Burial Platform. Another fineware form found in this cemetery is a Hybrid style face-neck jar found with a late adolescent male (I T3). Jars with face-necks and wide strap handles have also been recorded in Cemetery I and in the Huaca Burial Platform (Appendix 6, volume).

Several of the tombs in the Compound VI Cemetery contained copper. By far the richest tomb in the cemetery is that of an elderly female (II T2). Her tomb contained copper rings and necklaces of copper beads. Only one tomb contained animal remains: the burial in Level I of a three-year-old child (I T4; Figure 7.2). A complete skeleton of an adult cat of unidentified

species was buried with the child, as well as four ceramic vessels (Figure 7.2). This is the only feline recovered at Farfán. Other than spindle whorls, no weaving or spinning equipment was found in the Compound VI Cemetery. No food remains were found in any of the tombs.

Examples of Individual Tombs

Level I, Tomb 3

This tomb contained the seated body of a late adolescent male, shown during excavation, along with a drawing of the skeleton *in situ* (Figures 7.3, 7.4). A Hybrid face-neck jar with a wide strap handle was placed to his right (Figure 7.5). The features of the face on this spout-and-handle vessel are typical of the Hybrid-Inca style. Three vessels were on his left side, one of which is a polished blackware incurving bowl (Figure 7.6). This vessel form, found at Chan Chan in late Chimú contexts, continued in use into the Inca period, but is the only vessel of this type that has been found at Farfán. Also included with the vessels on the left side of his body was a jar with a three-dimensional monkey head, a form common in other Farfán cemeteries (Appendix 4, this volume). A variety of non-ceramic objects were recovered from this tomb, including four copper discs, over sixty copper beads, and some thirty shell beads of various sizes. The beads were found on the floor of the tomb in and around the body, and may have formed part of a necklace (Figure 7.7).

Level II, Tomb 2

The elderly woman in this tomb (II T2) was placed in a seated position. Her arms were bent at the elbows and the right arm was extended away from the body (Figures 7.8, 7.9). Her tomb included six vessels, more than with any other individual in this cemetery (Appendix 6, this volume). The vessels were placed on her left

side, at floor level, and on a ledge. A redware Hybrid face-neck jar portrays a man carrying an animal on his shoulders (Figure 7.10). Although the animal figure is broken, it was most likely a deer, which is a traditional North Coast motif in use since the Cupisnique Phase of the Early Horizon (c. 900 B.C.). A second redware jar shows an image of the Moon Animal wearing a crescent shaped headdress (Figure 7.11). This is a traditional North Coast motif widely found on Moche vessels (c. A.D. 200–800; Bruhns 1976; Mackey and Vogel 2001).

The elderly woman's tomb (II T2) included a rich array of non-ceramic objects, including spindle whorls and three copper rings. She is one of the few females outside of the Huaca Burial Platform to have been buried with rings. The rings are very similar in width and size, although their repoussé decorations differ (the widths vary from 1.1 to 2.1 centimeters, while the diameters are approximately 2 centimeters). The design on one of the rings (Figure 7.12) shows a three-pronged object generally thought to represent a spondylus shell. The tomb also contained the remains of several necklaces made of copper and shell beads (Figure 7.13).

Level II, Tomb 3

To the north of the elderly female is the interment of an adult male over 40 years of age (Figures 7.14, 7.15). There were three ceramic vessels in his tomb; two redware ollas placed to his left and the blackware jar to his right (Figure 7.16). The blackware jar has a three-dimensional monkey head. Monkey vessels found in this tomb are similar in style to others within this cemetery and the site as a whole, and cross-date this tomb with the other burials (Appendix 4, this volume). Patches of plain-weave cotton textile adhered to the cranium of the man, showing that he had been wrapped in a shroud. Included in this tomb was a copper spindle whorl suggesting that men as well as women spun (Figure 7.17). There were

also folded copper fragments that had once been tied with yarn, a practice common on the North Coast since the Lambayeque culture. Llama bones were found near his feet.

Level III, Tomb 2

This tomb contained the body of a seated, middle-aged male (Figure 7.18). His ceramic offerings included three vessels. To his right is a blackware monkey jar and a redware olla. Positioned over his crossed ankles is another redware olla with a press-molded circle-and-dot design on the shoulder (Figure 7.19). Soot on the exteriors of the two redware ollas showed that they had been used over a fire. The larger-than-usual monkey vessel measured some 25 centimeters in height. Despite the vessel's size, the face of the monkey falls into Levine's Type B which is common to Farfán (Appendix 4, this volume). The individual in this tomb had been buried with several items of copper and shell (Figures 7.20, 7.21). A string of copper and shell beads (11.3 centimeters in length) and a shell ornament with a green stone inlay (2.2 centimeters wide) were found with his body, as were copper tweezers (3.8 centimeters long by 1.5 centimeters wide). He was the only person in the Compound VI Cemetery who showed a bio-cultural affiliation with the ethnic Lambayeque, as suggested by his Form C head modification. It is notable that the circle-and-dot design on the redware olla was also a motif found in earlier Lambayeque tombs (Mackey 2011 [2016]: 160–161).

Summary

The amount of planning and labor investment in the Compound VI Cemetery attests to its importance. The compound was altered to provide a venue for mortuary rituals. It was lengthened, earth was brought in to create the cemetery mound, and a large area atop the mound was designated for drink and food prepa-

ration. A section of the eastern portion of the mound was used for interments in three distinct levels, suggesting that other burials could have been placed in the unused portion. The eleven interments, most likely representing a small portion of the population, were selected for burial in this cemetery (Table 7.1). Planning is evident in the placement of the bodies within the cemetery; females are primarily clustered on the south side, while males are found in the northern side of the cemetery. The placement of a male with a Lambayeque (Form C) cranial modification in the forefront of Level III was perhaps to grant him special status and honor.

The evidence from the interments supports the supposition that individuals buried here may have been mid-level officials and their families who resided in Compound VI (Type B Residences). The cemetery is notable for the high percentage of mature adults it contains and the low number of children (Table 7.1). These individuals were generally in good physical health, and showed few signs of stress, although one male (II T4) had been very ill before his death. Based on cranial modification types and isotopic analysis, this cemetery appears to be composed primarily of inhabitants from coastal valleys other than the Jequetepeque (Table 7.1). This illustrates that this is a North Coast population, but, as befitting a major urban center, one that drew individuals from other areas of the North Coast.

The individuals in the Compound VI Cemetery had a wide assortment of ceramics and metal objects. The elderly female (II T2) had the largest number of vessels of any of Farfán's tombs, plus she was buried with copper rings similar to those found with the women in the Huaca Burial Platform Chapter 3A). This may be evidence of her high status, or indicate that she had been an *aqllakona*, one of the Inca chosen women. Another unusual interment is that of the child (I T4) who was buried with a feline. Cats

had been important in Andean cosmology since the Early Horizon (c. A.D. 900) and the tombs of several women buried at Farfán contain ceramic representations of felines. The late adolescent male (I T3) had a variety of non-ceramic objects including four copper discs that have thus far only been found with high-status females (e.g. G T11, E T7).

The ceramics from the Compound VI Cemetery show an interesting mixture of Late Horizon Jequetepeque style vessels as well as several that show Hybrid-Inca style. Prior to the arrival of the Inca, the North Coast had been known for its reduced blackware ceramics, both in fine and utilitarian wares. The Compound VI Cemetery has the highest percentage of redware vessels at Farfán (Appendix 6, this volume). The majority of these vessels are ollas, a form found in reduced blackware throughout the other cemeteries at the site. The emphasis on redware ceramics may indicate change initiated by the Inca or they may be the products of a different group of craftsmen. There is also a high percentage, second only to the Huaca Burial Platform, of vessels with three-dimensional monkey heads, a North Coast motif associated with the prior Chimú Empire, but rendered here with Late Horizon formal and stylistic changes.

One of the unique aspects of the Compound VI Cemetery is that all of the individuals except the supine child (I T4) were facing east (Table 7.1). The most common orientation of the interments in Farfán's cemeteries is either north or northwest. However, there are two instances (Cemetery J and the Huaca Burial Platform) where individuals are oriented to four different directions, which may represent the "Four Quarters" or four *suyus* of the Inca Empire. Having all the bodies face east toward the rising sun, as they do in the Compound VI Cemetery, may suggest integration of these individuals into the Inca state solar religion, in contrast to the earlier Chimú culture that worshiped the Moon.

This cemetery reflects the overall Inca provincial strategy of leaving local populations with some traditional cultural elements while introducing and integrating Inca concepts.

Burial	Age	Sex	Pos	Ort	Org	CM	S/M	PC	Cin	Tex	Met	An	Ori	Sh	Wea
IT1	CH	N/A	S	E	n/a	B	S	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a
IT2	IN	N/A	S	E	n/a	n/a	S	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IT3	AD	M	S	E	n/a	B	S	4	n/a	n/a	1, 2	n/a	n/a	1	n/a
IT4	CH	N/A	EX	SW	n/a	n/a	S	4	n/a	n/a	n/a	1	n/a	n/a	n/a
IIT1	MA	F	S	E	n/a	A	S	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IIT2	OA	F	S	E	n/a	B	S	6	n/a	n/a	2, 3	n/a	n/a	1	1
IIT3	OA	M	S	E	n/a	B	S	3	n/a	3	4	2	n/a	n/a	1
IIT4	MA	M	S	E	n/a	A	S	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IIIT1	OA	F	S	E	n/a	B	S	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IIIT2	MA	M	S	E	n/a	C	S	3	n/a	n/a	2, 7	n/a	n/a	1	n/a
IIIT3	NEO	N/A	S	E	n/a	n/a	S	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Burial: Burial designation number.

Age: NEO=neonate (0–0.9 years), IN=infant (1–2.9 years), CH=child (3–5.9 years), JUV=juvenile (6–11.9 years), AD=adolescent (12–19.9 years), YA=young adult (c. 20–29 years), MA=mid-adult (c. 30–39 years), and OA=old adult (c. 40+ years).

Sex: F=female, M=male, N/A=not available.

Pos: Burial position: S=seated, EX=extended.

Ort: Seated orientation of the body, based on which way pelvis is facing; extended orientation is based on head direction only.

Org: Organics: 1=seed, 2=maize, 3=fruit, 4=fish, 5=gourd, 6=*Nectandra* seed necklace, 7=wooden figurine.

CM: Head modifications A–G (see Nelson, Chapter 2, Figure 2.1).

S/M: Tomb configuration: S=single, M=multiple individuals.

PC: Quantity of ceramics directly associated with an individual, rather than a communal offering.

Cin: Presence of cinnabar on the bones.

Tex: 1=textile bag, 2=other textiles, 3=shroud.

Met: Presence of metal: 1=discs, 2=beads, 3=rings, 4=folded copper pieces, 5=silver beads, 6=copper spindle, 7=copper tweezers, 8=other silver object, 9=silver-plated copper rattle, 10=copper *tumi*, 11=other copper.

An: Animal remains: 1=feline, 2=llama, 3=guinea pig.

Ori: Individual originally from: J=the Jequetepeque Valley, OC=other coastal valley, or H=the highlands.

Sh: Shell: 1=shell beads, 2=whole *Spondylus* shell, 3=mixed media with other material.

Wea: Weaving equipment: 1=spindle whorl, 2=weaving swords, 3=weaving basket, 4=needles, 5=chalk, 6=unspun wool.

Table 7.1. Compound VI Cemetery, Primary Burial Data (N=11).

CHAPTER 7B: BIOARCHAEOLOGY OF THE COMPOUND VI CEMETERY

Andrew J. Nelson

The burials in the Compound VI Cemetery are thought to represent the tombs of mid-level bureaucrats who lived and worked in Compound VI. Within the cemetery, these burials are arranged in three levels. Four burials each were found in Levels I and II, and Level III contains three, for a total of eleven individuals (Table 7.2). The cemetery differs from the Huaca Burial Platform (Chapter 3B, this volume) and Cemeteries J and I (Chapters 4B and 5B, this volume), but is similar to Mound G (Chapter 6, this volume) in that it does not contain any secondary burials, offering a unique opportunity to analyze a Farfán cemetery comprised of individuals found in their entirety. This chapter presents a summary of the cemetery's demographic composition and the sample's characteristics in terms of stature, health and disease, activity patterns, cranial modification, and isotopic analysis.

Demographic Composition

Among the sexable individuals in this cemetery, there are more males ($N=4$) than females ($N=3$). One of the males (Level I T3; Chapter 7A, this volume, Figures 7.3–7.4) was around nineteen years old at the time of his death, but the remaining adult individuals were all categorized as mid- and older adults. Two individuals (I T2 and III T3) were less than two years old when they died. One individual was a three-year-old child (I T4), and another child (I T1) was aged four at the time of death.

The demographic composition of the Compound VI Cemetery differs considerably from others at Farfán. It is particularly unusual that males outnumbered females. In the site as a whole, females outnumber males by approxi-

mately 1.5:1. In addition, the Compound VI Cemetery sample includes a number of very young individuals, while most other cemeteries at Farfán contain few neonates and infants. The age categories of juveniles (6–12 years of age) and young adults (20–29 years of age) are well represented in the rest of the site, but are absent from the Compound VI Cemetery mortuary sample.

Stature, Health and Disease, and Activity Patterns

Stature is used by skeletal biologists as a measure of individual and population health through the critical years of growth (Silventoinen 2003). Reduced stature has been associated with a variety of broad health indicators, including decreased life span (Kemkes-Grotten-thaler 2005) and increased obstetric risk in females (Prasad and Al-Taher 2002). Although many diseases do not leave a mark on the skeleton, careful analysis of the skeleton can reveal indications of many pathological conditions that affect the life of an individual. The individuals in the Compound VI Cemetery sample were examined for evidence of infectious or other disease, degenerative conditions, dental disease, and trauma.

Stature could be estimated for six individuals in the sample (Table 7.2). One other individual, the mid-adult male (II T4), could only be assigned a general stature category, because none of his long bones were complete. The average male stature for this group is 157.7 centimeters, which is somewhat shorter than the overall male mean for the site (158.8 centimeters, $N=14$). All three males with complete long bones are considered to be of medium stature when compared to the male distribution at the site. The mid-adult male (II T4) was also assigned to the medium category on the basis of an analysis of the other dimensions of his bones. The average female stature in this cemetery is 144.2 centime-

ters, which similarly falls below the overall site mean for females at Farfán (146.0 centimeters, N=32). Two of the females, the mid-old female (II T1) and an elderly female (III T1) were classified as having medium stature, while another old female (II T2) was classified as short.

There are few diseases manifested on the skeletons found in the Compound VI Cemetery (Table 7.2). The 1.5-year-old infant (I T2) demonstrates bowed long bones that are consistent with a diagnosis of rickets. Rickets is generally caused by a lack of vitamin D and/or poor calcium absorption. The most common age range in which rickets occurs is between six months and two years of age (Ortner 2003:393). The occurrence of this condition may represent inadequate breast-feeding of this infant. It is noteworthy that the only individual from this cemetery for whom a dietary isotope signature could be determined was a 9-month-old neonate (III T3; see Isotopes section below) with a very low nitrogen signature value. This suggests that this very young individual was also not adequately breast-fed.

An elderly male (II T3), an old female (III T1), and one mid-adult male (III T2) demonstrate vertebral collapse (Table 7.2). These individuals would likely have had reduced mobility. The middle-aged female (II T1) and male (II T4) show little or no degenerative changes in the spine. Given the absence of degenerative changes in the younger individuals, this pattern is largely consistent with age-related osteoporosis (Jaagumagi 2011). Age-related osteoporosis has been documented using histomorphometry at Pacatnamú, another site in the Jequetepeque Valley (Beauchesne 2005), indicating that this was a frequent affliction of adult populations in the valley.

An x-ray of the cranium of one mid-adult male (II T4) demonstrates the presence of multi-

ple well-circumscribed small destructive lesions (Figure 7.22). The differential diagnosis for this appearance includes multiple myeloma and metastatic carcinoma (Ortner and Putschar 1985:266). Myeloma is a cancer affecting the blood plasma cells (Mitsiades *et al.* 2004; Ortner 2003:376). Numerous types of cancer can metastasize to the cranium, including melanoma and thyroid cancer (Greg Garvin, personal communication, 6 November 2019). The cause of multiple myeloma is unclear, but it is uniformly fatal, has a higher incidence in males than females, and is often accompanied by anemia (Mitsiades *et al.* 2004), as it is in this case. Left untreated, other forms of metastatic cancers would also have been fatal. While we cannot make a definitive diagnosis in this case, this individual would certainly have been very ill before he died, and this condition probably led to his demise.

The youngest individuals in the Compound VI Cemetery all appear to have been in good dental health. However, the late adolescent male (I T3) was already in moderate-to-poor dental health by the time of his death at around nineteen years of age (Table 7.2). He presented five carious lesions across his thirty-two teeth, as well as evidence of periodontal disease and the build-up of calculus, or hardened dental plaque. The mid-adult individuals were in moderate-to-poor dental health. Among the elderly adults, one female was in good dental health with slightly worn teeth (II T2), one female was in poor dental health (III T1), and one male was in very poor (II T3) dental health. Dental caries, and its associated tooth loss and abscessing, has been repeatedly demonstrated to be associated with a diet that is high in carbohydrates (e.g. Lukacs 1989:266). It is likely that the primary source of the carbohydrates in the diets of these individuals was maize. The good dental health of one elderly female adult (II T2) is quite striking, given the condition of the teeth across the remainder of the adults in this cemetery and the

pattern of poor dental health across the site as a whole.

Although activity patterns can be reconstructed from skeletal remains using a variety of means, the present discussion deals with the insights gained from musculo-skeletal stress markers (MSMs; cf. Hawkey and Merbs 1995) and trauma. Trauma can also reflect how individuals interact with their environment and with other individuals (Merbs 1989) and can be revealing about particular lifestyles (e.g. for warriors, see Verano 2000).

Musculo-skeletal stress markers were assessed throughout the skeleton of each individual, and are summarized here for clarity. All adult individuals, both males and females, and the late adolescent male, have well-developed leg muscles, indicating that habitual squatting was part of their positional repertoire. Three individuals demonstrate pronounced MSMs in their lower arms and hands: the late adolescent male (I T3), a mid-adult male (II T4), and an elderly female (III T1). Because the hand is involved in so many different activities, no definitive conclusions can be drawn regarding the specific activity that these MSMs would represent. It appears that slightly different MSMs are involved in each of the three individuals. It is noteworthy, however, that the pattern is not consistent with that proposed for spinning (cf. Nelson, Nelson, Castillo, and Mackey 2000).

In the Compound VI Cemetery, there was only one example of trauma directly expressed on the bone (Table 7.2). The four-year-old child (I T1) has a lesion on the right side of the posterior cranium, indicative of a localized trauma such as a blow to the skull or a fall onto the back of the head. Individual III T1, an old adult female, demonstrates pronounced asymmetry in muscle markings of both tibiae, with the attachments for the muscles on the right leg

significantly larger. This suggests that she might have experienced soft tissue trauma to the left leg, leading her to favor it and increase weight-bearing on her right leg. The low level of trauma in this sample suggests that these individuals were not involved in dangerous or violent activities.

Cranial Modification

Although Christina Torres-Rouff (2003:xi) has argued “that in the Andes, complex and small-scale societies use cranial modification differently, and to serve different social needs”, this trait is generally thought to be an indicator of social identity (Gertzen and Gertzen 1995: 375). The expression of different forms of modification and their distribution across the site may be important indicators of social organization and group affiliation.

There are three different forms of crania represented within the Compound VI Cemetery (Table 7.2). Two individuals had non-modified (Form A) crania (II T1, II T4), five individuals had fronto-occipital (Form B) crania (I T1, I T3, II T2, II T3, III T1), and one individual had a fronto-occipital tabular (Form C) cranium (III T2). The cranium of one of the subadults (I T2) was too fragmentary to allow the determination of form. The Form C individual (III T2) is one of only eight similarly modified crania from the whole site. The non-modified Form A and fronto-occipital Form B crania are the most common forms at Farfán, while the rarer Form C modification is common to people affiliated with the Lambayeque ethnic group.

Isotopes

Eight of the individuals from this cemetery (I T3, I T4, II T2, II T3, II T4, III T1, III T2 and III T3) were subjected to carbon/nitrogen isotopic analysis in order to determine their diet (Appendix 5, this volume). The isotopes of carbon (C)

allow the differentiation of the dietary contribution of C_3 plants such as temperate grass species and C_4 plants such as maize. The isotopes of nitrogen (N) allow an assessment of the trophic level and dietary protein input (Keegan 1989: 228–229). Bones of three individuals (I T1, II T1, and III T2) were also analyzed for their oxygen isotope content. Oxygen isotope analysis has been used to reconstruct residence patterns, geographic origins, and to track migrations in archaeological samples (*cf.* Knudson and Price 2007; Toyne *et al.* 2014; White *et al.* 1998).

Of all eight individuals, only III T3, a nine-month-old neonate, was amenable to C/N isotopic analysis. This suggests that the protein collagen, which is required for the isotopic analysis, had been leached from the bones over time, most likely by water. This conclusion is consistent with the fact that the external surfaces of many of the bones from the Compound VI Cemetery were slightly flaky. The one individual who did have preserved collagen was recovered from the deepest layer of the cemetery, and may not have experienced water exposure to the same extent as the other interments. Unfortunately, we cannot determine exactly how long the rest of the bones were exposed to water, nor what the origin of the water was.

The isotopic results for the neonate III T3 ($\delta^{13}C = -10.7$, $\delta^{15}N = 8.4$) suggest that at the time of death, it was likely being fed a supplemental mush rather than being breast-fed. Breast feeding, which would have provided the neonate with breast milk rich in both nutrients and antibodies, would additionally elevate the $\delta^{15}N$ value (see Williams 2005 for comparable data from the Central Coast site of Puruchuco). The carbon signature for this individual suggests that the mush would have been a mixture of maize and small amounts of other foods. This supplementation would have placed the neonate at risk for malnutrition and disease. However, the Inca viewed maize as a high-status food, so

there is some possibility that maize supplementation was an expression of status (Costin and Earle 1989).

The oxygen isotope values for the three tested individuals lie well above the rest of the individuals from Farfán. The $\delta^{18}O$ value for I T1 (a child) is 19.5; for II T1 (a mid-old adult female) it is 20.0; and for III T2 (a mid-adult male) it is 19.0. These values are more than two units above the nearest individual (an individual from the Huaca Burial Platform) and they lie well above the range for the majority of the individuals from this site (*c.* $\delta^{18}O$ 15– $\delta^{18}O$ 17). This suggests that these three individuals were not local to the Jequetepeque Valley, or had lived in the valley for less than ten years, approximately the time that it takes for bone to remodel and incorporate the local oxygen signature. The child must have been brought to the site from elsewhere. Unfortunately, at this point we cannot determine the place of origin for these three individuals, other than to say that they are unlikely to be from the highlands (following the pattern demonstrated by Knudson and Price 2007). This is congruent with the cranial modification data, as individual II T1 had Form A (coastal) and individual III T2 displayed Form C (affiliated with coastal ethnic Lambayeque).

Comparison of the Three Levels

Comparison of the osteological data does not reveal strong differentiation between the levels. The subadults were primarily found in the first level (three out of the total of four), and no subadult individuals were found in the second level. There are males and females among the adults of Levels II and III, and there is some suggestion that females were roughly clustered on the south side and males on the north. The sexes of the young subadults from Level I are unfortunately indeterminate, but the adolescent from there (I T3) is male. Relatively poor dental

health is observed in all levels. Individuals from all three levels demonstrate similar activity patterns, involving squatting and heavy use of the upper arm. The only instance of a Form C cranial modification is in the third level (III T2), Form A unmodified crania are only found in level two (II T1, II T4), while Form B crania are found in all three levels (I T1, I T3, II T2, II T3, III T1). Finally, high oxygen isotope values are detected in individuals from each level, indicating their non-local origins. In sum, it appears that the structuring of the layers of this cemetery did not rely on any physical attributes of these individuals, nor their ethnic or geographic points of origin.

Summary

Analysis of the individuals buried in the Compound VI Cemetery makes an important contribution to the understanding of the overall population at Farfán. The sample of what are likely mid-level bureaucrats comprises mid and old adult males and females, young subadults, and an adolescent, but it does not include any juveniles or young adults. These individuals would have been carefully chosen from the many people who lived and worked in Compound VI. The individuals from this cemetery appear to belong to a fairly homogeneous group, sharing features that include activity patterns, the relationship between age and spinal degeneration, the lack of infectious diseases and skeletal trauma, and a common dietary regime. There is some differentiation within the group in terms of stature achieved and the expression of cranial modification. Individual III T2 was situated in the forefront of this group, and he is the only one of the eleven with the Lambayeque, Form C cranial modification style. One individual (II T4) suffered from a rare cancerous condition, which would have made him very ill and would have required a large amount of care from his friends and family. Oxygen isotope analysis suggests that least three individuals (including III T2) came

from a geographic location outside the Jequetepeque Valley, albeit likely still on the coast and likely to the north (Toyne *et al.* 2014:20).

Individual	Age/Sex ^a	Stature Estimate	Health and Other Disease Observations	Isotope Values ^b	Cranial Modification
I T1	child (4±1 yrs)	n/a	• trauma to right rear cranium	δ ¹⁸ O _p bone=19.5	Form B ^c (CI n/a) ^d
I T2	infant (1.5±yrs)	n/a	• possible rickets		n/a
I T3	late adolescent male (c. 19 yrs)	medium (157.7 cm)	• moderate to poor dental health	n/a	Form B (CI=93.8)
I T4	child (3±1 yrs)	n/a	n/a	n/a	n/a
II T1	mid-old adult female (35–45 yrs)	medium (144.7 cm)	• moderate dental health	δ ¹⁸ O _p bone=20.0	Form A (CI=82.5)
II T2	old adult female (40+ yrs)	short (142.6 cm)	n/a	n/a	Form B CI=97.2)
II T3	old adult male (40+ yrs)	medium (157.7 cm)	• vertebral collapse (L4 and L5) consistent with age-related osteoporosis; other degenerative changes in the spine • poor dental health	n/a	Form B (CI=99.4)
II T4	mid-adult male (30–40-yrs)	medium ^e	• lesions suggestive of multiple myeloma or metastatic carcinoma • poor dental health	n/a	Form A (CI=88.6)
III T1	old adult female (40+ yrs)	medium (146.0 cm)	• vertebral collapse (C5) • possible soft tissue trauma to left leg • poor dental health	n/a	Form B (CI=97.9)
III T2	mid-adult male (30–40 yrs)	medium (157.7 cm)	• vertebral collapse (T11 and 12), other degenerative changes of the spine • moderate to poor dental health	δ ¹⁸ O _p bone=19.0	Form C (CI=96)
III T3	neonate (.75±2.5 yrs)	n/a	n/a	δ ¹³ C=-10.7 δ ¹⁵ N=8.4	n/a

Notes:

a Unsexable subadult individuals do not have a sex assigned.

b δ¹⁸O_p=oxygen, δ¹³C=carbon, δ¹⁵N=nitrogen; where multiple isotope values are available, they are presented with the earliest forming tissue first, and later forming tissues presented in chronological order.

c For definitions of cranial modifications see Nelson, Chapter 2, Figure 2.1, this volume.

d CI=cranial index.

e None of this individual's long bones were complete enough to allow the estimation of a stature. A determination of "medium" was made by comparing the bone shaft diameters to the other males at the site.

Table 7.2. Compound IV Cemetery Burial Data.

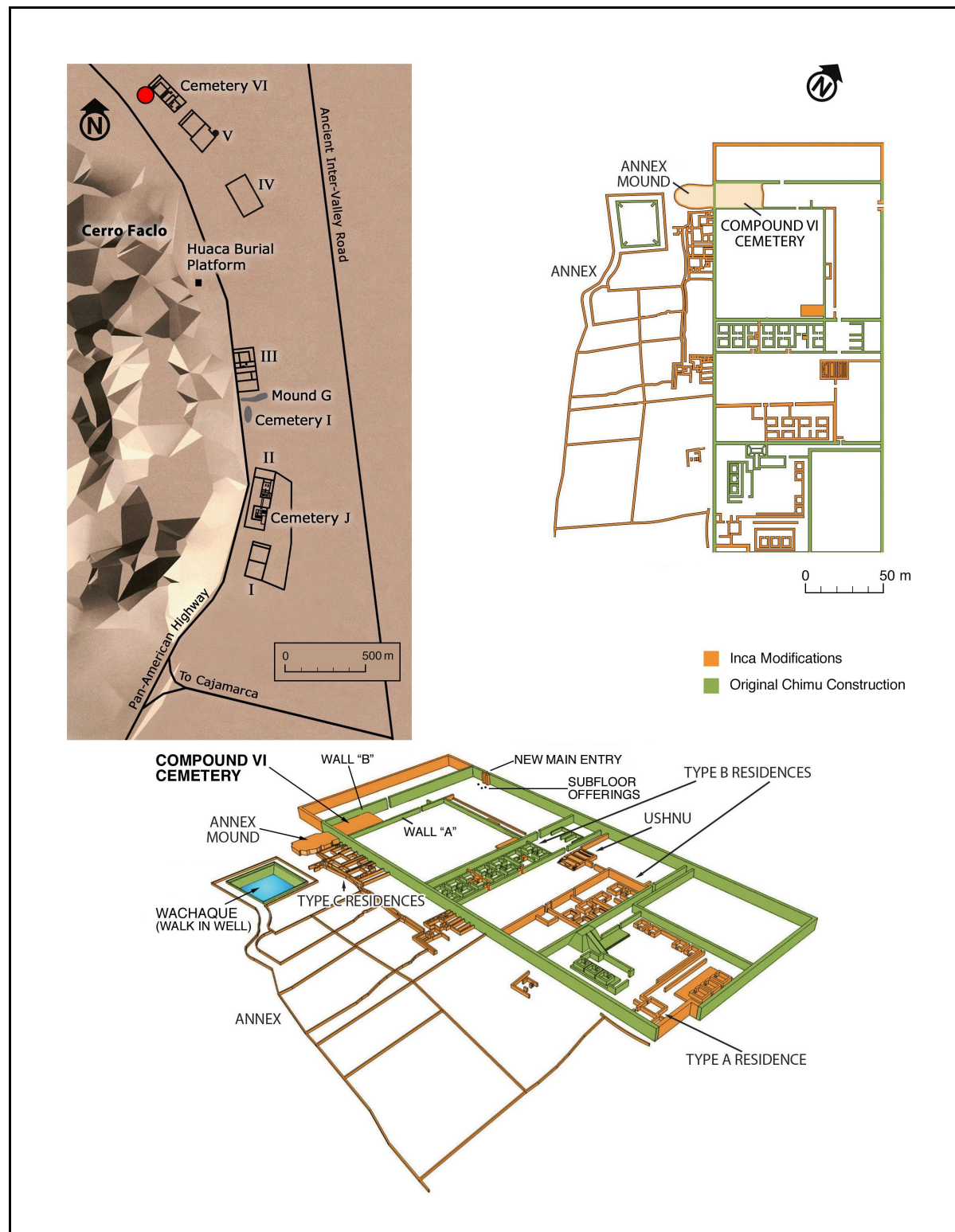


Figure 7.1. Overview Farfán's compound VI showing its location, plan, and perspective view indicating areas mentioned in the text.

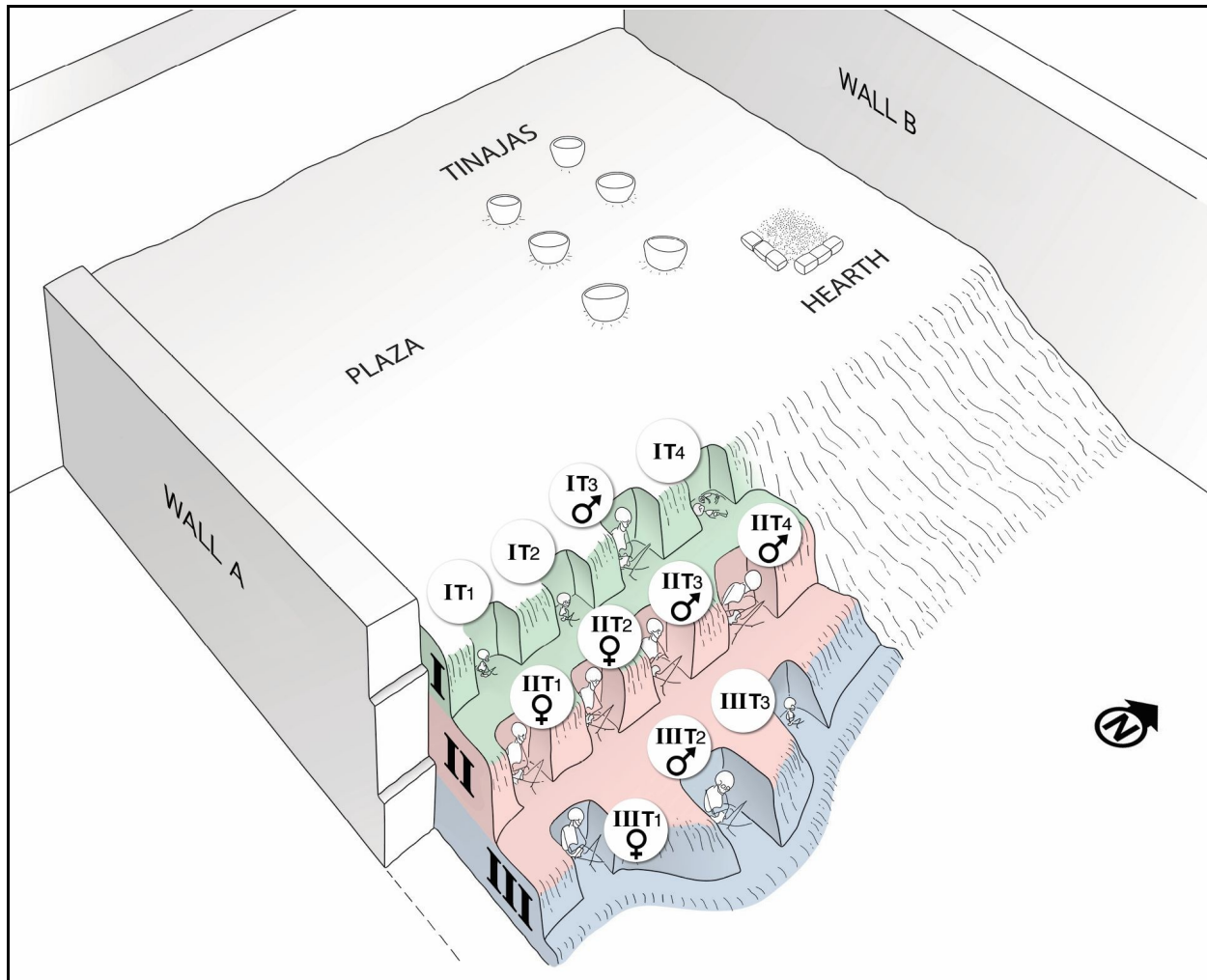


Figure 7.2. This reconstruction drawing is not to scale; see plan drawing Figure 7.1.

The entire mound is 30 meters long and 15 meters wide.

The cemetery itself, shown in color, measures 8.5 meters by 7.5 meters.

The remaining portion of the mound is devoid of burials.

Note: Primary Tombs are designated by T. Levels are indicated by Roman numerals.



Figure 7.3. Level I, Tomb 3. Photograph of the tomb excavation showing the burial and the solid matrix of the mound.

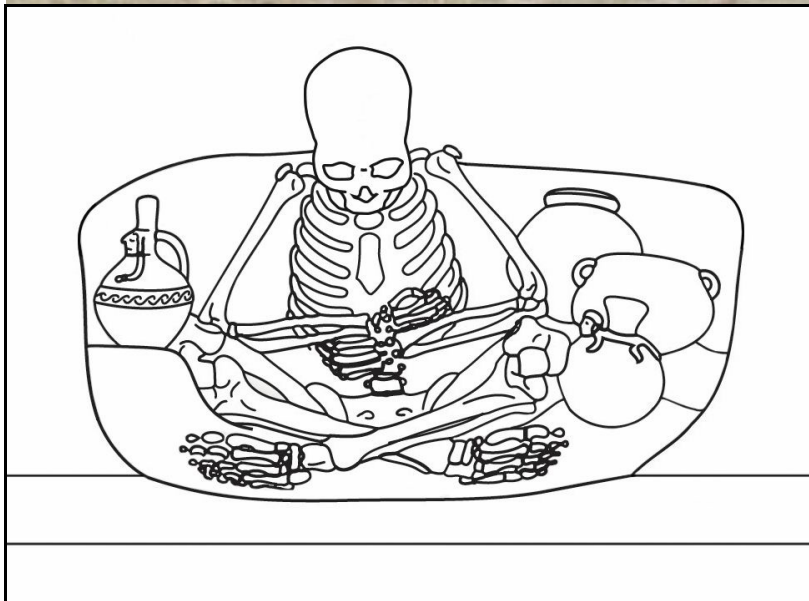


Figure 7.4. Level I, Tomb 3, drawing of the burial.



Figure 7.5. Level I, Tomb 3, Hybrid style spout-and-handle face-neck vessel. Height: 21 centimeters.



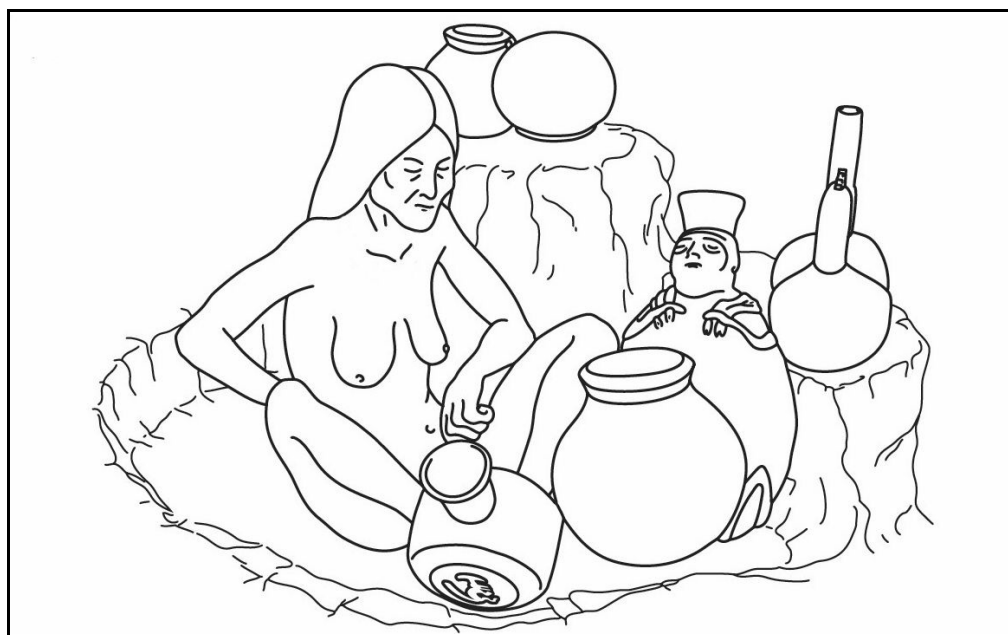
Figure 7.6. Level I, Tomb 3. Blackware incurving bowl. Height: 9.8 centimeters.



Figure 7.7. Level I, Tomb 3. Shell and copper beads.



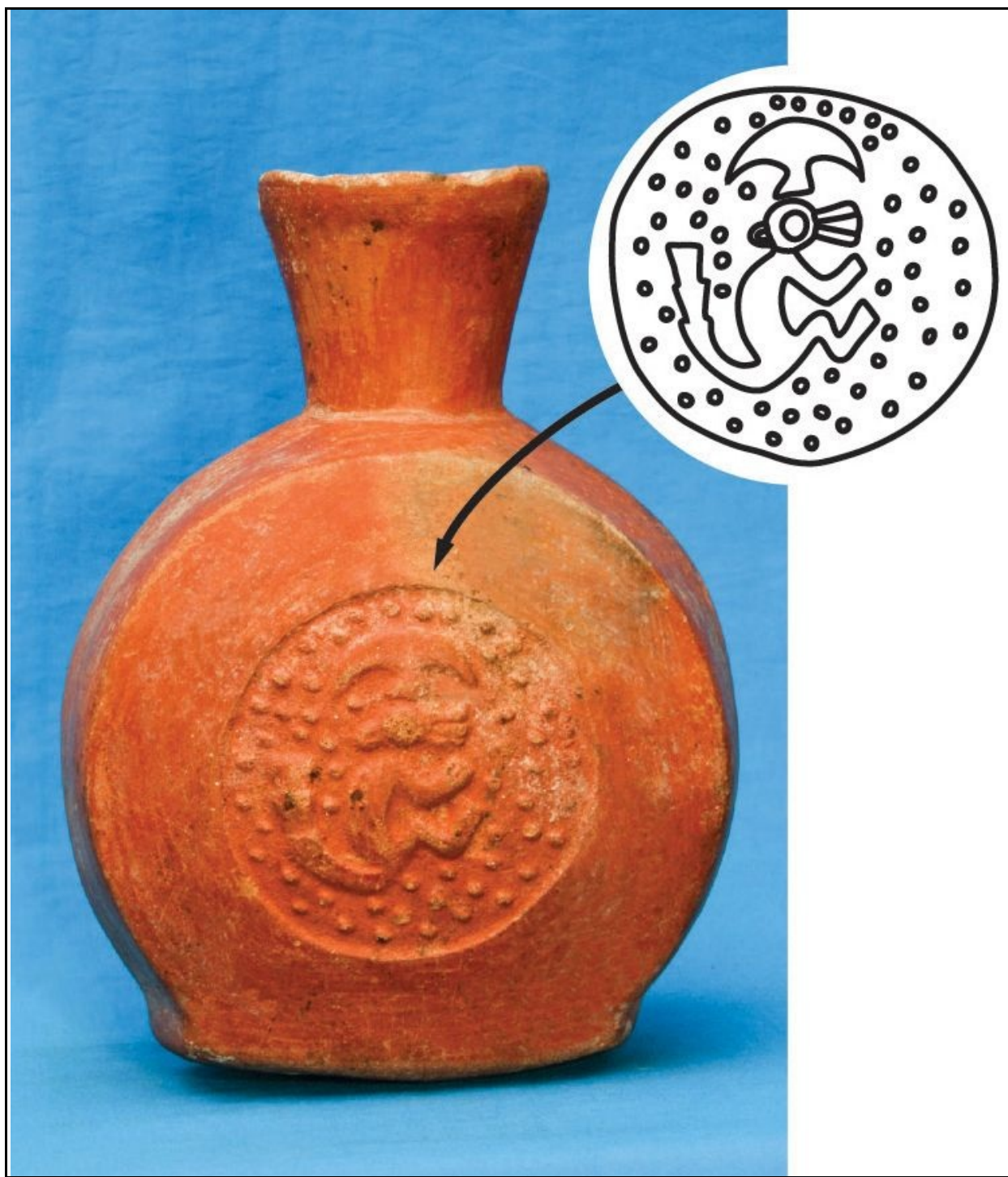
Figure 7.8. Level II, Tomb 2, excavation photograph.



Figures 7.9. Level II, Tomb 2, reconstruction drawing of the burial.



Figure 7.10. Level II, Tomb 2, redware face-neck jar of a man carrying an animal
Height: 29 centimeters.



Figures 7.11. Level II, Tomb 2, redware jar with inset detail of design. Height: 16 centimeters high.



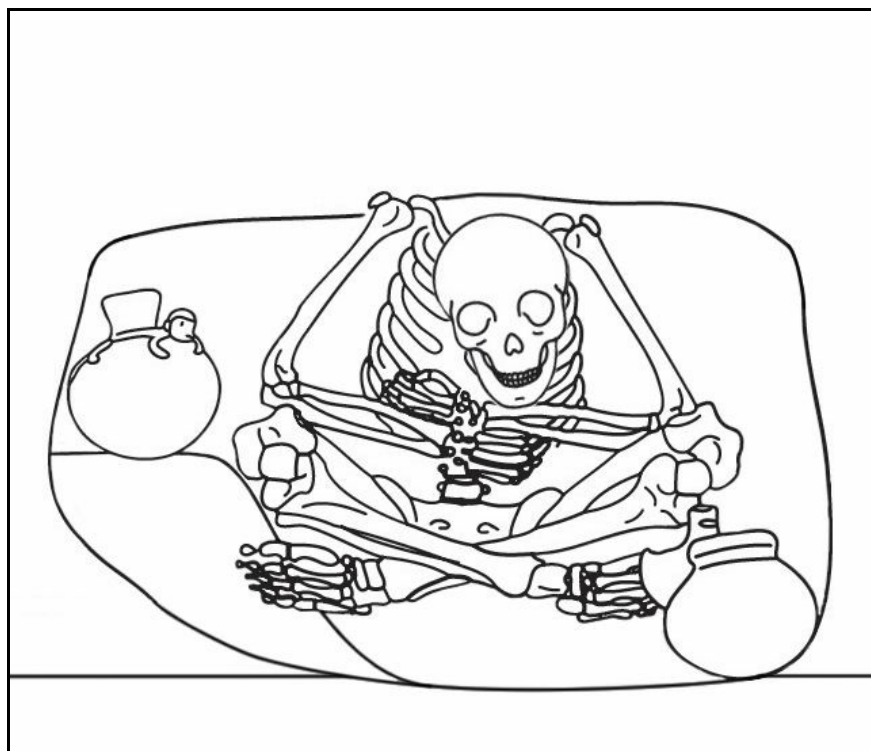
Figure 7.12. Level II, Tomb 2, one of the copper rings found in the tomb, 1.1 centimeters wide and 2 centimeters in diameter, with repoussé detail.



Figure 7.13, Level II, Tomb 2, shell and copper beads found around the body.



Figures. 7.14. Level 11, Tomb 3, photograph of the burial.



Figures. 7.15. Level 11, Tomb 3, a drawing of the skeleton.



Figures 7.16. Level 11, Tomb 3, blackware vessel with a three-dimensional monkey head and detail of the monkey's face. Height: 17.5 centimeters high.



Figure 7.17. Level 11, Tomb 3, copper spindle whorl.



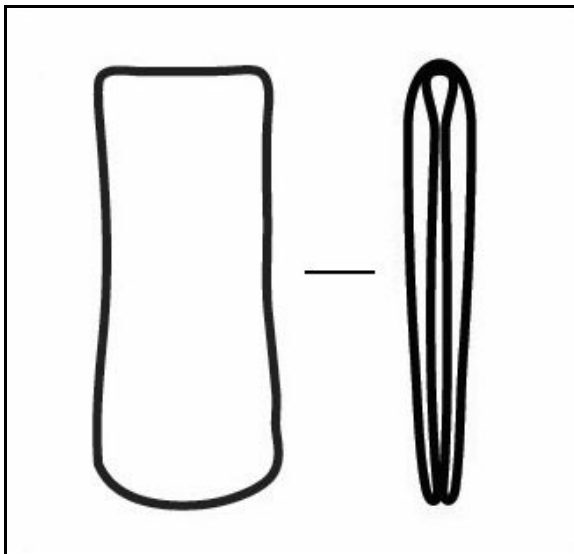
Figure 7.18. Level III, Tomb 2, in situ drawing of the skeleton and blackware jar with a three-dimensional monkey head; inset: detail of the head. Height: 25 centimeters high.



Figure. 7.19. Redware olla with inset detail of the design, Level III, Tomb 2. Height: 11 centimeters high.



Figure 7.20. String of copper and shell beads, Level III, Tomb 2.



Figures. 7.21. Copper tweezer, front and side views, Level III, Tomb 2. Dimensions: 3.8 by 1.5 centimeters).

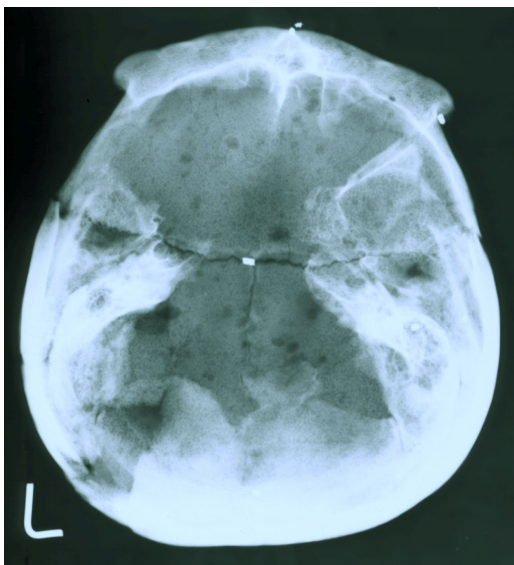


Figure 7.22. Radiograph of the cranium of II T4 showing several well-circumscribed lesions. The differential diagnosis includes multiple myeloma and metastatic carcinoma.

CHAPTER 8

BIOARCHAEOLOGY SUMMARY

Andrew J. Nelson

The site of Farfán was an important administrative center during the Inca occupation of the Peruvian North Coast. The remains of the individuals buried at the site can be used to create a picture of what the conditions of life—and death—would have been like during the brief (c. sixty plus years) Inca occupation of the site.

The Inca sample as a whole is composed of ninety-eight individuals, sixty-six of whom were primary burials. The sample is skewed towards females, who outnumber males by almost three to one, not just in the Huaca Burial Platform (which represents female individuals from Farfán's *aqllawasi*), but across the site as a whole. These two observations suggest that deliberate selection was taking place in terms of who was buried within the confines of Farfán. Certainly, a primary cemetery sample of sixty-six individuals who died over a period of about sixty years does not represent every person who lived and died at the site. Given the cosmopolitan nature of the sample (see below) it is possible that some individuals were returned to their natal sites for burial. From the demographic perspective and the clear role of selection for burial at the site, we must be cautious when interpreting the osteological material from Farfán. This caution is highlighted by the "Osteological Paradox" (Wood *et al.* 1992), which emphasizes that a cemetery sample is a sample of the dead, as opposed to the people who may have lived at the site. This will be explored in more detail below.

The set of bioarchaeological questions that were presented in the Introduction to the Archaeobiology of Farfán (Chapter 2, this volume) were:

1. Can the five mortuary facilities be differentiated from each other on the basis of bioarchaeological observations? In particular, in what aspects do the burials of the *aqllakona* differ from others at Farfán?
2. What are the bioarchaeological antecedents on the North Coast?
3. What were the living conditions at Farfán?

The remainder of this chapter will follow this sequence.

Can the five mortuary facilities be differentiated from each other on the basis of bioarchaeological observations?

Each cemetery appears to have a unique combination of physical characteristics (Tables 8.1, 8.2 and 8.3 for the tabulations of age, sex, and cranial modifications between the different cemeteries). The Huaca Burial Platform, the final resting place for some of the *aqllakona* from Farfán who at were sacrificed, has the greatest variability of any of the other cemeteries. It has the largest number of juveniles and adolescents (it is the only cemetery with the full range of ages), the greatest ratio of females to males, the largest range of stature for both males and females, the largest range of numbers of linear enamel hypoplastic lesions (LEH) per individ-

ual, the largest range of cranial modification forms, and the widest range of all isotope values (Appendix 5, this volume). The Huaca Burial Platform sample has individuals who are healthy as well as ill. It includes four out of six subadults from the site who demonstrate growth faltering, and the musculo-skeletal stress markers (MSMs) do not indicate a high level of repetitive activity. The large number of juvenile and adolescent individuals from the Huaca Burial Platform is not what one would expect for a typical site's mortuary profile (see for example Verano 1997a: 192 for the mortuary profile from Pacatnamú), where mortality is low at this age. The demographic profile of the Huaca Burial Platform most likely reflects the choices made to be included in this burial facility (see below) rather than the site's mortuary profile.

Cemetery J is similar to the other burial facilities in many ways. It has one of the subadults who expressed growth faltering and a large range of episodes of LEH per individual, indicating exposure to multiple stress episodes while they were young. In addition, there is a very high rate of dental pathology in young individuals. Four forms of cranial modification are expressed in Cemetery J: Form A (non-modified), and modified Forms B, D (like the G T11 individual mentioned below), and F.

Cemetery I has a seemingly conflicting series of characteristics: the highest mean stature of males and females (including no short individuals), but the highest prevalence of linear enamel hypoplastic lesions (LEH) (but a narrow range of episodes per individual), and the lowest prevalence of spinal pathology, but the highest prevalence of dental pathology (particularly in younger individuals). The group shows the greatest expression of musculo-skeletal stress marker (MSM) scores, particularly in the arm. Mackey notes (Chapter 5, this volume) the clear ethnic division within this cemetery, which is expressed in part by the pattern of cranial

modification, including Forms A (non-modified), B, C, and F.

Mound G is the only cemetery with no males. The burials do not include short individuals, and exhibit very low levels of childhood stress and good dental health, but these burials also have the highest prevalence of infectious diseases and all of the individuals buried here have some sort of spinal pathology. There are no non-modified crania here; instead Forms B, C, and D are expressed. Mackey notes that G T11 is a very high-status individual, but her extensive physical maladies are unique at the site, and she presents the rare Form D modification contributing to the unique signature of this cemetery. Within the Jequetepeque Valley, the Form D modification has only been described from the Early Moche Period (Lichtenfeld 2001).

The Compound VI Cemetery is the only cemetery that includes more males (adolescents and adults) than females. These burials have the lowest average stature (no tall individuals), the lowest incidence of infectious disease at the site, minimal expression of indicators of childhood stress, and individuals with the highest oxygen isotope values indicating that they spent time in another coastal region (Appendix 5, this volume). Form A (non-modified) and modified forms B and C are expressed in this cemetery, but no others. Mackey has concluded that these individuals were mid-level Inca administrators drawn from the Jequetepeque and other coastal valleys.

Differences between cemeteries can be examined using a variety of statistical tests on the bioarchaeological data. Verano (1987, 1997a: 194) used a multivariate analysis of facial measurements to demonstrate significant differences in facial dimension between groups of individuals buried in the Moche cemeteries at the nearby site of Pacatnamú. He interpreted

this to mean that the cemeteries represented kinship groups. In order to test this hypothesis for the site of Farfán, the same analysis was undertaken here. This analysis was based on a suite of facial measurements (Table 8.4), chosen to maximize the number of individuals included in the analysis and to be consistent with Verano's (1987) analysis. The test demonstrated that the groups did not vary significantly from each other (Wilks' Lambda $p=0.846$) and only 40.7 percent of the individuals were correctly assigned to their cemetery by the calculated function (Table 8.4). No facial metrics were available for individuals from Mound G, so that cemetery was not represented in this analysis.

Summary

Differences were found between cemeteries in terms of stature, growth faltering, rates of childhood stress, anemia, infectious disease, poor dental health, vertebral collapse, an activity that involved upper arm muscles and a squatting position, the expression of cranial modification, and for values of oxygen isotopes of bone. However, there are no observable differences among the individual cemeteries in terms of age distribution, spinal degeneration, most activity patterns, trauma, population traits, or carbon and nitrogen isotopes. Thus, there is no single consistent pattern that would allow the construction of biological "rules" that might have governed the process for deciding who was buried in which cemetery (such as the endogamous kin based units suggested for Pacatnamú), or that would allow us to construct a picture of how life for an individual in one cemetery was different from that of an individual in another.

Perhaps the most important implication in this summary is that the individuals buried in the Huaca Burial Platform, with its unique archaeological context and demographic profile, are not unique in terms of traits that reflect

genetic relatedness, health, or cultural practices that would have an impact on the body. The key pattern unique to the Huaca Burial Platform sample is the great deal of variability it expresses. This conclusion likely reflects the fact that the *aqllakona* were drawn from a wide geographic area.

What are the bioarchaeological antecedents on the North Coast?

Since the 1980s, there has been a wealth of bioarchaeological work carried out on Peru's North Coast. It is beyond the scope of this project to review all of it, but a sample of key references divided by time period will be described below, focusing, where possible, on the Jequetepeque Valley. Two particular bioarchaeological variables will be the subject of this focus: stature and cranial modification.

Moche Culture

There is a large and growing body of literature on the bioarchaeology of the Moche. Bioarchaeological (osteological) information is available from, moving from north to south, Sipán (Verano 1997b) and Sicán (Farnum 2002) in the Lambayeque Valley; San José de Moro and Pacatnamú in the Jequetepeque Valley (Tables 8.5 and 8.6; Verano 1987, 1997a); and the Huacas de Moche from the Moche Valley (Sutter and Verano 2007). Genetic information on Moche individuals has been presented by Shimada *et al.* (2005, 2008) from, again moving from north to south, the sites of Sipán, Huacas de Moche and Huancaco, and El Castillo.

Chapdelaine (2011:202–203) has suggested that there were as many as five levels in the Moche social hierarchy. Three levels of social structure are discussed here: the commoner burials at Pacatnamú (Verano 1987, 1997a); the upper/middle class boot tomb burials from San

José de Moro, excavated in the late 1990s, and those excavated at Pacatnamú by Ubbelodhe-Doering (housed in the Department of Biology II, Ludwig-Maximilians Universität, Munich, hereafter referred to as San José de Moro+Pacatnamú (Tables 8.5 and 8.6), and elite burials from Sipán (Verano 1997b).

Stature. The correlation of status and stature is quite striking in the Moche Period. The two elite males from Sipán (with fused epiphyses) have the highest average site stature (161.0 centimeters, recalculated from Verano 1997b: table 1¹; Table 8.5). The 16 male individuals from San José de Moro+Pacatnamú's boot cut tombs are next (159 centimeters; Table 8.5 and 8.6), and the three commoner cemeteries from Pacatnamú follow at 155.8 centimeters for Cemetery S4, 155.3 centimeters for Cemetery H45CM1, and 154.2 centimeters for Cemetery S2 (data recalculated from Verano 1997a:206). This sequence maps well onto an elite>upper class>commoner sequence. The same pattern is seen in the females. The female retainer burial (skeleton 4) from Sipán is consistent with the elevated male means discussed above (156.7 centimeters, recalculated from Verano 1997b: 672), but then there is a sizable gap to the upper-class individuals from San José de Moro+Pacatnamú at 147.3 centimeters (Tables 8.5, 8.6), with the commoner Pacatnamú cemeteries rounding out the sequence (S2: 144.9 centimeters; H45CM1: 144.4 centimeters; and S4:

143.7 centimeters; recalculated from Verano (1997a:206). Thus, the social stratification of the Moche appears to be reflected in access to resources and improved living conditions that would allow upper-class and elite individuals (*sensu* Chapdelaine 2011) to grow taller than commoners (*cf.* Steckel 1995).

Cranial Modification. The Moche are generally described as demonstrating either no cranial modification, or slight occipital flattening likely secondary to cradle-boarding (*cf.* Verano 1997a: 192–193, 1997b:673). This kind of modification does not have a large impact on the cranial index. However, Lichtenfeld (2001:49–58) reported two additional forms of modification at Dos Cabezas—fronto-occipital oblique (Form D of the typology presented here) and trapezoidal (Form E). An additional Moche cranium from a boot tomb at San José de Moro (MU 319) demonstrates trapezoidal modification. These forms of modification would require appliances in addition to, or instead of, cradle-boards. Thus, while many of the modified crania were probably modified by the practice of cradle-boarding, additional modification techniques were practiced by the Moche, suggesting that the pattern of expression of several contemporary modification forms seen at Farfán likely had earlier roots.

Lambayeque Period

The Lambayeque (Sicán) Period on the North Coast is represented in the bioarchaeological record by burials from El Brujo (Gaither 2004), a sample of elite individuals from the site of Sicán (Farnum 2002), and by previously unpublished data from San José de Moro+Pacatnamú (Tables 8.5, 8.6). In addition, Shimada *et al.* (2005) have presented mtDNA data for Lambayeque samples from Sicán and neighboring sites, and El Brujo.

¹ Stature is commonly calculated in the Peruvian bioarchaeological literature using formulae from Genovés (1967), without including his 2.5 centimeter correction for living stature (which was built into the tables in Genovés (1967) and the equations in del Angel and Cisneros (2004) and occasionally using formulae from Trotter and Gleser (1958; Farnum 2002). All values are recalculated here for consistency, either from raw long bone length data when available, or by subtracting Genovés' 2.5 centimeter correction from the published mean values.

Stature. Lambayeque stature estimates are available from El Brujo, San José de Moro+Pacatnamú, and Sicán. The San José de Moro+Pacatnamú males are the tallest group with a mean stature of 158.3 centimeters (Tables 8.5, 8.6), down less than a centimeter from their Moche upper class antecedents. The El Brujo sample is next at 155.1 centimeters (data recalculated from Farnum 2002: table 12), with the elite Sicán males very close behind at 154.8 centimeters (data recalculated from Farnum *ibid.*: table 11). The pattern is slightly different for the females, with Sicán females being on average the tallest at 147.7 centimeters (data recalculated from Farnum *ibid.*: table 11), the El Brujo females at 146.4 centimeters (data recalculated from Farnum *ibid.*: table 12, and the San José de Moro+Pacatnamú females at 145.6 centimeters (Tables 8.5, 8.6). This pattern is different from that of the Moche. Given the elite status of the individuals from the site of Sicán, one might have expected the Sicán females to be more differentiated from the individuals from El Brujo and San José+Pacatnamú. Likewise, one would not have expected the Sicán males to be the shortest in the sample. These results suggest that status did not affect access to resources during the critical growth periods in Sicán society as much as it did during Moche times. Farnum (*ibid.*) came to a similar conclusion regarding the females from Sicán.

Note that Farnum's conclusions regarding the comparison of stature to that at other sites and time periods was greatly affected by her use of the Trotter and Gleser (1958) stature formula which produce stature estimates that are elevated by between 3 and 5 centimeters relative to the del Angel and Cisneros (2004) estimates.

Cranial Modification. The fronto-occipital Form C modification, generally associated with the Lambayeque occupation of the Jequetepeque Valley, actually first appeared in the Transitional Period, a short period of great

cultural change in the Jequetepeque Valley between the Moche and Lambayeque occupations, A.D. 750 to 900 (Rucabado and Castillo 2003). A single Form E, trapezoidal, individual is noted for this period. However, the Lambayeque individuals from San José de Moro+Pacatnamú show a marked increase in the use of Type C cranial modification.

Inca Period on the North Coast

The only site on the North Coast other than Farfán with Inca bioarchaeological data is Túcume, specifically the Stone Temple context on Huaca Larga (Toyne 2002). This excavation produced nineteen females and three males, in a context often interpreted as the burial of *aqllakona* (Narváez 1995a in Heyerdahl *et al.* 1995:93) and therefore directly relevant to this research. These females are believed to have been sacrificed, although there is no direct evidence in the form of cut marks, as is also the case at Farfán. Toyne (2002: figure 6.2, pp. 140–141) tested several assumptions of what the bioarchaeological profile of an *aqlla* might look like, based on reports in the Spanish chronicles, and found that these women had a wider age range, poorer health, and experienced more trauma than might be expected, but they had experienced low levels of stress, as one might expect of individuals with high status.

Stature. The average male and female statures at Túcume were 156.2 centimeters and 144.1 centimeters respectively (recalculated from Toyne 2002: table 5.2); (Table 8.5)—a slight reduction for the females, and an increase for the males from the average for the Lambayeque population (Farfán data are summarized and discussed below).

Cranial Modification. Cranial modification was described as variably-expressed fronto-occipital modification with only six of the twenty-two individuals being non-modified.

Summary of the Biological Antecedents on the North Coast and Comparison with Farfán

Stature

To facilitate comparison with the data presented above, stature estimates for Farfán were recalculated using maximum femoral length only. Elsewhere in this volume stature is based on all available long bone lengths for each individual. The calculation of stature this way reduced the available sample size from 23 to 18 for females and from 8 to 6 for males, but did not yield an appreciable difference in sample means (figures presented in Table 8.5). Primary data used for this purpose are presented in Table 8.6.

The key elements gleaned from the data prior to, or contemporary with, the Farfán sample highlight the interactions between biology and culture and how these elements change over time (see Figure 8.1). A comparison of stature estimates across the time periods reveals not only indications of status differentiation, but also different patterns within the sexes. Status and stature differentiation appear to have been clear in Moche times. However, that pattern is not clear in the later periods. What is noteworthy are the very high statures for the Moche individuals from Sipán (male and female), and the relatively low stature for elite individuals from Sicán (particularly the males). This pattern is not currently amenable to statistical testing, as samples are small, all raw data are not available, and the full ranges at each site will overlap to some extent. Thus, these suggestions are subject to further testing and refinement.

Figure 8.2 allows a more detailed examination of the ranges of stature over the three time periods using primary data from San José de Moro+Pacatnamú and Farfán (Table 8.6). In the Moche Period there is clear sexual dimor-

phism, but with a substantial overlap in the male and female ranges, as one would expect in a biologically normal sample. During the Lambayeque Period, the overlap is substantially reduced, particularly for females, with only a single female lying within the male range. As discussed above, the effects of social status on stature are muted during the Lambayeque Period, and the sample size is unquestionably small, but there would appear to be a lack of tall females in this sample. There are tall females in Farnum's (2002: tables 11, 12) samples from Sicán and El Brujo. However, during the Inca Period at Farfán, there is no overlap between the stature ranges of males and females, suggesting that we may be missing tall females and short statured males, or both, in the Farfán sample.

When placed in the broader context (Figure 8.1), the average stature for Farfán males (154.4 centimeters, $\text{std}(x)=2.13$, $N=6$) is among the lowest available sample means (Tables 8.5, 8.6). An examination of Figure 8.2 shows the distribution of male statures is also very truncated at Farfán (range of 6.1 centimeters) in comparison with earlier sites, although the three male individuals from Tucumé have an even smaller range (4.9 centimeters—data from Toyne 2002: Appendix XII). In both cases, small sample size is likely playing a role, but it is also likely that the males at Farfán may have been drawn from commoner classes.

The same low mean stature relative to other sites also pertains to the females (144.0 centimeters, $\text{std}(x)=3.42$, $N=18$). The stature means for the Tucumé and Farfán females are almost identical. The means are reduced relative to the upper status individuals from San José de Moro+Pacatnamú, and they are similar to the means for the commoner Moche burials from Pacatnamú (Figure 8.1, Table 8.5). This suggests that the females, primarily *aqllakona*, were not uniformly drawn from the upper classes

of coastal Late Horizon society, but the status bestowed upon them as members of the *aqlla* gave them right of burial at Farfán.

Cranial Modification

Cranial modification is expressed in the earliest described material from the North Coast of Peru. This modification is generally assumed to be the product of cradle-boarding and is often described broadly as a single category: fronto-occipital modification. If this is indeed the case, then Farfán was simply continuing a well-established practice.

However, the argument is made here that specific modification forms appeared as early as the Early Moche Period. These forms, such as fronto-occipital oblique and trapezoidal, would require different modification appliances than a cradle-board. Therefore, the typology of forms of cranial modification needs to be more complex than a single category. This would mean that deliberate choices were being made by parents about marking their children for life—but all of those choices are not yet clear. At least in the case of the Form C Lambayeque modification, there is a clear ethnic association between form and cultural affiliation, strongly expressed in the Lambayeque Period and marking the presence of the persistent Lambayeque ethnic group during the Inca occupation of Farfán.²

Cranial Modification and Ethnicity

Ethnic differentiation on the North Coast appears to be well established at least as early as Moche times (Bawden 2004; Bourget 2004). There may have been multiple levels of ethnic

identification, such as valley to valley, but also intra-site, as suggested by Verano's (1997a) study of facial metrics from Pacatnamú. Shimada *et al.* (2005) noted the presence of at least two ethnic groups at Sicán and Sapp (2002:142–146) has documented an ethnic Lambayeque group persisting into Inca times, as we have at Farfán.

In the case of the bioarchaeological evidence, the ethnic Lambayeque individuals at Farfán are marked by the Form C fronto-occipital cranial modification, which first appeared in the Jequetepeque Valley in the Transitional Period at San José de Moro. As discussed in the introductory chapter, two broad explanations for cultural cranial modification in the Pre-Columbian Andes can be proposed: that it was a marker of social status (e.g. Las Casas 1967 [1552–1561]:197) or that it was a marker of ethnic identity (e.g. Cieza de Leon 1984 [c. 1553]): *passim*), with most bioarchaeologists working in Peru favoring the latter (cf. Lozada 2011; Torres-Rouff 2003).

It is also likely that the cultural rationale varied in space and time (Boston 2012). Many bioarchaeologists, including Verano (1997a: 192) and Farnum (2002:117), argue that the majority of cranial modifications is a result of cradle-boarding. Most bioarchaeologists on the North Coast are quite conservative in their assessment of variability in cranial modification, restricting their typology to fronto-occipitally-modified and non-modified (following Hrdlička 1912). However, the contention here is that there is patterned variability in the modified group, as indicated by the Form categories outlined in the Introduction. The typology employed here is similar in number to the five-form typology used by Dembo and Imbelloni (1938), but it is more conservative than Weiss (1961) who identified 12 different modification styles.

² While much of the literature on cranial modification is couched in status *vs.* ethnicity terms, it must be recognized that ethnicity and status can be inextricably intertwined, and it may actually be difficult to identify one or the other as the determining factor.

The close relationship between cranial form and material culture among Lambayeque Form C individuals is reason to split them out from the rest of the sample. The degree of fronto-occipital shortening and the bilobate shape of the skull are quite distinctive. This form could have been associated with a cradle-board. Form D, the oblique form of frontal-occipital modification, would have required a different apparatus, as the oblique plane of the occiput would not be compatible with positioning the infant in a supine position on a cradle-board (see Chapter 2B, this volume, Figure 2.2 for suggested appliances for each form). Form E, fronto-occipital with superior flattening, could be compatible with a cradle-board, but would have required the addition of a superior board to the modification apparatus. The Form F apparatus is not easily identified. Indeed, the rationale for the identification of this form is based only on the fact that parents have tried to impose some form of fronto-occipital modification on a long skull, which is suggestive of highland ancestry. It is not clear which of the fronto-occipital forms they were trying to achieve. Finally, Form B differs from the other forms because it combines slight evidence for flattening, with a strong degree of fronto-occipital shortening of the cranium. This must have been achieved using textile wrappings with little or no incorporation of hard flat objects. This form is not likely to be associated with cradle-boarding, which would flatten the occiput.

An examination of the frequency with which the various forms occur (Table 8.3) suggests that there are three large groups represented at Farfán, those who chose not to modify their children (Form A), those who chose Form B, and those who chose Form C, the Lambayeque occupants of the site. Non-modification is a choice that was made by parents during all time periods on the North Coast. Both non-modified (Form A) and Form B individuals are found with Late Horizon Jequetepeque Style

ceramics and there are no other indicators of ethnic differentiation between them. Thus, it would appear that a single ethnic group could choose one of at least two possible outcomes for the shape of their children's crania.

The D and E forms of cranial modification have been noted at low frequencies in earlier time periods in the Jequetepeque Valley. These frequencies are likely too low to represent ethnic markers. The two individuals with Form D modification are both very high-status females. The burial contexts of the two individuals are quite different, and not all high-status females at Farfán demonstrate this form of modification.

The F form of modification suggests something quite interesting about ethnicity at Farfán. The long cranium of these individuals suggests that they were of highland ancestry (Ross *et al.* 2008). These individuals are in cemeteries that have artifactual indications of links to the highlands (Chapters 4A and 5A, this volume). The form of cranial modification generally associated with highland populations is annular modification (Form G here) as seen in one secondary burial on the Huaca Burial Platform (S26A2). The fact that the parents of these individuals were trying to create a coastal frontal-occipital modification form for their children suggests that they were co-opting the coastal ethnic practice, demonstrating that ethnic affiliation and practice was not absolute, but was in fact plastic. This is in keeping with the idea that ethnicity is a social construct that can be modified in light of changed social circumstances (*cf.* Jenkins 1996).

In sum, life and social interactions at Farfán were likely organized at least in part around ethnic groups, and those groups practiced a particular form or forms of cranial modification. However, the fact that there was no cemetery-specific pattern of differentiation like that found by Verano (1997a) at Pacatnamú suggests that

burial practices at Farfán were not organized by ethnic group. Members of the distinctive Lambayeque ethnic minority are represented in all of the cemeteries except Cemetery J. Both a conservative approach to the classification of cranial modification and the approach advocated here suggest the presence of two dominant ethnic groups. However, the facts that there are cranial modification forms that do not conform to the ethnicity model, and that there may be some plasticity in ethnic identity suggest that the practice of cultural cranial modification was a complex one, likely demanding several explanations.

WHAT WERE LIVING CONDITIONS AT FARFÁN?

Conditions of Life at Farfán

Despite the fact that Farfán lies at a crossroads of the Inca Empire and its cemetery population includes many individuals of very high status, the bioarchaeological/ paleopathological analysis suggests that life was difficult and disease was common. Verano (*ibid.*: 203) described life at Moche Pacatnamú as “active”, with elevated amounts of wear and tear on the upper body, high levels of young male mortality, and high levels of dental disease. Mortality profiles differ between Pacatnamú and Farfán, but the general living conditions apparently did not. As outlined in the antecedent section, anemia was a very common problem among Pre-Columbian populations on the North Coast. Anemia is associated with infant mortality, poor childhood cognitive development, and reduction in work productivity (Blom *et al.* 2005:153). Blom *et al.*'s (*ibid.*) extensive study of almost 1,500 individuals concluded that environmental stressors, including parasites and disease, were likely associated with anemia in Pre-Columbian Andean populations. It is clear that these issues were front and center for the Farfán population.

Dental disease in the ancient Andes was, in part, the product of a high maize diet. This has been established both by dental pathological lesions and isotopic analysis of bone for the Moche Period (*cf.* Verano 1997a:195) and by the isotopic evidence presented here. Dental pain, though cavities, tooth loss, and abscesses, even among young individuals, must have been a constant companion to the ongoing life of an occupant of Farfán. It is even possible that dental infections were a significant contributor to mortality at this time.

The diseases experienced by the occupants of Farfán include tuberculosis (TB) and other infectious diseases, fungal diseases, and dietarily-induced diseases, including perhaps scurvy. The fungal diseases are likely fostered by the arid environment. TB and many other infectious diseases are the product of close and unsanitary living conditions (Larsen 2002:125; Roberts and Buikstra 2003). TB first appeared in South America in the Early Intermediate Period, but became well established as urbanism spread (Gómez i Prat and Mendonça de Souza 2003). Suffice to say, living conditions and sanitation influenced quality of life.

The possible presence of scurvy in this sample, in an area where sources of vitamin C are plentiful, is very puzzling, which is one reason a systemic infection was considered a more likely explanation for the lesions on several individuals. However, scurvy has been reported on the North Coast as early as the Early Horizon (Yoshida 2004:141), and Klaus (2014 [2013]) has described it for colonial material. This suggests that individuals may have had their diet deliberately manipulated, either in terms of dietary composition or quantity (*e.g.* fasting), likely without a full appreciation of the consequences.

The array of diseases present at Farfán, particularly those that require a large population

reservoir, such as tuberculosis, probably reflect the mobility which characterizes this sample. Some degree of mobility was present in Moche and Lambayeque times (White *et al.* 2009), but the Inca road system and wide-ranging trade routes would have encouraged the spread of diseases, along with the people, ideas and trade goods (*cf.* Gómez i Prat and Mendonça de Souza 2003).

Ethnic Differences in Bioarchaeological Traits

Cranial modification Form C is strongly associated with individuals buried with Lambayeque artifacts, but other bioarchaeological data does not suggest that ethnicity affected other differences between the Lambayeque and non-Lambayeque affiliated groups in terms of their experiences of everyday life. The oxygen isotope values suggest that individuals in both groups had spent at least part of their time elsewhere. Mobility in both groups is directed to other coastal areas, rather than to the highlands. Both Lambayeque and non-Lambayeque groups experienced poor dental health, pathological conditions of the spine, trauma, and other maladies. Having said that, the Lambayeque individuals do differ slightly from the rest of the non-*aqlla* occupants of the site. The sex ratio among the Lambayeque individuals is more similar to that of the *aqllakona* than to the rest of the site. Of the seven adults in this sample, six are female. The seventh individual is a male from Compound VI Cemetery with the Form C modification, but no Lambayeque cultural goods, so perhaps he was expressing Inca ethnicity at the time of his death. It is possible that these Lambayeque women were present and buried at Farfán because they played a supportive function for the *aqllakona*. Five of the seven (71.4 percent) Lambayeque adult individuals demonstrated marked musculo-skeletal markers on their upper arms. This trait was also observed in individuals in the rest of the site, but at lower

frequencies (10 out of 41, or 24.4 percent, adolescents or adults). This may suggest that the Lambayeque women were more likely to engage in a repetitive activity that utilized their deltoid and triceps muscles. Unfortunately, we cannot be specific in terms of identifying the activity.

Status and Life at Farfán

As demonstrated in the biological antecedents part of this chapter, status appears to affect stature, so one might assume that individuals buried at an important site like Farfán would show tall stature and good health. However, the Farfán female mean stature is more similar to the commoner burials from Pacatnamú than the higher-status burials from San José de Moro + Pacatnamú. That would suggest that the females were, on average, not being provided critical resources during their growth period. However, whether this is a function of life at Farfán or their natal site is not clear. The male stature is reduced relative to the high-status burials from San José de Moro + Pacatnamú, but this may reflect selective burial as much as resource access (see the discussion of Summary of the Biological Antecedents and Comparison with Farfán above).

Six elderly females stand out in terms of their burial goods, as being of particularly high status: Mound G T4 and T11, Cemetery J-JOS1 and the Huaca Burial Platform East Tomb 4, East Tomb 7, and North Tomb 1B. However, while the burial goods indicate high status, that status does not appear to have affected their underlying bioarchaeological measures. Oxygen isotope analysis suggests that all were local to the Jequetepeque region. Three of the six were medium statured, two were tall (G T4 and ET 7), and one was short (N T1B). All suffered from at least some dental problems, some had likely suffered from infections, and they appeared to have eaten a fairly typical diet. Two of the six had the rare Form D cranial modification

(Mound G T11 and Cemetery J-JO S1). However, they were found in very different burial contexts: one on the top of an artificial mound (Mound G T11) and the other as a disarticulated, secondary burial (JO S1) in her own, above-ground adobe tomb. The former is associated with some Lambayeque grave goods, while the latter is associated mainly with Inca-affiliated tomb offerings. Thus, it is difficult to see what the connection might be.

The elderly female (Mound G T11) who likely suffered from a disease like cerebral palsy, demonstrates that severe illness did not preclude one from having high status at Farfán. She must have received a great deal of care during her life, as she would not have been able to walk on her own, and her limb contracture would have severely affected her ability to do many tasks. The elderly female in North Tomb 1B had lesions on her spine that are consistent with tuberculosis. Both of these examples could be effectively explored using Tilley's Bioarchaeology of Care model to assess the impact on, and response of the community (*cf.* Tilley 2015).

DEATH AT FARFÁN

The discussion of the conditions of life leads to a consideration of death and burial at the site to determine who was buried at Farfán. For the purposes of this discussion, I will focus on the primary burials, because the secondary burials were likely individuals excavated from burials who were no longer known, and may not have been occupants of the site (see Chapter 3, this volume).

The mortality profile for the sample of primary burials recovered from Farfán (Figure 8.3) clearly differs from what one would expect of an archaeological burial assemblage. Peruvian examples can be found in Verano (1997a) for the Moche site of Pacatnamú, Drusini *et al.* (2001) for the Nazca Valley, and Tung (2003)

for the Wari heartland. These other profiles show the expected high mortality rate in the very young, dropping off in adolescence, rising into early adulthood, and trailing off in the older ages as a smaller proportion is alive at that stage. However, in comparison to the expected profile, the Farfán profile shows relatively few very young individuals, a substantial number of juveniles and adolescents, a lower number of young adults, and large numbers of middle-aged and old adults.

The elimination of the “adolescent dip” in mortality is almost entirely accounted for by the sample from the Huaca Burial Platform, where thirteen of the site's sixteen primary juveniles and adolescents were found. This likely reflects the presence of teenage girls among the *aqllakona*. Half of the entire site's elderly adults come from the Huaca Burial Platform (five out of ten primary individuals across the site), perhaps representing the *mamakona* of the *aqllawasi*.

The fact that Farfán was an administrative center with an *aqllawasi* is consistent with the mortality profile as discussed above with the mid- and old adults representing experienced individuals. Thus, we can safely assume that at least some of these individuals lived, as well as died, at the site, and, while we must be cautious in our interpretations, we can consider the bioarchaeological data to shed some light on life at Farfán.

Conditions of Life and Death in the *Aqllawasi*

The Huaca Burial Platform is a key focus of the site of Farfán, physically and functionally very different from the other components of the site. However, the bioarchaeological evidence suggests that life in the *aqllawasi* was not very different from life elsewhere at the site in terms of access to resources, exposure to disease, minor trauma, and other vagaries of quotidian life. The physical evidence does suggest that it

was a highly-variable group, likely drawn from a number of different geographic locations. As noted above, oxygen isotope analysis suggests that non-*aqlla* occupants of Farfán were derived from other coastal areas. However, mobility within the *aqllakona* was evidenced by women who were from both the coast and the highlands.

The bones of these individuals were checked carefully for evidence of cut marks and broken hyoids that would have clearly indicated if and how they were sacrificed. However, no such evidence was found. There has been a great deal of discussion regarding how sacrificial contexts can be identified in the archaeological record, particularly in the absence of clear evidence for a violent death. Eeckhout and Owens (2008) summarized traits often used in this context, two of which are particularly relevant here: a special setting and a peculiar population bias. The setting of the Huaca Burial Platform is a special setting, and there is a very strong demographic bias to the sample, both in terms of age and sex distribution.

The primary *aqllakona* burials were also checked carefully for evidence that the individuals may have died elsewhere, and been curated for some time before final burial, as has been reported for the Moche (e.g. Nelson 1998). No such evidence was found. While the Farfán skeletons themselves do not bear witness to the mode of sacrifice, the context argues quite strongly that this is evidence for human sacrifice. In addition to Farfán, two other North Coast sites are generally accepted as having sacrificed individuals with no direct evidence of cut marks or strangulation: Túcume (the *aqlla* sample from the Stone Temple; Toyne 2002) and Chan Chan (the retainer burials from the Las Avispas burial mound; Nelson and Mackey 2011). These sites also do not have direct osteological evidence for the mode of sacrifice (Toyne 2002, 2008:34 and Nelson and Mackey 2011

respectively). It is worthy of note that the llamas sacrificed as burial offerings at Farfán also show no cut marks that indicate how they were killed. Cut marks on the camelids are restricted to joints where the animals were being dismembered (See Richter Lagha, Appendix 3, this volume).

Secondary Burials

Thirty-two burials from Farfán are classified as secondary burials; that is, final burial did not immediately follow the death of the individual. These secondary burials were found in three cemeteries: Cemeteries I and J and the Huaca Burial Platform. Delayed burial has now been well documented for the Moche (Millaire 2004; Nelson 1998; Verano 1997b) and likely involved curation of corpses for an extended period of time before burial. There is also evidence for the opening of tombs or exhumation of burials for the retrieval of skeletal elements for use in later burials as offerings (Hecker and Hecker 1992; Millaire 2004), presumably for their magico-religious powers (*ibid.*). The evidence at Farfán suggests that many elements of the Moche postmortem treatment rituals were retained into Inca times.

The skeletal elements represented in the secondary burials at Farfán are catalogued in Table 8.7. The first conclusion that can be reached is that there was no systematic selection for particular skeletal elements. The second is that the degree of completeness of the skeleton is highly variable. This suggests that there is no single explanation of the selection and burial process that will explain all of these burials.

The most complete secondary burials are from Cemetery J: J25 S2, J26 S1, and JO S1. The J25 S2 and J26 S1 individuals are missing only elements of their hands and feet, and so conform well to the Moche curation model, where the body as a whole was moved some

time after death, sometimes dislodging small bones (*cf.* Nelson 1998). The JO S1 individual, however, was disarticulated but very complete. This pattern would fit better with the model of a tomb opening and careful removal of the complete, but totally excarnated skeleton for interment in JO S1.

At the other end of the secondary burial spectrum are the offerings of isolated bones that appear to have been exhumed from older graves, and are frequently fragmentary and generally incomplete. As noted above, there is no apparent selection for specific skeletal elements, and as discussed in Chapter 3B on the Huaca Burial Platform, the presiding officials did not appear to have the anatomical knowledge to make selections on the basis of gender. Millaire (2004: 383) suggested that these offerings “should be understood as surrogates of complete skeletons or as *pars pro toto* of ancestors.”

In between these two extremes lie secondary burials that are missing significant portions of the skeleton such as the entire thorax, crania, and whole limbs, or where two individuals are completely intermingled. These could be individuals who were curated for lengthy periods of time. It is worth noting that the Late Horizon burials were positioned in a seated position and wrapped with a simple shroud, as opposed to the Moche burials, many of whom were wrapped in both textiles and cane mats or coffins. It would be much more challenging to carry a loose, partially disarticulated skeleton, whose shroud may have also been in a state of decay, than an extended burial that was stabilized by the cane enclosure. Thus, it is very possible that significant portions of the skeleton could be dislodged during transportation of a long-curated, shrouded, seated body. It is also possible that they represent individuals recovered from tomb openings or excavations whose state of preservation made it difficult for the presiding officials to keep the body intact. However, if Millaire’s

(*ibid.*) suggestion of the *pars pro toto* concept pertained, then the completeness of the body was less of a concern than the presence of at least some of the remains of an ancestor.

Suffice it to say, a wide variety of burial practices and funerary rituals was employed: from primary burials of the recently deceased to secondary burials of individuals who had been curated for differing periods of time, and from individuals recovered whole from older tombs to individuals only partially recovered by either opening older tombs or excavating older burials. These practices were first seen in Moche times and they appear to have continued despite the presence of the Inca.

CONCLUSIONS

The quest to answer the key questions set out at the beginning of this chapter brought new information to light, but it has also led to new questions. First, based on Verano’s work at Pacatnamú (Verano 1987, 1997a) we might have expected the different burial facilities to represent different ethnic groups. However, while each facility is characterized by a unique combination of biological characteristics, these characteristics overlap enough that it is clear that ethnicity was not a key factor in determining where an individual would be buried. One of the characteristics of the *aqllakona* sample from the Huaca Burial Platform was that it was extremely diverse. This conclusion is consistent with the idea that the *aqllakona* were drawn from a wide geographic area, and from many different social groups. Finally, as discussed in detail in Chapter 3B, this volume, the physical descriptions of the *aqllakona* themselves show numerous points of disagreement with the picture painted of life in an *aqllawasi* by the Spanish chronicles.

Second, these results demonstrate that the bioarchaeological characteristics of the Late

Horizon Farfán sample are firmly based on those of the populations that preceded it on the North Coast. It is clear that the interaction between culture and biology is dynamic, and it ebbs and flows over time as cultural processes ebb and flow. While we do not always understand the cultural reasons behind the physical patterns we see (e.g. the range of variation for male stature in the Inca Period), these patterns give us the opportunity to explore cultural decision-making processes to which we would not otherwise have access.

While the dominant bioarchaeological signal in this sample is coastal, there are several intriguing indications of interactions with the highlands. The only individuals with chemical signals indicating residence in the highlands came from the Huaca Burial Platform (E T5, CT 11A, CT 11D, and S21 B1). The single case of Aymara annular modification (Form G) also came from a secondary burial in the Huaca Burial Platform (S26 A2). Individuals with relatively long crania (cranial index <80 ; $N=2$ non-modified Form A, $N=5$ modified Form F) are found in Cemeteries I and J. Following Ross *et al.* (2008), it is likely that these individuals were of highland ancestry. Mound G and Compound VI have purely coastal bioarchaeological profiles. This pattern may reflect Inca administrative strategies as they played out at Farfán.

Finally, this analysis has shed new light on the conditions of life at an important administrative center and on a little known cultural institution within that center. Farfán sat at the center of trade and cultural interactions with new people constantly coming and going, so it must have been a very dynamic and exciting place to be. However, even in the sheltered confines of the *aqllawasi*, disease lurked, quite likely in the context of living conditions that we would not now find very salubrious. But such is the trade off in urban settlements everywhere,

and clearly the benefits of being at the site outweighed the negative aspects encountered.

The site of Farfán lay at the crossroads of the North Coast portion of the Inca Empire, and it was occupied by a diverse group of administrators and *aqllakona*. The physical characteristics of the Farfán population were shaped by thousands of years of interactions between evolving cultures and the coastal environment. The spectrum of burial practices expressed at Farfán also appears to have deep roots in the earlier cultural traditions of the North Coast. The occupants of Farfán represent both the sacred and secular realms, and as such they present an important window into daily life in the fifteenth century.

Cemetery	Neonate	Infant	Child	Juvenile	Adolescent	Young adult	Mid-adult	Old adult
Huaca burial platform	1	0	3	7	6	2	3	5
J	2	3	2	2	0	4	2	1
I	1	0	2	0	0	0	2	0
Mound G	2	1	1	0	0	0	2	1
VI	1	1	2	0	1	0	3	3
Total	7	5	10	9	7	6	12	10

Table 8.1. Age Breakdown by Cemetery—Primary Burials Only (N=66).

Cemetery	Females	Males	Total
Huaca Burial Platform	8	2	10
J	4	3	7
I	1	1	2
Mound G	3	0	3
VI	3	3	6
Total	19	9	28

Table 8.2. Sex Distribution by Cemetery—Sexable Adults, Primary Burials Only.

Cemetery	Form A	Form B	Form C	Form D	Form E	Form F
Huaca Burial Platform	7	11	2	0	1	0
J	5	5	0	1	0	3
I	0	2	2	0	0	0
Mound G	0	1	1	1	0	0
VI	2	5	1	0	0	0
Total	14	24	6	2	1	3

Table 8.3. Cranial Modification Distribution by Cemetery—All Ages, Primary Burials Only.

EIGENVALUES				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical correlation
1	.286 ^a	58.1	58.1	.472
2	.167 ^a	33.9	92.0	.378
3	.039 ^a	8.0	100.0	.195

WILKS' LAMBDA				
Test of Function(s)	Wilks' Lambda	Chi-Square	df	Sig.
1 through 3	.641	9.561	15	.846
2 through 3	.824	4.151	8	.843
3	.962	.831	3	.842

CLASSIFICATION RESULTS ^b						
Cemetery		Predicted Group Membership				
		VI	I	J	Huaca Burial Platform	Total
Original Count	Huaca Burial Platform	4	1	3	3	11
	J	1	2	4	2	9
	I	1	2	0	0	3
	VI	2	1	1	0	4

CLASSIFICATION RESULTS ^b						
Cemetery		Predicted Group Membership				
		VI	I	J	Huaca Burial Platform	Total
%	Huaca Burial Platform	36.4	9.1	27.3	27.3	100.0
	J	11.1	22.2	44.4	22.2	100.0
	I	33.3	66.7	.0	.0	100.0
	VI	50.0	25.0	25.0	.0	100.0

^a First 3 canonical discriminant functions were used in the analysis.

^b 40.7% of original grouped cases correctly classified.

Table 8.4. Details of the Discriminant Function Analysis Based on Six Facial Measurements. (Upper facial height, nasal breadth, orbit height and breadth and interorbital breadth; analysis includes all individuals for whom these traits could be observed).

<i>Period</i>	<i>Site</i>	<i>No.</i>	<i>Adjusted Stature (cm)</i>	<i>Adjustment Reason</i>	<i>Reference</i>
FEMALES					
Inca	Farfán	18	144.0 (std(x)=3.42)	As calculated per Del Angel & Cisneros (2004); based on maximum femoral length only	Table 8.6
	Túcume	14	144.1 (std(x)=3.15)	146.6-2.5cm adjustment per Genovés 1967	Toyne 2002:80
Lambayeque	Sicán	14	147.7 (std(x)=3.21)	Statures calculated from femoral lengths; original statures calculated using Trotter and Gleser 1958	Farnum 2004: Table 11
	El Brujo	11	146.4 (std(x)=6.05)	Statures calculated from femoral lengths; original statures calculated using Trotter and Gleser 1958	Farnum 2004: Table 12
	San José de Moro + Pacatnamú	5	145.6 (std(x)=4.21)	As calculated per Del Angel & Cisneros 2004	Table 8.6
Moche	Sipán	1	156.7	Recalculated from femoral length per Del Angel & Cisneros 2004	Verano 1997b: 672
	San José de Moro + Pacatnamú	8	147.3 (std(x)=4.81)	As calculated per Del Angel & Cisneros 2004	Table 8.6
	Pacatnamú S2	18	144.9	147.4-2.5cm adjustment per Genovés 1967	Verano 1997a: 206
	Pacatnamú S4	21	143.7	146.2-2.5cm adjustment per Genovés 1967	Verano 1997a: 206
	Pacatnamú H45CM1	13	144.4	146.9-2.5cm adjustment per Genovés 1967	Verano 1997a: 206

Table 8.5. Comparative Stature Table (Females).

<i>Period</i>	<i>Site</i>	<i>No.</i>	<i>Adjusted Stature (cm)</i>	<i>Adjustment Reason</i>	<i>Reference</i>
MALES					
Inca	Farfán	6	154.4 (std(x)=2.13)	As calculated per Del Angel & Cisneros (2004); based on maximum femoral length only	Table 8.6
	Tucume	3	156.2 (std(x)=2.84)	158.7- 2.5cm per Genovés (1967)	Toyne 2002:80
Lambayeque	Sicán	2	154.8 (std(x)=2.24)	Statures calculated from femoral lengths; original statures calculated using Trotter & Gleser (1958)	Farnum 2004: Table 11
	El Brujo	17	155.1 (std(x)=1.85)	Statures calculated from femoral lengths; original statures calculated using Trotter & Gleser (1958)	Farnum 2004: Table 12
	San José de Moro + Pacatnamú	6	158.3 (std(x)=5.94)	As calculated per Del Angel & Cisneros (2004)	Table 8.6
Moche	Sipán	2	161.0 (std(x)=4.3)	Recalculated from femoral lengths per Del Angel & Cisneros (2004)	Verano 1997b: 672
	San José de Moro + Pacatnamú	16	159.0 (std(x)=5.98)	As calculated per Del Angel & Cisneros (2004)	Table 8.6
	Pacatnamú S2	19	154.2	156.7- 2.5cm per Genovés (1967)	Verano 1997a: 206
	Pacatnamú S4	17	155.8	156.7 2.5cm per Genovés (1967)	Verano 1997a: 206
	Pacatnamú H45CM1	17	155.3	157.8-2.5cm per Genovés (1967)	Verano 1997a: 206

Table 8.5. Comparative Stature Table (Males; cont.).

Site name	Cemetery	Burial	Sex	Period	Period num	Femoral length (cm)	Stature (cm)	Mean stature (cm)	Standard deviation	N
Farfán	huaca burial platform	C T2a	Female	Inca	3	35.6	139.4	n/a	n/a	n/a
Farfán	huaca burial platform	C T11a	Female	Inca	3	36.2	140.9	n/a	n/a	n/a
Farfán	huaca burial platform	C T11b	Female	Inca	3	35.7	139.6	n/a	n/a	n/a
Farfán	huaca burial platform	C T11c	Female	Inca	3	38.8	147.7	n/a	n/a	n/a
Farfán	huaca burial platform	C T11d	Female	Inca	3	36.4	141.5	n/a	n/a	n/a
Farfán	huaca burial platform	E T1	Female	Inca	3	39.1	148.4	n/a	n/a	n/a
Farfán	huaca burial platform	E T4	Female	Inca	3	36.7	142.2	n/a	n/a	n/a
Farfán	huaca burial platform	E T5	Female	Inca	3	39	148.2	n/a	n/a	n/a
Farfán	huaca burial platform	E T7	Female	Inca	3	39.4	149.2	n/a	n/a	n/a
Farfán	huaca burial platform	N T1a	Female	Inca	3	36.7	142.2	n/a	n/a	n/a
Farfán	huaca burial platform	N T1b	Female	Inca	3	34.9	137.6	n/a	n/a	n/a
Farfán	cemetery I	I10 T2	Female	Inca	3	38.2	146.1	n/a	n/a	n/a
Farfán	cemetery J	J25 T8	Female	Inca	3	37.2	143.5	n/a	n/a	n/a
Farfán	cemetery J	J25 T9	Female	Inca	3	38	145.6	n/a	n/a	n/a
Farfán	compound VI	VI II/T2	Female	Inca	3	37.4	144.0	n/a	n/a	n/a
Farfán	compound VI	VI III/T1	Female	Inca	3	37.8	145.1	n/a	n/a	n/a
Farfán	mound G	G T3a	Female	Inca	3	37.3	143.8	n/a	n/a	n/a
Farfán	mound G	G T4	Female	Inca	3	38.5	146.9	144.0	3.42	18
Farfán	huaca burial platform	CH 1a	Male	Inca	3	40	154.4	n/a	n/a	n/a
Farfán	cemetery I	I3 T1a	Male	Inca	3	40.2	154.8	n/a	n/a	n/a
Farfán	cemetery J	J14 T1	Male	Inca	3	38.2	150.3	n/a	n/a	n/a
Farfán	cemetery J	J25 T1	Male	Inca	3	40.9	156.4	n/a	n/a	n/a
Farfán	cemetery J	J25 T6	Male	Inca	3	40.3	155.1	n/a	n/a	n/a
Farfán	compound VI	VI III/T2	Male	Inca	3	40.5	155.5	154.4	2.13	6
Pacatnamú		M 1	Female	Lambayeque	2	38.3	146.4	n/a	n/a	n/a
Pacatnamú		M II	Female	Lambayeque	2	36.6	142.0	n/a	n/a	n/a
San José de Moro		MU 412	Female	Lambayeque	2	40.7	152.6	n/a	n/a	n/a
San José de Moro		MU 501	Female	Lambayeque	2	37.5	144.3	n/a	n/a	n/a
San José de Moro		MU 502	Female	Lambayeque	2	37	143.0	145.6	4.21	5
Pacatnamú		G	Male	Lambayeque	2	42.7	160.5	n/a	n/a	n/a
Pacatnamú		G no designation	Male	Lambayeque	2	42.7	160.5	n/a	n/a	n/a
Pacatnamú		M 9	Male	Lambayeque	2	44.9	165.5	n/a	n/a	n/a
San José de Moro		MU 409	Male	Lambayeque	2	39	152.1	n/a	n/a	n/a
San José de Moro		MU 408	Male	Lambayeque	2	38.1	150.1	n/a	n/a	n/a
San José de Moro		MU 503	Male	Lambayeque	2	43.1	161.4	158.3	5.94	6
Pacatnamú		B-3	Female	Moche	1	39.2	148.7	n/a	n/a	n/a
Pacatnamú		B-55	Female	Moche	1	37.7	144.8	n/a	n/a	n/a
Pacatnamú		M 12c offering 4	Female	Moche	1	36.2	140.9	n/a	n/a	n/a
San José de Moro		MU 313	Female	Moche	1	40.9	153.1	n/a	n/a	n/a
San José de Moro		MU 405	Female	Moche	1	38	145.6	n/a	n/a	n/a
San José de Moro		MU 409 e1	Female	Moche	1	36.5	141.7	n/a	n/a	n/a
San José de Moro		MU 417	Female	Moche	1	41	153.4	n/a	n/a	n/a
San José de Moro		MU 509a	Female	Moche	1	39.8	150.3	147.3	4.81	8
Pacatnamú		B-4	Male	Moche	1	42	158.9	n/a	n/a	n/a
Pacatnamú		B-43	Male	Moche	1	42.5	160.0	n/a	n/a	n/a
Pacatnamú		B-63	Male	Moche	1	41	156.6	n/a	n/a	n/a
Pacatnamú		E 1a offering 4	Male	Moche	1	42.2	159.3	n/a	n/a	n/a
Pacatnamú		E 1c	Male	Moche	1	41.8	158.4	n/a	n/a	n/a
Pacatnamú		E 1d alpha	Male	Moche	1	38.3	150.5	n/a	n/a	n/a
Pacatnamú		E 1e	Male	Moche	1	41.8	158.4	n/a	n/a	n/a
Pacatnamú		E 1g	Male	Moche	1	46.2	168.4	n/a	n/a	n/a
Pacatnamú		E1d beta offering 3	Male	Moche	1	36.9	147.4	n/a	n/a	n/a
San José de Moro		MU 312	Male	Moche	1	41.3	157.3	n/a	n/a	n/a
San José de Moro		MU 318	Male	Moche	1	43.6	162.5	n/a	n/a	n/a
San José de Moro		MU 319	Male	Moche	1	43.8	163.0	n/a	n/a	n/a
San José de Moro		MU 407	Male	Moche	1	40.6	155.7	n/a	n/a	n/a
San José de Moro		MU 409 E2	Male	Moche	1	47.4	171.1	n/a	n/a	n/a
San José de Moro		MU 413	Male	Moche	1	43.7	162.7	n/a	n/a	n/a
San José de Moro		MU 416	Male	Moche	1	39.6	153.5	159.0	5.98	16

Table 8.6. Primary data used in this chapter from Farfán and San José de Moro+Pacatnamú.

<i>Individual</i>	<i>Skeletal Elements Preserved</i>
<i>Huaca</i> Burial Platform	
S21B	Bones of both legs, both upper arms and hands (but not lower arm bones); no cranium, mandible, pelvis, feet; several thoracic vertebrae are all that remains of the thorax and spine
S21A	A tibia, bones of the foot, scapula, humerus, teeth and cranial vault fragments and many other bone fragments
S21 C	Pelvic fragments, right femur, ankle bones and other bone fragments
S21 D	Pelvic fragments and other bone fragments
S26A1	Cranium and vertebrae C1–C6; no mandible
S26B2	Cranium and mandible; vertebrae C1–C4
S26A3	Cranium, isolated teeth, ulna, radius, and femur
S26A4	Most of the spine, hands, feet, fragments of the pelvis, fragments of the scapulae and the sternum; several teeth are preserved; long bones preserved include the left tibia, both fibulae, the right clavicle, and unsided ulna fragments
S26A5	Two complete feet
S26A6	Major bones of the right arm and leg, both scapulae, fragments of the ribs and vertebrae, a complete pelvis, both patellae, the right forearm and both feet; no cranium or mandible
S26A7	Right and left humeri, a fragment of the left ulna, bones of both hands, the right femur, tibia and fibula, fragments of the right tibia and elements of both feet; no thorax, pelvis, cranium or mandible
S26A8	Mandible only
S26A9	Almost complete skeleton—she is missing her left arm bones, right lower arm bones, right leg bones, both fibulae, 2 lumbar vertebrae and the right clavicle
S26B2	Bones of both arms, the thorax (not complete), the left half of the pelvis and the left leg; no cranium
S26B3	Miscellaneous fragments including pieces of the pelvis and major long bones
S26B4	Miscellaneous fragments including pieces of the pelvis and major long bones
S31B	Right ulna, left fibula, right femur, right tibia both calcanei, isolated cervical, thoracic and lumbar vertebrae, a few rib fragments and a mandible; no cranium or mandible
S31A	Major bones of the left leg, foot bones from both sides, the left pelvis, both patellae, elements of the left hand, the left radius and some lumbar vertebrae; no cranium or mandible
S31 C	Right humerus and radius

/continued

Table 8.7. Secondary Burial Skeletal Element Inventory.

<i>Individual</i>	<i>Skeletal Elements Preserved</i>
Cemetery I	
I10S1	Cranium, some elements of the arms and hands, the bones of the legs; the only element of the thorax is one thoracic vertebra; no pelvis
I5S1	No data
I16S1	Cranium (missing mandible and facial bones), the right humerus and right and left radii, left fibula and left fourth metacarpal and one toe phalanx; missing all elements of the thorax (except one vertebral end of a rib), the pelvis, most arm and hand bones and most leg and foot bones
I16S2	Cranium only
I16S3	Pelvis, the thorax (sternum, manubrium, various ribs, right clavicle), elements of the hands and feet and the distal half of the right radius; no cranium preserved for this individual (although the medial portion of the hyoid bone is preserved)
I16S4	Major bones of the right leg, right humerus, both radii and ulnae, and mixed remains from both hands and feet as well as fragmentary remains of the thorax (fragments of the left clavicle, spine, right scapula, ribs, sternum, zyphoid process); no remains of the cranial vault preserved, although there is a fragment of mandible; there is an "extra" ankle included with this material—a left calcaneus and talus
I19S1A and S1B	The intermingled material could not be completely separated in order to confidently identify the inventory for each individual; the intermingled inventory included the major bones of the pelvis, legs and feet for both individuals, one fairly complete spine and non-matching elements of a second spine; there are only 2 humeri, 1 radius, 2 scapulae, miscellaneous rib fragments, parts of 1 hand; these upper body elements could not be confidently assigned to one or the other individual and so may belong to one, or both (although at least 1 humerus probably belongs to A2); there are some cranial fragments that were judged to belong to the A1 individual
Cemetery J	
J14S1	Fragments of the major bones of the arms and legs, pelvis, lumbar vertebrae, and bones of the hands; no bones of the feet, thoracic or cervical vertebrae and there is no cranium
J25S1	Complete cranium, thorax, major arm and leg bones, but the hands and feet are incomplete and fragmentary; many of the bones are fragmentary; there is an extra left 5th metacarpal that clearly belongs to a smaller individual, an extra distal femoral fragment and several extra tibia fragments
J25S2	The skeleton of this individual is largely complete; all anatomical elements are represented, although many of the bones are fragmentary
J2621	This individual is represented by most of the skeleton; the cranium is very fragmentary, but largely complete; the postcranial skeleton is also fragmentary but largely complete; missing elements of the hands and feet
JOS1	Skeleton complete but completely disarticulated

Table 8.7. Secondary Burial Skeletal Element Inventory (cont.).

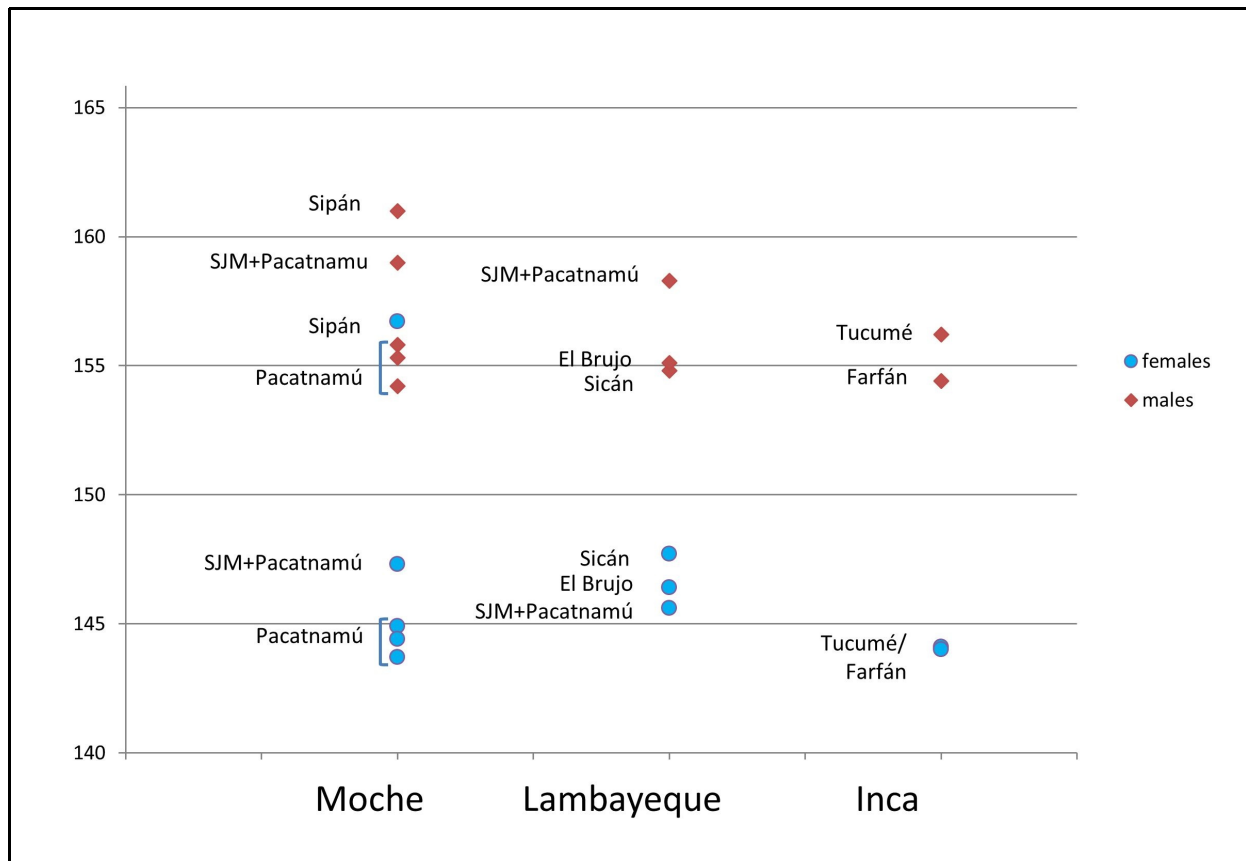


Figure 8.1. Stature (in centimeters) by site and time period of available North Coast sites.
Site means are presented in Table 8.5.

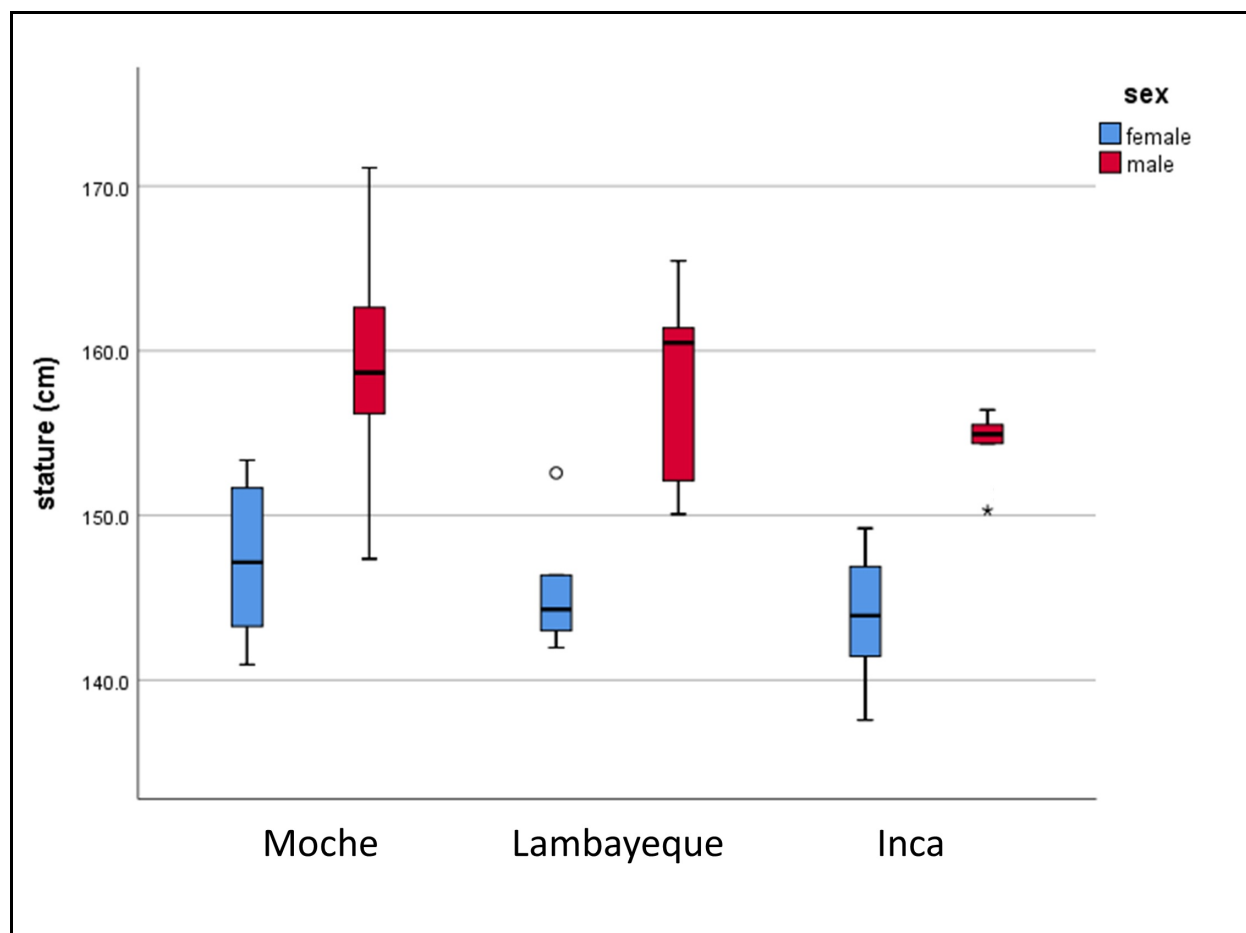


Figure 8.2. Box and whisker plots for primary data for stature (in centimeters) from San José de Moro + Pacatnamú (Moche and Lambayeque) and Farfán (Inca; see Table 8.6).

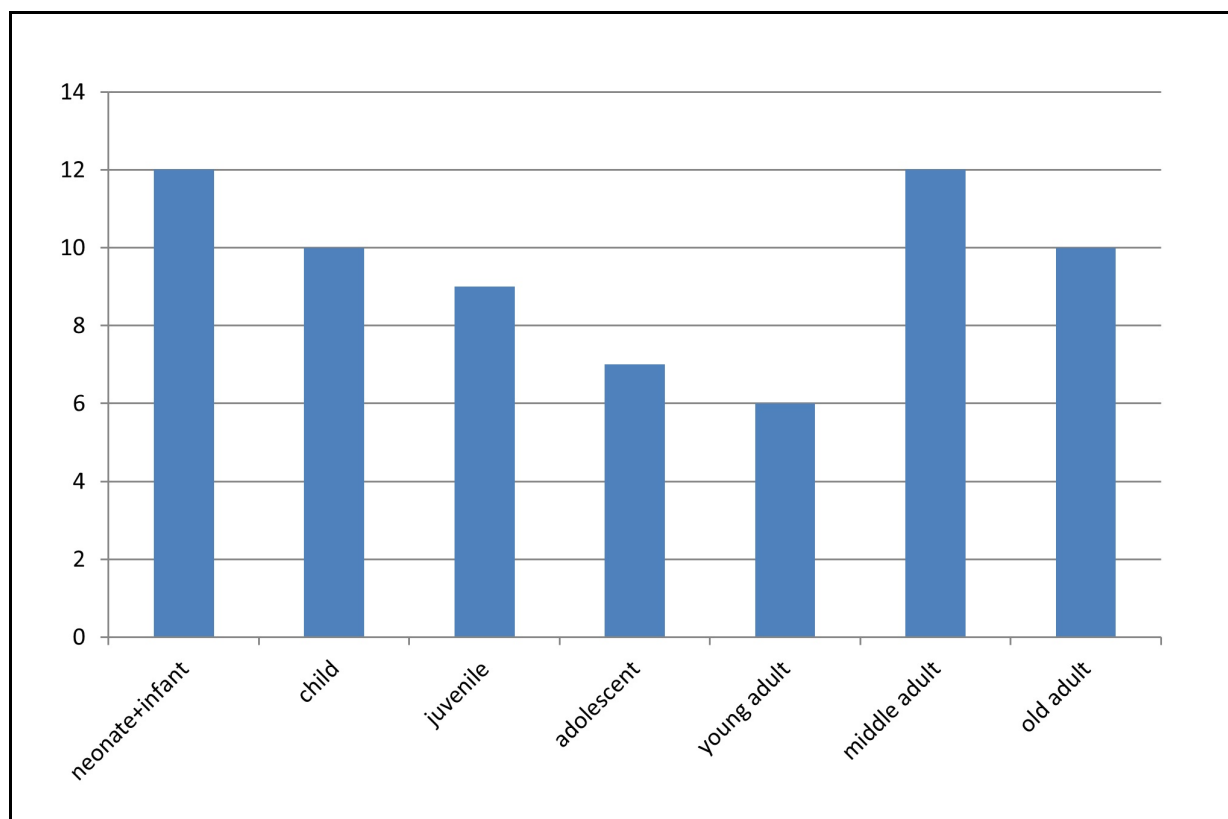


Figure 8.3. Demographic profile of the primary burials from Farfán.

CHAPTER 9

SUMMARY OF LIFE, DEATH, AND BURIAL PRACTICES

Carol J. Mackey

Until the inception of the Farfán Project in 1999, most scholars believed that the six compounds at Farfán had been built and occupied by the Chimú state. After twelve years of excavation, mapping, and analysis, Farfán's long, complex history has been revealed. In fact, three polities—the Lambayeque, Chimú, and Inca—occupied Farfán over the course of four hundred years. The first occupants, the Lambayeque, held sway for the longest period (A.D. 1100–1320), while the Chimú exerted control from approximately A.D. 1320 to about 1470. The Inca presence was considerably shorter (c. A.D. 1470–1535), and there is now evidence that individuals affiliated with each of the three cultures were buried at Farfán.

The ninety-eight Inca period burials excavated by the Farfán Project include both primary interments (complete skeletal remains and grave goods of individuals buried in their original location, N=66) and secondary burials (individuals who had been buried or warehoused elsewhere and later reburied at Farfán, N=32). Although the burial facilities have unique characteristics, they share many common burial practice features, uniting them temporally and culturally. These five burial facilities include: the Huaca Burial Platform for the interment of the sacrificed *aqllakona*, or Inca Chosen Women (Chapter 3A); the burial facilities for the interment of the Inca-affiliated administrators and possibly their families in Cemetery J and Tomb JO (Chapter 4A); two cemeteries that held Lambayeque-affiliated individuals, Cemetery I (Chapter 5A) and the Mound G Cemetery (Chapter 6A); and also the Compound VI

Cemetery (Chapter 7A) for individuals identified with Inca administration.

This summary chapter details the results of our research campaign, focusing on mortuary practices and the imperial use of mortuary rituals to promote the political agenda of the state. The questions guiding our research, presented in Chapter 1, are repeated below with the results of our fieldwork and analyses.

Does the intra-site analysis of burial treatment indicate a pattern for all five of Farfán's Inca mortuary facilities, and what are their antecedents?

The data generated from the burials regarding treatment and preparation of the body for burial focus on the position, covering, personal adornment, and orientation to a cardinal direction.

Burial Position

Most individuals in Farfán's burial facilities were interred in a seated, cross-legged position with the knees apart, while neonates and infants were generally on their backs in a supine position. The seated burial position is a practice of long antiquity on Peru's North Coast and is associated with Lambayeque culture (c. A.D. 900; Shimada *et al.* 2004:374). One explanation for the choice of the Lambayeque burial position is the Inca's close relationship with the Lambayeque lords who may have co-ruled Farfán (Mackey 2011 [2016]). The evidence for this alliance stems from the construction of two

compounds built according to Lambayeque architectural canons to accommodate their functionaries and ceremonies (Compounds I and V; Mackey 2011 [2016]: note 7, p. 156, 160–161).

Another example of an adherence to a Lambayeque burial practice like that found at Farfán was first noted at Huaca Loro in Batán Grande in the Lambayeque Valley (c. A.D. 1000; Shimada *et al.* 2004:374). Repeated at Farfán some four hundred years later, the burial practice, termed “symmetrical opposition”, consists of two ethnic groups facing each other. At Huaca Loro the two groups were represented by Moche and Lambayeque individuals, while at Farfán the two groups, in Cemetery I, are those identified as Lambayeque on the cemetery’s south side and individuals with Inca affiliations on the north. This highlights the continuation of a practice with deep historical roots on the coast.

The Inca chose a coastal seated position to bury bodies not only at Farfán, but at other administrative facilities on the North Coast. This is in contrast with the highland Inca burial position, where a body is seated with the knees tightly flexed and drawn to the chin (Salazar 2007; Verano 2003). This type of flexed position is rare on the coast.

Body Coverings

It is assumed that all North Coast burials were covered with shrouds. Although this is generally true of the Farfán burials, the sample did show some variation. At Farfán, the shrouds are generally one, or sometimes two, plain-weave cloths of cotton and camelid fiber. Careful examination of the bodies by Andrew J. Nelson and his team revealed fragments of cloth in the hair, thorax, and legs of the bodies, but fabric was mostly absent from the undersides (Andrew J. Nelson, personal communication, 2002). The most likely reason for this absence is that body

decomposition products would have drained to the lowermost point of the burial environment, where they pooled, leading to the destruction of the fabric (Janaway 2008). An alternate explanation is that the shrouds were mostly draped over the body and not under the entire corpse. In contrast, there appears to be no evidence of shrouds in North Tomb 1; rather, the two women and the infant buried there were under a tent-like multicolored cotton cloth. However, cloth was not always used for covering. One high-status elderly female (G T11) was encased in clay, 5–7 centimeters thick, covering most of her body. This practice has antecedents in earlier Moche culture (A.D. 200–800) from the site of Dos Cabezas (Donnan 2007:72–75, figures 5.8, 5.10, 5.11).

Inca burials are generally of the *fardo* type. This entails multiple layers of cloth wrapping around the body, and is a practice not generally found on the North Coast. One exception occurred during the Inca occupation of Túcume. Several *fardo* burials were found there in the Stone Temple. In Room 1, three elite males were in seated positions, and were wrapped with multiple layers of cloth (Narváez 1995a in Heyerdahl *et al.* 1995:93–96). In a separate room, nineteen bodies of *aqllakona* were found. One of these bodies was in a seated position and was part of a well-preserved *fardo*. With regard to the remaining females in that room, physical anthropologist J. Marla Toyne noted that, based on the position of their bodies and cotton wrappings, the possibility exists that the other females may also have been interred as *fardos* (Toyne 2002:19, Appendix XII 214–233).

No clothing was found with any of the individuals at Farfán. During the Late Horizon, there are examples of individuals clothed when buried, as with the *capacocha* sacrificed children. They were clothed, as the children were part of a procession that was viewed by many people before their arrival at the place of sacrifice (Rein-

hard and Ceruti 2005:19–22). Since all Farfán individuals were naked, whether they were sacrificed or not, it is most probable that the shrouded body was not viewed before they were buried. This is an anonymous presentation of the dead, because the plain-weave shrouds contain no motif that would indicate the status or home region of the deceased.

Bodily Adornments

Features of bodily adornment and items included during the interment process are considered part of the burial preparation. Cinnabar, a red mineral ore, had been rubbed on the faces of some individuals, mainly elderly high-status women (see North T1B and Mound G T11), a custom that most likely began in the earlier Moche Period (Donnan and Mackey 1978:180). Most of the women, especially the *aqllakona*, had necklaces of shell and bracelets of shell and/or silver beads. Several of the elderly women had ceremonial *tumi* knives and many held copper discs. Rings were also common among the *aqllakona* and, outside of the Huaca Burial Platform, among some elderly women. The type of ring may have denoted age grades within the *aqlla*; for example, the rings worn by the young girls in the Huaca Burial Platform (C T2) were bound with thread. The most important objects, associated with the two women in North Tomb 1, were the two silver-plated rattles. The rattle is a form that has long antiquity on the North Coast, and was associated with the Moche Priestess from San José de Moro (Donnan and Castillo 1992:42).

Many individuals, both in the Huaca Burial Platform and the earthen mounds, held *Spondylus princeps* shells. Most spondylus shells are associated with women, but one mid-adult man in Cemetery I and a juvenile in Cemetery J had these shells. Other items related to weaving, such as baskets (see Jackson, Appendix 2, this volume) or weaving swords, were found with

some of the *aqllakona* in the Huaca Burial Platform. One elderly *aqlla* (E T7) was associated with a deerskin case containing copper needles. This needle case is similar to one found with the *aqllakona* at Pachacamac (Tiballi 2010:186, 187, 456). Outside of the Huaca Burial Platform, the only weaving implements found were with some women in Cemetery J. Seeds, such as *Nectandra* sp. and lucuma (*Pouteria lucuma*), are found in earlier Moche contexts (Montoya 2015), as well as with some of the *aqllakona* in the Huaca Burial Platform.

Cardinal Orientation

Bodies were positioned in graves in directions that may have been oriented either to geographic features or perhaps to the Inca *suyus* or the four quarters of the Inca Empire. In the burials, as the shrouds disintegrated, the bodies slumped forward, or to one side. Since the majority of individuals were seated, the most secure reading for cardinal orientation of the body was from the pelvis that was often embedded in the sand or the floor. Most of the bodies at Farfán are oriented to the north or northwest, with the exception of those in the Compound VI Cemetery, who are all oriented to the east. They face the rising sun, and by doing so may be adhering to the Inca state solar religion that considered the sun (Inti) as one of the most important deities. However, Cemetery J has individuals oriented to the four cardinal directions, as does one tomb in the Huaca Burial Platform (C T11).

Summary

Farfán's funerary characteristics (shrouded, seated, cross-legged bodies with knees apart) have long antiquity on the North Coast and are associated with the earlier Lambayeque culture. South of the Jequetepeque Valley, there is a lack of standardization in burial patterns during the Inca occupation. This may reflect lesser Inca influence in this region. However, there are

reports from the Casma Valley of individuals buried in an extended or seated position (Mackey 1982; Vogel 2016:144–145).

Characteristics noted in the treatment of the bodies at Farfán are found in the earlier Moche culture (A.D. 200–800). For example, at Dos Cabezas, Donnan reports a thin clay covering encasing one of the Moche Period bodies (see above). This same type of covering was found with the elite female in Mound G Tomb 11, a woman who had a cranial deformation (Form D) also identified in earlier Moche culture (Chapter 2, this volume; Lichtenfeld 2001). The use of cinnabar rubbed on the face of the deceased is common in Moche and also among elite females at Farfán. The conscious choice of an earlier Lambayeque burial position, as well as the many Moche burial treatments, illustrate the Inca strategy of identifying themselves with earlier coastal traditions in order to establish their legitimacy in this newly conquered area.

Are the contextual aspects of the burial process also standardized at Farfán?

The second question relates to the contextual characteristics of the burials. These characteristics show intra-site continuity at Farfán and include: labor expenditure in the construction of the burial structures, consecration of the structures, areas for feasting, the organization of bodies within the burial facility, the tomb form, and the presence of infant offerings.

Labor Expenditure and the Construction of Burial Facilities

All of the individuals interred during the Inca occupation of Farfán were placed in purposely-built monumental mortuary structures. Their construction involved considerable labor expenditure, including hauling large quantities of earth and/or manufacturing adobe bricks. The two types of Late Horizon burial facilities—adobe

and earthen—clearly correlate with the status differences of the individuals interred therein. The Huaca Burial Platform, on the site's west side, was specifically constructed of adobe brick for the burials of the sacrificed *aqllakona*, and is the largest and most labor intensive structure. By contrast, the other burial facilities that mainly held the middle-class administrators and their families were earthen mounds. These burial mounds are located on Farfán's east side and, although monumental in nature, are all unfaced. There is one variant that does not conform to the adobe huaca or earthen mound dichotomy: Cemetery J. Although an earthen structure, this cemetery was subterranean and was placed under an earlier Chimu plaza in Compound II. Although Túcume has a variety of burial types (Narváez 1995a in Heyerdahl *et al.* 1995: figure 39, p. 84; figures 49, 50, 54–59, pp. 92–96; figures 86, 27, pp. 112–113; Sandweiss 1995 in Heyerdahl *et al.* 1995: figure 126, pp. 151–152; Narváez 1995b in Heyerdahl *et al.* 1995: figures 143, 150, 156, 157, pp. 169–178; Toyne 2002), none of these are similar to the earthen mounds at Farfán.

Consecration of the Burial Facilities

In accordance with its importance, the Huaca Burial Platform shows evidence of the consecration of the structure. The preparation and ritual accompanying the building of the Huaca was as complex as the interment of the bodies, and in many ways echoed the process. At the end of the north-facing exterior walkway of the Huaca Burial Platform, a wooden human figure had been embedded in the fine plaster floor of the walkway (Chapter 3A, this volume: Figure 3.5). The interior ramp on the Huaca's north side leading to the top tier had offerings placed along its length (*ibid.*, Figure 3.2). The first offering, placed on the ramp's plastered surface, consisted of more than fifty pieces of cinnabar. The second offering, to the east, was a complete llama buried under the ramp's floor

(Appendix 3, this volume). On the surface of the top tier of the Huaca, a round (fifty centimeter diameter), plastered basin was filled with small stones taken from the adjacent mountain, Cerro Faclo. The Spanish chronicler Juan de Betanzos noted similar basins filled with stones placed atop platforms in important towns. When the Sapa Inca Huayna Capac visited one of these towns, he would climb its platform where there was a “basin” filled with stones. Over this the inhabitants would pour chicha and animal sacrifices were made (Betanzos 1996 [1557]: chapter XLII, p. 168). It is of interest that the basin at Farfán was placed on the summit of the site’s largest platform and over the burials of the sacrificed *aqallakona*.

The placement and features of many of the tombs in the Huaca Burial Platform indicate consecration within the mortuary facility. Large stones, dislodged from the adjacent mountain of Cerro Faclo, were left in place where they fell, a practice seen in other Inca installations. North Tomb 1 and the flanking secondary burials (S26A and S31) were placed near these rocks, and then the Huaca was built around them. The proximity of the tombs to the large rocks symbolizes their relationship to the sacred mountain. Located 2.5 meters above S26A and the North Tomb 1 is a commemorative secondary burial (S26B; Chapter 3A, Figure 3.2). This shallow, secondary burial was located in the interior walkway sometime after construction of the Huaca was completed, and its placement strongly suggests that it was in memory of those interred below. There are no other reports of similar types of consecration at any other North Coast Inca center.

The small Inca and Lambayeque affiliated cemetery that was intrusive into the earlier Lambayeque Mound G echoes some of the features of the Huaca Burial Platform. This small cemetery has a pathway of tamped earth that stretches from the foot of Mound G to its sum-

mit, where the principal burials were placed (Chapter 6A). This pathway was flanked by three burials, most likely sacrificed individuals. There is no evidence in any of the other earthen mounds at Farfán of consecration of the mound structure; however, all the burial facilities were laid out with great care and planning.

Areas Devoted to Feasting

The consumption of food and drink was—and still is—an integral part of rituals in the Andes (Bray 2003; Hastorff 1991; Moore 1989). The context of Farfán’s burial facilities shows that space at this Inca administrative center was devoted to this consumption of food and drink. Large vessels (*tinajas*) that still contained the dregs of chicha were associated with the Compound VI Cemetery and the Huaca Burial Platform. Also, evidence for food preparation and consumption is present in the Compound VI Cemetery and Cemetery J. These Inca-sponsored feasting events, associated with, or commemorating mortuary activities, would have served to unify Farfán’s residents and valley inhabitants under the Inca state, as well as demonstrate the largesse of the Inca administrators.

The Organization of the Bodies within the Burial Facility

All of Farfán’s mortuary facilities have a unique interior organization. The cemeteries, and in many cases the tombs, are divided into three levels. This may be a space saving device, or it may connote an Inca cosmological concept. In the Compound VI Cemetery, for instance, the levels are very pronounced and resemble three terraces). There is a space between each terrace that could have been used as a walkway to aid in placement of the bodies (Chapter 7A, this volume). The three level concept also occurs in Cemeteries I and J.

The Huaca Burial Platform is composed of three interior tiers that contained the tombs of the *aqllakona*. Several of these tombs are divided into three levels (Chapter 3A, this volume: Figures 3.8, 3.43). For example, the central shaft of the Huaca Burial Platform contains Center Tomb 2 on the top, Tomb 11 at the bottom, and a spondylus offering in the middle separating the two tombs, creating three distinct levels (Chapter 3A, this volume). The Huaca's East Tomb is also composed of three levels. In Mound G the burials are not in terraces. Instead, they were placed in three areas close to a pathway on the north face of Mound G: the lower and middle areas and summit (Chapter 6A, this volume).

It is intriguing that there are no known earlier examples from other North Coast or Inca cemeteries that were organized in three levels. One possible explanation of the importance of this number is the Inca view of the cosmos, mentioned in several ethnohistorical documents, as three interactive worlds: the underworld (*ukha pacha*), the earth (*cay pacha*), and the sky (*hanan pacha*; Laurencich Minelli 2000:8, figure 1). The tripartite division within the burial facilities that appears to be unique to Farfán may relate to this cosmological belief, and may demonstrate how the Inca introduced their belief system to conquered peoples.

Tomb Form

Individuals interred at Farfán were not placed in simple pits. Rather, they were generally interred in "earth-covered burials," a practice that appears to be unique to Farfán and is correlated with the placement of bodies on three levels. The construction of the tomb itself consisted of several steps: (1) First, the body is placed on the newly created tamped earthen surface of one of the levels. There may have been a time lapse before the next body or bodies were placed on the same level since some, presumably the first placed on the level, rest directly

on tamped earth, while the remainder of the individuals rest on an accumulation of wind-blown sand, indicating that the area had been open to the elements, or that sand had been purposefully placed under them. (2) The second step entails the placement of earth behind and around the body at shoulder height to support the seated corpse. Grave goods were often arranged on the ledge thus created, near the arms and shoulders of the individual (Chapter 7A, this volume: Figures 7.3, 7.4). (3) The last step occurred when all the bodies placed on a level were covered with earth. It may be that some bodies were placed in pit burials dug from the plaza level of Cemetery J, forming Level 1 of the cemetery (Chapter 4A, this volume: Figure 4.14).

Two other sites offer some comparison with Farfán. Túcume has several types of mortuary facilities. The burials in the South Cemetery were simple pit interments. However, at Túcume, the administrators and the *aqllakona* were buried in a special edifice on the Huaca Larga, the Stone Structure. Other Late Horizon burials at Túcume are sacrificed individuals found near the Temple of the Sacred Stone. Inside this structure are some of the most high-status Inca artifacts found on the coast. Many of the artifacts are gold, silver-plated, or made of spondylus, including metal miniatures, Inca *canopa* figures, that represent people, animals, and objects from everyday life (Narváez 1995a in Heyerdahl *et al.* 1995: figures 69–87, pp. 101–115; Toyne 2008:40–42). In addition, stone-lined Inca shaft tombs intruded into the Huaca Facho. These had niched chambers and algarroba beam roofs (Narváez 1995b in Heyerdahl *et al.* 1995: 177–178). Thus, the two North Coast Inca centers, Farfán and Túcume, both buried high-status individuals in or near special structures. On the other hand, at the Central Coast center of Pachacamac it appears that the *aqllakona* were buried in simple pits on the first

southeast terrace of the Temple of the Sun (Tiballi 2010:126, figure 10).

Infant Offerings

There are three examples of neonates or infants being placed in a niche or ledge close to an adult burial. In Mound G, a middle-aged female was placed in a tomb at the foot of the mound with a baby above her in a niche (G T3A/B). At the summit of the mound is another infant in a niche above an elderly high-status female (G T11/12; Chapter 6A, Figure 6.3). The placement of an infant in a niche in Cemetery I breaks with the pattern of infant offerings, as this infant was placed above a middle-aged male (I3 T1A/B; Chapter 5A, Figure 5.6). An exception to the above pattern occurs in North Tomb 1 of the Huaca Burial Platform, where the infant is held in the arms of a high-status elderly female, rather than being placed in a niche (N T1B/C; Chapter 3A, Figure 3.31A).

Summary

At Farfán there are significant similarities in the characteristics that comprise the contextual aspects of the funerary process. Almost all of the interments were placed in three levels within the burial structures, and the graves are generally non-pit burials. All mortuary facilities were purposely built, are monumental in size, and involved significant labor expenditure. The Huaca Burial Platform, however, is distinguished from the earthen mounds in size, visibility, construction materials, and consecration of the structure. The difference between the Huaca and the earthen mound cemeteries clearly shows a correspondence with the ranking of the individuals interred within. Farfán has no cemeteries for a lower-class population, suggesting that other individuals were buried in their home villages. As noted previously, people of this social class may not have resided at Farfán but instead “commuted” from their local villages to complete

their labor service to the Inca state. Farfán does differ from other North Coast Inca centers in its unique characteristic of burials in three levels that may correspond to the Inca ideological view of the cosmos as three interactive worlds. From the available data it appears that there was more standardization in North Coast Inca centers in the treatment of the body than in the contextual aspects of mortuary practice.

What does the intra-site location of the mortuary facilities at Farfán imply?

There was a strong religious, political, and ethnic relationship between the location of the burial facility and the identity of those interred within. Analyses of the data indicate two important aspects regarding the location of the burial facilities at Farfán. First, location is among the key factors used to ascertain the affiliation of the individuals buried in the mounds (Shimada *et al.* 2004:369–371). At Farfán, affiliation with a group is manifested by the placement of the tombs either within or near one of the large administrative/ceremonial compounds. The burial mounds constructed within compounds VI and II (Compound VI Cemetery and Cemetery J) most likely contained those individuals affiliated with the administration of Farfán who lived and worked within these compounds (Mackey 2006:329–341). As Nelson points out (Chapter 8, this volume), the number of individuals selected for burial in the mounds was small. One probable reason for this low number is that very few individuals lived at Farfán, judging by the small number of elite residences in each compound.

Second, the location of the burials at Farfán materializes the Inca strategy of co-opting the sacred spaces of conquered peoples (Bauer and Stanish 2001; Stanish and Bauer 2007). The Inca did not destroy the existing architecture at Farfán, but intentionally constructed mortuary facilities on or near former Lambayeque or

Chimu sacred spaces. Two such facilities, the first an earthen mound (Compound VI Cemetery) and the second a subterranean cemetery (Cemetery J), were constructed in Chimu-built compounds within former Chimu sacred space. Two other areas, based on bioarchaeological data and grave goods, contained individuals identifying culturally as Lambayeque—Mound G and Cemetery I. The latter two burial facilities were located on or near earlier Lambayeque sacred areas.

The Huaca Burial Platform, constructed to house the burials of the Inca *aqllakona*, was purposefully placed on the site's west side, and was built only meters away from the base of the highest peak in the lower valley range, Cerro Faclo. Early burials on Cerro Faclo prior to the Inca occupation of Farfán (Mackey 2005) are evidence of the mountain's long-standing religious importance. In Andean cosmology mountains are considered sacred because of the spirits (*apu*) that dwell within. Many of the boulders and stones of this mountain were incorporated in or placed near the burials such as North Tomb 1. Under Inca rule, the ritual landscape of Farfán was clearly transformed. Although the Inca did not erase earlier monuments, their re-use of sacred space manifested imperial dominance and gave these areas a clear Inca signature.

What differences and similarities exist between the interments in the Huaca Burial Platform and other cemeteries at Farfán and the *aqllakona* interments at other Inca coastal administrative centers?

Similarities Between the Interments in the Huaca Burial Platform and other Cemeteries at Farfán

In contrast to earlier Moche (A.D. 200–800) and Chimu burial platforms (A.D. 1000–1470) all the evidence suggests that the Huaca Burial Platform was specifically built to honor and inter the *aqllakona*, or chosen women. The burials

with the highest-status goods in the Huaca appear to be the elderly females who were probably the *mamakona*, or instructors of the young *aqllakona*. The *aqllakona* were members of one of the most important Inca state institutions and, as such, had a pivotal role within the state by weaving textiles for gifts, preparing food for feasts, and caring for religious shrines. One of the obligations of these women was also to be sacrificed to the state gods; these were the women who were interred in the Huaca.

The Huaca Burial Platform differs from other mortuary structures at Farfán in that it was the only adobe structure; the others were unfaced earthen constructions. In addition, it was located on the west, rather than the east side of the site, further setting it apart from the administrative compounds and emphasizing its importance. The tombs within the Huaca also differed in that they contained multiple burials of sacrificed females and several tombs that were roofed and/or had niched chambers.

Like the mid-level burials, the *aqllakona* had a wide age distribution, from an infant to elderly women of forty plus years of age. However, unlike the individuals placed in other burial facilities, the *aqllakona* were often placed with others of their age group. For instance, in Center Tomb 2, the upper portion of the shaft tomb, the very young girls were separated from the adolescents. The young girls had rings with yarn and beads appended to them which also set this age group apart. The elderly women in the Huaca were most likely the *mamakona* and were the highest-ranking individuals, as indicated by the quality, quantity, and diversity of their grave goods (Chapter 3A, this volume). None of the individuals in the other burial facilities at Farfán were placed in groups according to age. Some of the elderly women in the other cemeteries had higher quality grave goods, especially the principal woman in Mound G (T11) and the secondary burial in Tomb JO; however, several middle-

aged men, especially in Cemetery I, also had offerings that set them apart, such as spondylus shells and fineware Hybrid ceramics that exhibit Inca and coastal characteristics.

The female burials in the Huaca Burial Platform stand apart from other women at Farfán because, according to isotopic analysis, several women had spent time in the highlands, as for instance the three elderly women in Center Tomb 11. They may have been affiliated with an *aqllawasi* in the highlands and received training there; however, their cranial modification was like that of the majority of individuals at Farfán, Form A or B (no or little modification), indicating that they were originally from the coast. Like at the Huaca Burial Platform, individuals from the earthen mounds are primarily drawn from either the Jequetepeque or other coastal valleys.

The burials of the sacrificed *aqllakona* were also unique in that their tombs contained both communal and individual grave goods. The nature of the shared offerings may reflect that the Chosen Women lived communally in the *aqllawasi*. The communal offerings consisted of large numbers of ceramic vessels, as well as bundles of textiles, some a meter in length. The textile bundles contained smaller tubular bundles mainly of miniature clothes (Appendix 1, this volume). These women, like all the interments at Farfán, were buried naked, and generally covered by plain-weave, undecorated shrouds. This may indicate two possible features of the burial process: that there was no public presentation of the women such as seen in the *capacocha* procession of the young individuals to be sacrificed; or that the communal nature of the *aqllawasi* did not permit reference to community origin. It is noteworthy that each of the four *aqllakona* in Center Tomb 11 of the Huaca Burial Platform had a distinctive hair style indicating either her social standing or place of origin.

Summary

The funerary practices within the Huaca Burial Platform showed significant differences from the mid-level administrative class burials in the earthen mounds: a substantial labor investment in construction, multiple individuals in a tomb, a higher quality and quantity of grave goods, and the presence of communal offerings. It should be noted, however, that the *aqllakona* had the same burial treatment as the mid-level administrators in the earthen mortuary structures: bodies were generally seated, cross-legged with splayed knees, often covered with a simple shroud or shrouds, and individuals were generally placed in three levels.

Comparison with *Aqllakona* Burials at other Inca Centers

Only two other cemeteries on the Peruvian coast containing *aqllakona* have been excavated: Túcume on the North Coast (Narváez 1995a in Heyerdahl *et al.* 1995:91–93; Toyne 2002) and Pachacamac on the Central Coast (Tiballi 2010; Uhle 1991 [1903]:84–96). Unpublished or incomplete data on grave goods from Túcume and Pachacamac precludes comparison of some mortuary features. Nevertheless, several observations can be noted.

Túcume

There is a connection between the *aqlla* burials at Túcume and Farfán in some material remains, burial locations, the number of sacrificed women, and the presence of male burials. At both Inca centers the *aqllakona* were buried with weaving equipment and similar earspools (Chapter 3A, this volume; Narváez 1995a in Heyerdahl *et al.* 1995: figures 49, 53, pp. 92–93). Both sites had an unusual ceramic piece—a painted vessel in the form of a llama with a bird-neck motif was found at Túcume and in Farfán's East Tomb (T1). Just as the *aqllakona* at Farfán

were buried in a separate structure, the Huaca Burial Platform, so were the females at Túcume. At the latter site, the women were interred in the Stone Temple constructed on the earlier structure of Huaca Larga. There is a near-identical number of individuals from the *aqllakona* burials at both Inca centers: nineteen adult and subadult females at Túcume, and nineteen adults and subadults at Farfán, plus an infant, for a total of twenty individuals at Farfán.

At both Túcume and Farfán male burials are associated with the *aqllakona*. At Túcume, three *fardo* burials of males are located in a room near the nineteen *aqllakona* in the Stone Structure. The archaeologists (Narváez 1995a in Heyerdahl *et al.* 1995: figure 49, p. 92) suggest that the women were sacrificed to accompany the males, the high-status Inca-affiliated administrator and his two attendants. The evidence from Farfán differs from that of Túcume. At Farfán, a single male was interred with six *aqllakona* in Looted Chamber 1. This chamber was placed in the Huaca sometime after its original construction and the initial interments of the sacrificed *aqllakona* in the Center and North tombs. Therefore, it does not appear that all the women in the Huaca were sacrificed to honor the one male in Looted Chamber 1. Perhaps only the six *aqllakona* in Looted Chamber 1 were sacrificed to honor the one male buried there. There are, however, alternate explanations for his presence. He may have had some activity or position in textile production such as being a member of the *qumpikamayuc* or male weavers (*c.f.* LeVine 1987:23–25, table 1), or he may have been an attendant or guard of the *aqllakona* to ensure their virginal purity (*ibid.*). So although there was the presence of a male with the primary burials at Farfán, the reason for his inclusion in Farfán's Huaca appears different from the male burials at Túcume.

Pachacamac

There are several similarities between the *aqllakona* of Pachacamac and Farfán. At both centers the women were buried close to a sacred location—next to the highest mountain peak in the lower valley at Farfán and within the tiered structure of the Temple of the Sun at Pachacamac. Similar artifacts also occur at the two centers. Women at both centers had identical bird necklaces made of shell (Tiballi 2010: figure 15, p. 156), as well as similar cases to carry needles (*ibid.* 187, figure 26, p. 195) Chapter 3A, this volume). The women at Pachacamac were clothed, but probably not interred as *fardo* burials. Pachacamac remains, especially the ceramics and the organic materials, show more of a highland affiliation than at either Farfán or Túcume.

Summary

The available data demonstrate that there was a strong connection between Túcume, Farfán, and Pachacamac in the burial practices and treatment of the *aqllakona*. More importantly, this overview shows consistencies within the institution of the *aqllakona* at the three Inca administrative centers, making a broader comparison possible.

Is there a difference in the quality or quantity of grave goods or style of goods by gender, age, or ethnicity in the non-*aqllakona* burials?

Differences in Grave Goods by Gender

Mid-level interments of administrators and possibly their families (see Cemeteries, J, I, and VI) have few differences in grave goods based on gender. Although both males and females were buried with ceramic vessels—and no individual has more than six—males, perhaps because of their close affiliation with the Inca

administration, were interred with more Hybrid-Inca vessels. These vessels show features such as out-flaring jar rims and aryballo forms (Appendix 6, this volume). In general, the burial goods with the mid-level individuals are not reflective of their behavior or activities as earlier authors have suggested (e.g. Binford 1971:21–23). For instance, very few women were buried with weaving implements. Since there was an *aqllawasi* at Farfán, associated with Compound IV, perhaps most of the weaving and spinning was done by the *aqllakona* and other women were given different tasks in textile production such as carding or dyeing. Both mid-level males and females were buried with spondylus shells and copper objects, although neither was common.

Differences in Grave Goods by Age

There is a striking pattern of honoring elderly women, not only in the Huaca Burial Platform, but in the other cemeteries as well. Several high-status elderly women outside of the Huaca had high-quality grave goods indicating they were not mid-level, but rather high-status individuals as, for example, the principal woman in Mound G (T11; Chapter 6, this volume) and the secondary burial in Tomb JO (Chapter 4, this volume). This pattern indicates a gerontocratic system of status attribution that was also noted for the Inca burials at Pachacamac. Although the grave goods of the elderly women in the earthen mounds were lesser in quantity and quality than those of the *aqllakona*, they nevertheless did stand apart from others in the same cemetery by the inclusion of copper pieces, some fine ceramics, and shell and/or copper beads (e.g. Compound VI Cemetery, Chapter 7A).

Subadults, including children and infants, were buried with grave goods indicative of their ascribed status and their inclusion into the broader community as part of the administrators' families. The most common vessel forms found with subadults are jars, followed by ollas.

Subadult burials also included shells (*Spondylus princeps*) and shell necklaces. Only one child in Cemetery I (I10 T3), displaying Lambayeque affiliations, was buried with pieces of copper and the head of a llama (Chapter 5A, this volume, Figure 5.11).

Differences in Grave Goods by Ethnicity

The determination of Farfán's political history—based mainly on architectural features, construction techniques, and artifacts—indicates that three polities occupied the site over a 400-year period: Lambayeque, Chimu, and Inca. However, the determination of the ethnic groups that occupied Farfán relies on other criteria. Ethnic identification is based on the notion that group members, as well as outsiders, identify a person as belonging to a certain group. Essential to this identification are visual symbols in art, such as ceramic form and motif, textile designs, and architectural style (Pasztory 1989). The determination of ethnicity uses this definition in conjunction with bioarchaeological evidence, such as culturally-determined cranial modification carried out in early infancy. The resulting data from these lines of evidence indicate that two dominant ethnic groups occupied Farfán in the Late Horizon (see also Chapter 8, this volume). Further, oxygen isotopic analyses identify the geographical areas where individuals have lived and supports the delineation of the two ethnic groups (Chapter 8, this volume).

The division into two ethnic groups is based in part on cranial forms. Cranial Forms A and B, that involve no or slight cranial modification, constitute one of these groups at Farfán. The slight modification form (Form B) is probably a result of the use of textile bands around the infant's head (Chapter 2). Analysis of primary and secondary burials (a sample of N=63 from a total of 98 burials) shows that a majority of individuals (N=46) comprise this ethnic group

of individuals with cranial Forms A and B. The predominance of these two forms demonstrates that cranial modification practices were undergoing change, and that the types of devices that had resulted in the traditional tabular fronto-occipital form of cranial deformation were being modified or were no longer in use. This suggests that traditional childcare and cranial modification methods were in flux in the Late Horizon.

Like cranial modification forms, ceramic styles, visual indicators of ethnicity, were also in flux. The Inca consciously introduced new ceramic forms and either modified or discontinued motifs and forms that had been used in Chimú ceramics. The result was a new ceramic assemblage—the Late Horizon Jequetepeque Style (Appendix 6, this volume). In addition, a Hybrid Style that combines Cusco-Inca features with coastal ceramic attributes was also introduced, but these vessels occur with a very low frequency at Farfán.

The second ethnic group comprises individuals identified as Lambayeque who, at that time, resided at Farfán and in the Jequetepeque Valley (Cutright and Terrones 2007; Mackey 2011 [2016]; Sapp 2002:29–30). These skeletal remains exhibit cranial modification Form C, most likely resulting from the use of an appliance on both the frontal and occipital bones of the infant's head (Chapter 2, this volume, Figure 2.2). While Cemetery I has the largest number of these individuals, one or more representatives of this ethnic group are found in Farfán's other mortuary facilities, with the exception of Cemetery J.

Lambayeque-style ceramic forms and decoration are found with individuals with Form C cranial modification in Cemetery I, and with lower frequency in Farfán's other burial facilities (Mackey 2011 [2016]:154). Within Cemetery I is a manifestation of an earlier Lambayeque (a.k.a. Sican) concept termed “symmetrical

opposition” by Izumi Shimada and colleagues (2004:372 and *passim*). This trait, described for a tomb within Huaca Loro (c. A.D. 1000), is illustrated by the separation of two ethnic groups that face each other in a single tomb. This same concept is repeated in Cemetery I where one of the two groups manifests identity with the Inca administrators (Sector A) and the other is identified with Lambayeque culture (Sector B; Chapter 5A, this volume). The combination of this continued ceramic style and the persistence of burial practices are further evidence for the Lambayeque ethnic group at Farfán.

Summary

The determination of who was buried in the earthen mounds and their ethnic affiliation did not entirely meet the expectations we held at the outset of our research. We expected that administrators would exhibit clear highland bioarchaeological attributes. Based on their bioanthropological attributes, the administrators at Farfán were mainly local individuals (Appendix 5), as is typical of other Inca centers (Morris and von Hagen 2011:172). However, some individuals, and possibly their families, were from the highlands as indicated by the long-headed and Type F individuals (see Chapter 2, this volume). The changes in infant care that produced a more homogenous cranial type and changes in material culture may have sped up integration of the coastal population and eradicated the identification of the Chimú population. Those identifying as ethnic Lambayeque met the bioarchaeological and cultural criteria that we established. However, even though individuals identified as Lambayeque had a strong presence at Farfán, they maintained spatial and cultural separation from the Inca-affiliated elite with their own administrative and ceremonial compounds (Compounds I and V).

Did funerary rituals play an important role in Inca political strategy at Farfán?

We proposed that mortuary practices and the rituals surrounding them were used by the Inca to integrate the groups in Farfán and in the valley into the Inca Empire and to legitimize Inca rule in this conquered region by affiliating the Inca with pan-coastal traditions.

Mortuary Practices were Designed to Integrate Farfán and the Jequetepeque Population into the Inca Empire

Spatial analyses and contextual data indicate that the five mortuary facilities had different roles in the integration of Farfán and the Jequetepeque Valley population. The free-standing Huaca Burial Platform, constructed for the *aqllakona*, was purposefully located in the center of Farfán, next to a sacred mountain. A flat area on its east side would have accommodated a large number of attendees to view the rituals that took place on the platform's summit. Since the women buried in the Huaca had spent time in the highlands and other coastal valleys, this venue had the potential of attracting local communities, as well as other groups from outside the Jequetepeque Valley. The *aqllakona*, referred to as "Virgins of the Sun," were members of an important Inca institution. The ceremonies surrounding their sacrifice and burial emphasized state ideology and religion, and evidence shows that events to honor them and the state gods took place throughout the duration of the Inca occupation. Each tomb installation was likely an occasion for a large, multi-valley ceremony. These public ceremonies offered the administration an opportunity to demonstrate Inca generosity and their care for the deceased, while imparting state religious concepts.

On the other hand, it appears that the earthen mounds were designed to honor specific

groups that emphasized ethnicity, kinship, and/or occupation. As other scholars have suggested (e.g. Shimada *et al.* 2004), the location of the burial facilities appears to be a determining factor of the affinity of the individuals buried within. For instance, both the Compound VI Cemetery and Cemetery J were built within former Chimu compounds and probably contained the bodies of administrators and their families. Mound G and Cemetery I were in areas associated with the earlier Lambayeque occupation of Farfán and mostly contained individuals of Lambayeque affiliation. The earthen mounds had small public spaces for the attendees and areas for the preparation of food and drink. Since many of the individuals buried in the earthen mounds were local, they would have had kinship ties within the Jequetepeque Valley. The data suggest that the Inca strategy for these cemeteries was to focus on the deceased's descendants and establish a link between local inhabitants and the Inca state. The funerary rituals were an opportunity to demonstrate the empire's hospitality and its careful preparation and treatment of the deceased that could be witnessed by their descendants. These venues draw on long-held traditions of using large public spaces, as occurred in Moche and Inca ceremonies, and smaller, more limited ritual space as practiced by the Chimu (Moore 1996: 793–795).

Legitimizing Inca Rule

A main goal of the Incas' strategy was to establish the legitimacy of their rule by aligning themselves with previous North Coast cultures. This notion is supported by two lines of evidence. First, this was a tactic employed in other areas of the Inca Empire, such as the Titicaca Basin (Bauer and Stanish 2001). The Inca administrators reused earlier sacred space for their own ritual purposes, thereby putting their signature on these locales, as they did at Farfán,

for example in Cemetery J (Chapter 4A, this volume).

Another avenue the Inca employed for associating themselves with previous coastal cultures was to control the decorative motifs that appeared on ceramics and other media. From the vast array of motifs that had existed in the Late Intermediate Period, the Inca purposefully selected those themes that had long antiquity on the North Coast and also had importance in Inca ideology. Decorated pottery constitutes some forty-five percent of the ceramic sample (Appendix 6, this volume). Several examples from this corpus illustrate this point. Marine motifs, comprising twenty-three percent of the sample, are the most common. The long antiquity of marine themes is understandable, given the economic and cultural importance of the sea to coastal peoples. Such themes were also important to the Inca, as can be seen by the continued use of marine iconography on the ceramics and the many offerings of spondylus shells in the tombs.

Vessels with monkey motifs, either press molded or with three-dimensional heads, were another motif selected by the Inca (seventeen percent of the sample; Appendices 4 and 6, this volume). Although the monkey motif has long antiquity, dating to the Early Horizon, its more recent appearance on stirrup spout vessels began in the late Moche Period (c. A.D. 700) and continued into the Inca occupation. The monkey motif in Moche culture was linked with an increase of spondylus shells imported from northern Peru and Ecuador. The shells were highly valued and a key element in Inca rituals (Pillsbury 1996), as seen in the spondylus offering in the central shaft tomb of the Huaca Burial Platform. Other Moche ceramic forms and burial practices continued into the Late Horizon, and are present in the burials at Farfán, standing as testament to the Inca strategy of affiliating their rule with past coastal cultures.

Summary

Imperial strategy was designed to legitimize Inca rule by associating the state with the traditional cultures of the North Coast while simultaneously transmitting a clear message of Inca dominance and control. As observed at Inca highland centers and on the coast, the re-use of sacred space and traditional iconography was a calculated strategy employed by the Inca to tap into the collective memory of the local population. There may have been an additional reason that motivated the Inca to control the mythological content displayed on the vessels—that of easing social and political tensions. The three groups cohabiting Farfán—the Inca, the Chimú, and the Lambayeque—had a turbulent past. There had been a long history of violence and warfare among them, waged first between the Lambayeque and Chimú forces for the control of the Jequetepeque Valley, as well as the more recent series of battles between the Inca and the Chimú for the conquest of the Chimú state. Since the overall objective of the Inca was the integration of the population of the valley into the empire, it may have been politically expedient to choose images that had long antiquity on the coast rather than specific associations with either of the two cultures in potential contention.

What characteristics were exhibited by the secondary burials?

The sample of secondary burials (N=32) provides a basis for comparison with the primary interments. Secondary burials were found in Cemeteries I and J, Tomb JO, and the Huaca Burial Platform, but were not present in the Compound VI Cemetery or Mound G. The bones that comprise secondary burials were human offerings that accompanied the primary interments, and were placed in close proximity to them. As Andrew J. Nelson states (Chapter 8, this volume), there was no pattern to the

selection of bones used in secondary interments; however, only thirty percent of the secondary burials contained crania, suggesting that perhaps there was a preference to leave the skull with the original burial.

Secondary burials may have been viewed, as suggested by Hecker and Hecker (1992:194), as *pars pro toto* of ancestors. While this is an important point, there are three factors that affect Farfán. First, the association of the population with the ancestors may have only been implied, because Farfán had a mobile population drawn from a wide area, and the ancestors of their lineages may have been buried elsewhere. Second, these secondary interments may have had an additional function—providing symmetry within the cemetery. In order to achieve the three level organization within a cemetery, additional remains were often added to complete a level or row of bodies. For example, secondary burials make up the top tier of Cemetery I, and secondary burials were added to both ends of the lower level of Cemetery J. Third, another role of the secondary interments may have been commemorative as seen in S26B, an offering placed in the walkway directly over North Tomb 1, a tomb which was interred years earlier in the original construction of the Huaca Burial Platform.

By their nature, these secondary burials did not share in the basic burial treatment of position or orientation of the body, nor did they have shrouds. However, some secondary interments did contain high-status goods, such as metal and/or fine ceramics (e.g. S21 in the Huaca Burial Platform). The location of the grave goods around the bones of secondary burials paralleled the placement of goods in the primary burials. In sum, the intra-site analysis of secondary burials demonstrates that they only follow some of the burial practices of the primary interments.

Conclusion

Late Horizon Inca funerary practices are remarkably similar among Farfán's five burial facilities. Bodies were unclothed, seated with knees splayed, covered with shrouds, and interred in three levels within the burial structures. Status and occupation were differentiated mainly by three variables:

1. the construction of the burial facilities—earthen mounds for the middle class and adobe construction for women who were part of an important state institution, the *aqllakona*;
2. The location of the burial facilities within the site—administrators and their families in an adobe compound and/or near an earlier sacred space;
3. the quality and quantity of burial goods—the highest-status goods being found generally with elderly *aqllakona* in the Huaca Burial Platform and with elderly women in other burial facilities.

Oxygen isotope values show that of the individuals buried in these facilities, the only ones who had spent time in the highlands were found in the Huaca Burial Platform, and those individuals with cranial modifications identified with the highlands, long-headed and Type F, were found mainly in Cemetery J, suggesting they may have been part of a group of Inca overseers. However, the majority of burials were from the Jequetepeque or surrounding coastal valleys. The study also reveals that cranial modification was in a state of flux, and a majority of individuals in our sample had little or no skull modification, indicating a change in child care practice.

This study also underscores a common strategy of Inca imperial policy. As the Inca had

done in many highland and coastal areas, they co-opted earlier sacred spaces for their own rituals, and re-used the regional iconography and mythology to legitimize their rule in a conquered area. Ritual was an important Inca emphasis in all areas of the empire; however, in the case of Farfán, it is clear that funerary rituals were a primary focus. The Inca also employed many elements of earlier burial practices associated with the Moche and Lambayeque cultures. This large sample of intact burials, yielding detailed information on both the cultural and biological aspects of the interments, has provided invaluable data for future comparison with other North Coast Inca-period burials and other imperial installations throughout Tawantinsuyu.

APPENDIX 1

FARFÁN TEXTILES FROM THE HUACA BURIAL PLATFORM

Gail Ryser

independent scholar

glryser@gmail.com

and

Judy Newland

Arizona State University, retired

newland.judy@gmail.com

INTRODUCTION

The textiles described in this appendix were found as offerings in Farfán's Huaca Burial Platform (Chapter 3A, this volume) and date to the Late Horizon or Inca occupation of the North Coast (after c. A.D. 1470). These large textile bundles had been placed in the tombs as communal offerings with the sacrificed women who were most likely *aqllakona* (Center Tomb 2, Center Tomb 11, and East Tomb; see Chapter 3A for discussion). One of the elderly *aqllakona* in the East Tomb (T7) was the only individual who had separate, personal textiles which were contained in a woven bag.

The Huaca Burial Platform textiles comprise the largest group of fine textiles from the site and one of the largest groups of Late Horizon Inca textiles from the North Coast. Unfortunately, the majority of these textiles are in a poor state of preservation. This is primarily due to the fact that the bundles had a substance poured over their center that was probably a liquid such as chicha. Since the liquid penetrated the entire bundle, many textiles were damaged or destroyed.

In spite of this, over one hundred textiles were recovered. Of these, sixty-eight were

analyzed for this study and make up the sample in the following discussion (Table A.1). The majority of these pieces are woven (seventy-five percent), while the twenty-five percent that are non-woven comprise yarns used as tassels. The following discussion of the textiles is organized by weave structure, which consisted of two major types: slit tapestry and plain weave.

SLIT TAPESTRIES

The slit tapestry pieces represent thirty-seven percent of all specimens in the sample analyzed (N=25). In some cases, the slits are stitched closed and, therefore, are not readily evident in the finished textile. Generally, the warp yarns are cotton, and the weft yarns are wool, although there is some variability in the structures of the yarns used. In many textiles the warp yarns have disintegrated, but when they exist, they almost all display a 2sZ yarn structure (see Emery 1966:10–11). A yarn structure of 2sZ is created by twisting together two yarns spun in the 'S' direction; yarns slant down to the right like the center of the letter "S" for the spin direction and the yarns slant down to the left like the center of the letter "Z" for the ply direction. There are also six cases of single ply s- or z-spun warps. There is only one example with a wool warp, and it also has a 2sZ yarn structure

(Figure A1.1). In contrast to the warps, the wefts are much more structurally consistent: all of the wefts are wool and have a 2zS yarn structure. The colors of the wool wefts are most commonly red, ochre, and light brown, although dark brown and, occasionally, black are also used.

Bands

Bands comprise the largest textile artifact category, constituting twenty-six percent of all slit tapestry specimens in the sample (N=18). Bands are generally four centimeters in width, and many consist of two two-centimeter bands sewn together along the selvage. They are all woven using split tapestry technique and, as they employ multicolored plied yarns and intricate designs, comprise the most complex textile group.

It is not clear whether the Farfán bands were meant to be worn as headbands or worn around the waist as belts. The closest Inca garments may be *chumpi*, thin belts often worn around the waists of high-status women (Uhle 1991 [1903]: 89–91, figure 106, plate 19: figures 1–5). However, the Farfán bands resemble *chumpi* only in their width (two to four centimeters); otherwise, they differ in weave, fiber, and motif from those described by Uhle. Because the women recovered from the tombs at Farfán were not wearing the bands, their function remains in question: therefore the general term “band” is used in this study instead of headband or belt.

Many of the cotton warps on bands have a 2sZ yarn structure, except for one example that has cotton z-spun single yarns. On the other hand, all of the wefts are wool, and have a 2zS yarn structure. Many of these bands were found rolled (Figure A1.1). Because most bands are not well preserved, they are difficult to unroll; therefore, their length could not always be determined. Of those that were preserved, some

measure between forty-five centimeters and fifty-five centimeters in length, while others were as long as 167.5 centimeters.

The bands have a limited number of design motifs. The most common are sea birds (seventy-five percent), followed by geometric forms, including crosses, step frets, and stripes. The birds range in size from 1.9 to 2.2 centimeters beak-to-tail and 1.4 to 1.75 centimeters from head-to-foot. In general, bird motifs are on a red or light brown ground. Occasionally birds are associated with stripes, but not other geometric designs. The crosses, step frets, and/or steps (Figure A1.2) are often found together without birds.

Although the bird motifs are similar in silhouette, there are important differences in detail, form, and orientation. The eye shape may be round, rectangular, or in the form of a cross. The most common layout is a single line of birds with the heads and beaks oriented to the left or to the right relative to the selvage. This pattern is referred to as having translation symmetry (Washburn and Crowe 1988:45, 48). However, in many instances two bands are sewn together, aligning the single row of birds in various ways. Birds can mirror one another, back to back, as in a mirror reflection across a central horizontal line, also known as a glide reflection (Figure A1.3; *ibid.*: 46, 50). Alternatively, they can align one on top of the other, oriented in the same direction. In other cases, multiple motifs are patterned across the width of the band. Many of the bands are bifurcated at one end (Figure A1.4) and tassels with yarn extensions are attached to the bifurcated ends.

Tassels and Extensions Associated with the Bands

Tassels are objects that are formed by binding looped yarns at one end. The loops are cut at the opposite end, creating the form of a

small, bell shaped object. In Textile 93, a tiered tassel is formed by stacking different colored tassels one inside another (Figure A1.5A). Yarns hold the tassels together and also secure the loose yarns emanating from the ends of the tiered tassel. Tassels range in length from fourteen to sixteen centimeters (see Figure A1.5B).

Tiered tassels and extensions comprise twenty-five percent of all specimens in the Farfán sample. This includes tassels found separately, as well as those attached to bands. The tassels and extensions are generally of wool, and have a 2zS yarn structure. Only four colors are used in the tassels: red, ochre, light brown, and dark brown, although the color sequences may vary. The extensions, however, are always light brown or red.

Slit Tapestry Fragments

Three of the slit tapestry textiles (Textiles 65, 66, n/a) lack selvages. Although it was not possible to determine the original dimensions of the complete textiles, one fragment measures fifteen centimeters in length and six centimeters in width (Figure A1.6). This fragment is the most elaborate of all the slit tapestries in the sample, and was found in a bag associated with an elderly woman, T7, in the East Tomb. All the other tombs have communal bundles of textile offerings. These fragments are similar to the slit tapestry bands in terms of yarn (material) and yarn structure. However, the textile illustrated in Figure A1.6 uses cabled warps, consisting of three strands of 2zS yarns twisted in a Z direction. The areas around the figures were not interlaced, leaving the cabled warps exposed. Although these two figures have similar headdresses and posture, the top figure is wearing a necklace and a loincloth, while the lower figure lacks neck ornamentation and wears a long garment. Both figures have raised arms.

Some of the slit tapestry bands were also used as borders and sewn to the edges of plain-weave textiles. Textile 6 (Figure A1.7) differs from the bands described above in (1) the spin of the warp, but not the weft; and (2) in that they have single s-spun warps and a 2zS weft yarn structure. The finished ends of this example were sewn together, forming a circle, and it (and one other, Textile 7, not shown) was most likely the border on the sleeve of a tunic. The border is decorated relative to the side selvage with a vertically oriented bird motif. The upright birds have round heads and bodies. Both the birds' eyes and bodies have a design element in the form of a cross.

PLAIN WEAVES

Plain weaves account for thirty-five percent of all specimens in the sample (N=24), nearly equal to that represented by the slit tapestries. Most of the plain weaves are 1x1 (twenty-five percent) and generally have the same diameter of yarn. Most of the 1x1 weave textiles are cotton. The yarns are s-spun single ply, both in the warp and weft, and the color is generally a shade of white. Textile 109 measures 153 centimeters by 8 centimeters (Figure A1.8). It is constructed of two bias cut pieces approximately eight centimeters wide that are joined with an overhand stitch. Bias is a line at a 45-degree angle to the selvages. It creates greater elasticity in a textile and is often used in cutting textiles and garments for a smoother fit.

A number of textiles were folded before being placed in the offering bundles. One example, Textile 105 (Figure A1.9), has fifty-six layers of a 1x1 plain weave. The majority of the 1x1 plain weave textiles are balanced with s-spun single warps. One exception is a warp dominant textile fragment with thick z-spun warp yarns and very fine s-spun wefts. The result is that the warp yarns nearly conceal the weft

yarns, creating a warp-dominant structure (Figure A1.10).

One piece that is unique to the sample and unusual in the North Coast textile tradition is a four centimeter wide band with complementary warp-faced patterning (Figure A1.11). This band is 167.5 centimeters long with wool 2zS yarn structure warp and weft yarns. The red and ochre warp yarns create a double line of bird motifs.

The 2x1 plain weave textiles generally have warps and wefts that are s-spun. An excellent example of a plain 2x1 structure is Textile 91, measuring 22 by 17 centimeters (Figure A1.12). The textile is decorated with woven stripes. This piece was found wrapped around the silver rattle in North Tomb 1.

Tubular Bundles

The most numerous plain weave objects in the sample are those designated as tubular bundles. They are often tied with a cotton cord and may have a decorative, fringed border (Figure A1.13). These tubular bundles have both 1x1 and 2z1 weave structures, and they are generally 12 to 19 centimeters long and 2.5 to 6 centimeters wide.

Most of these tubular bundles are woven in white cotton yarn, and the warps and wefts are both s-spun. Two exceptions are Textile 39, with z-spun cotton warp and weft yarns, and Textile 41, woven with wool 2zS yarn structure in both the warp and weft. In spite of the differences in weave structure, all of these tubular bundles have several traits in common: (1) they are all rolled into a similar tubular form; (2) they are generally tied either with cotton or wool cords, and; (3) sometimes a band may be inside the tubular bundle. A fringed border, if present, is attached to the selvage edge with a simple slip-stitch.

Similar tubular textile bundles have been reported from late Chimu burial offerings. Ann Rowe (1984:101), in her description of the textiles from the Huaca Las Avispas burial platform at Chan Chan, describes small rolled bundles of plain weave textiles that are similar to those found at Farfán. Their presence at Farfán indicates that this offering practice continued into the Late Horizon.

Textile 39 is an example of a tubular bundle. A plain weave miniature loincloth, 53 centimeters by 40 centimeters, had been rolled to form a tubular bundle (Figure A1.14). This single layered piece is constructed of two woven sections and a fringed border. The two sections of the loincloth have different spins in the warp and weft yarns: the top section has z-spun warp and weft yarns, while the lower section has z-spun warps and s-spun weft yarns. The left and right extensions, shown at the right side of Figure A1.14, are deteriorated at each end. Most likely these ends were longer and in larger garments were wrapped around the waist (*ibid.*: 102). The weft-faced fringed border is a 2zS yarn structure and measures approximately 1.5 centimeters in width.

Borders

Some rolled textile bundles are finished with a fringed border that generally ranges in width from 1.5 centimeters to 2.5 centimeters. Although fringed borders appear to consist of two parts, a border and a fringe, they are actually one piece. The weft threads extend beyond the outermost warps on one side, most likely held by a scaffold yarn during the weaving process, forming the fringe. When the weft thread is turned back to create a new row through the warp yarns, the extended yarns create a fringe. When these extensions twist together and when the scaffold yarn is removed, a fringe with the appearance of cabled yarn is

created. The fringe yarns remain looped or in some cases are cut (Figure A1.15).

SUMMARY

The textile sample from Farfán's Huaca Burial Platform consists largely of slit tapestry bands with their associated tassels and plain weave panels. In addition, there is one warp faced band and one warp dominant fragment. The design motifs displayed on the tapestry pieces are limited to sea birds and four geometric designs. Sea birds were common on earlier Chimú textiles, ceramics, and metalwork. The geometric designs were also part of the North Coast design tradition used to decorate textiles and ceramics.

The majority of these textiles were excavated in the multiple tombs of sacrificed *aqllakona* from the Huaca Burial Platform at Farfán (Chapter 3A, this volume). There are differences between the tomb offerings. Center Tomb 2 contained the largest percentage of slit tapestry bands and very few textiles of other weaves. The textile bundle from Center Tomb 11 consisted mainly of small tubular tied bundles. The bundle from the East Tomb contained only 1x1 plain weave textiles, with no slit tapestries. The textiles associated with the elderly female (ET7) in the East Tomb, the only individual to have her own textile bag, were the most complex in the sample. North Tomb 1 contained no textile offering bundles. The textiles from this tomb are of interest because they were used to wrap the silver rattles associated with each woman in the tomb.

The textile sample from the Huaca Burial Platform is one of the largest deposits of textiles to be archaeologically recovered and analyzed for the Inca horizon on the North Coast. It is hoped that this textile sample may form the basis for comparison with other Inca textiles from the coast and highlands.

ACKNOWLEDGMENTS

Preliminary analysis was carried out by María Jesús Jiménez from 2002 to 2004 and the final analysis by Gail Ryser and Judy Newland in 2009. Photographs of the textiles are by Ed Schoch. The drawings of the motifs are by Jorge Gamboa.

Ticket number	Textile number	Burial	Object	Weave	Dimensions (cm)	Warp Yarn 1	Warp Yarn 2	Warp Spin/Ply	Weft Yarn 1	Weft Spin/Ply	Non-Woven Spin/Ply	Design
982A	70	C T2	B	SL TAP	? x 4	Cot		2sZ	Wool	2zS		B
982A	71	C T2	B	SL TAP					Wool	2zS		B
982A2	86	C T2	B	SL TAP		Cot		2sZ	Wool	2zS		B
982A1	87	C T2	B	SL TAP		Cot		2sZ	Wool	2zS		B
982A3	88	C T2	B	SL TAP		Wool		2sZ	Wool	2zS		B
982A5	89	C T2	B	SL TAP		Cot		2sZ	Wool	2zS		B
982A	92	C T2	B	SL TAP					Wool	2zS		
982A	93	C T2	B	SL TAP		Cot		2sZ	Wool	2zS		B
982A	94	C T2	B	SL TAP		Cot		z	Wool	2zS		B
982A4	95	C T2	B	SL TAP	? x 4	Cot		2sZ	Wool	2zS		B
982A6	97	C T2	B	SL TAP	? x 4	Cot		2sZ	Wool	2zS		B
982A6	97B	C T2	B	SL TAP	? x 4	Cot		2sZ	Wool	2zS		CH
1177	14	C T11	B	SL TAP		Cot		2sZ	Wool	2zS		S
1178	33	C T11	B	SL TAP	45 x 4				Wool	2zS		BS
1069	67	E T7	B	SL TAP	9x7x4	Cot		2sZ	Wool	2zS		
1069	68	E T7	B	SL TAP	? x 1.7	Cot		z	Wool	2zS		SP
xxxx	1		B	SL TAP	? x 2				Wool	2zS		B
1066	65	E T7	FRAG	SL TAP	55 x 34	Cot		2sZ	Wool	2zS		A
1066	66	E T7	FRAG	SL TAP		Cot		z	Wool	2zS		
1073	N/A	E T7	FRAG	SL TAP				z	Wool	2zS		
982A	91B	C T2	BOR	SL TAP		Cot		2sZ	Wool	2zS		B
1177	6	C T11	BOR	SL TAP	12 x 2	Cot		s	Wool	2zS		B
1177	7	C T11	BOR	SL TAP	12 x 2	Cot		s	Wool	2zS		B
1073	69	E T7	BOR	SL TAP	? x 4				Wool	2zS		
1071	N/A	E T7	BOR	SL TAP	? x 4				Wool	2zS		
1072	N/A	E T7	WR		5x7x3							
1178	35	C T11	RECT	1 x 1	43.5x25	Cot		s	Cot	s		
1178	35B	C T11	RECT	1 x 1	43x24	Cot		s	Cot	s		
1178	36B	C T11	RECT	1 x 1		Cot		s	Cot	s		
1178	38	C T11	RECT	1 x 1		Cot		s	Cot	s		
1178	44	C T11	RECT	1 x 1	12x2.5	Cot		s	Cot	s		
1170	107	E T7	RECT	1 x 1	19x6	Cot			Cot			
1178	37	C T11	RECT			Cot			Cot			
1170	105B	E OFF	BOR	1 x 1		Cot		s	Cot	s		
982A6	72	C T2	B	1 x 1	167.5x4	Wool		2sZ	Wool	2zS		B

/continued

Table A1.1. Analyzed Textiles from the Huaca Burial Platform.

Ticket number	Textile number	Burial	Object	Weave	Dimensions (cm)	Warp Yarn 1	Warp Yarn 2	Warp Spin/Ply	Weft Yarn 1	Weft Spin/Ply	Non-Woven Spin/Ply	Design
982A	91B	C T2	FRAG	1 x 1		Cot		s	Cot	s		
982A	93	E OFF	FRAG	1 x 1		Cot		s	Cot	s		
1170	105	E OFF	FRAG	1 x 1		Cot		s	Cot	s		
1170-15	106	E OFF	FRAG	1 x 1		Cot		z	Cot	s		B
1170	108	E OFF	FRAG	1 x 1	? x 3.5	Cot		s	Cot	s		
1170	N/A B1	E OFF	FRAG	1 x 1		Cot		s	Cot	s		
1170	N/A B2	E OFF	FRAG	1 x 1		Cot		s	Cot	s		
1170	109	E OFF	TEX	1 x 1	153 x 8	Cot		s	Cot	s		
1170	N/A B3	E OFF	TEX	1 x 1	110 x 9	Cot		s	Cot	s		
1652	90	N T1	FRAG	2 x 1		Cot	Cot	s	Cot	s		
1178	34	C T11	RECT	2 x 1	12 x ?	Cot	Cot	s	Cot	s		
1178	36	C T11	RECT	2 x 1		Cot	Cot	s	Cot	s		
1178	39	C T11	RECT	2 x 1	53 x 40	Cot	Cot	z	Cot	z		
1178	40	C T11	RECT	2 x 1		Cot	Cot	s	Cot	s		
1178	41	C T11	RECT	2 x 1		Wool	Wool	2zS	Wool	2zS		
1692	91	N T1	WR		22x17x4	Cot	Cot	s	Cot	s		
982A	70	C T2	TAS								W/2zS	
982A	71	C T2	TAS								W/2zS	
982A6	72	C T2	TAS								W/2zS	
982A2	86	C T2	TAS								W/2zS	
982A1	87	C T2	TAS								W/2zS	
982A3	88	C T2	TAS								W/2zS	
982A5	89	C T2	TAS								W/2zS	
982A	92	C T2	TAS								W/2zS	
982A	93	C T2	TAS								W/2zS	
982A	94	C T2	TAS								W/2zS	
982A4	95	C T2	TAS								W/2zS	
982A6	97	C T2	TAS								W/2zS	
1177	14	C T11	TAS								W/2zS	
1178	33	C T11	TAS								W/2zS	
1170	108	E OFF	TAS								W/2zS	
1170	110	E OFF	TAS								W/2zS	
xxxx	1		TAS								W/2zS	

Table A1.1 Key: **Ticket Number:** the project accession number. **Burial:** burial designation number. E OFF=East Tomb offering. **Object:** B=bands, FRAG=textile without selvage, BOR=border, WR=wrap, RECT=rectangle, TEX=textile with selvage, TAS=tassels. **Weave:** SL TAP=slit tapestry, 1x1=plain weave, 2x1=plain weave. **Warp Yarn 1:** Cot=Cotton. **Warp Yarn 2:** Cot=Cotton. **Weft Yarn 1:** Cot=Cotton. **Design:** A=Anthropomorphic, B=birds, CH=cross and hook, S=stripe, SP=step.

Table A1.1. Analyzed Textiles from the Huaca Burial Platform (cont.).



Figure A1.1. Textile 68, a rolled band showing the colors used in slit tapestry weave (East Tomb 7).



Figure A1.2. Textile 33, slit tapestry with geometric designs (Center Tomb 11).

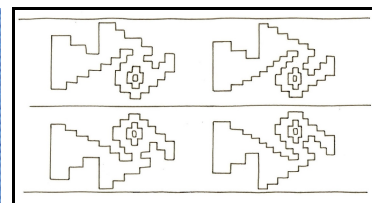


Figure A1.3. Textile 97, bird motif in glide reflection (Center Tomb 2).



Figure A1.4. Textile 33, slit tapestry with bifurcation (Center Tomb 11).

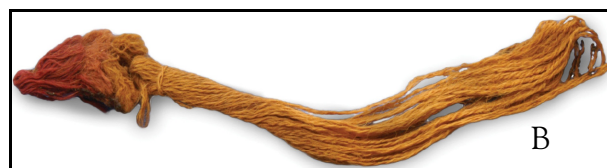


Figure A1.5. (A) Textile 93, tiered tassel (Center Tomb 2); (B) Textile 87, loose yarns attached to the end of a tassel (Center Tomb 2).

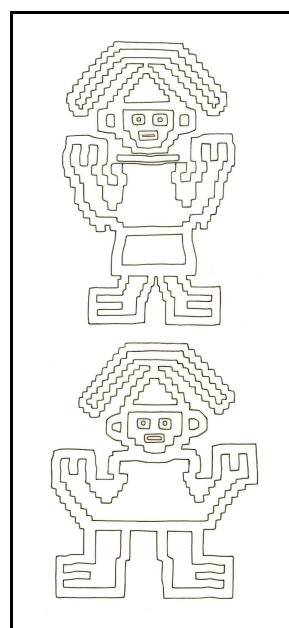


Figure A1.6. Textile 65, slit tapestry with design of human figures (East Tomb 7).

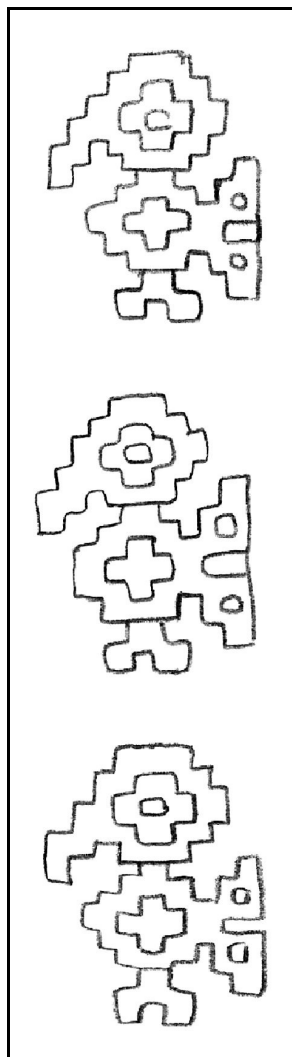


Figure A1.7. Textile 6, border of the sleeve of a tunic; slit tapestry with design of birds (Center Tomb 11).



Figure A1.8. Textile 109, two joined bias-cut pieces (East Tomb 7).



Figure A1.9. Textile 105, a plain-weave textile folded multiple times (East Tomb 7).



Figure A1.10. Textile 108, a warp-dominated textile (East Tomb 7).



Figure A1.11. Textile 72, a band showing complementary warp-faced patterning (Center Tomb 2).



Figure A1.12. Textile 91, the 2 x 1 cloth wrapped around the silver rattle in Tomb 1 (North Tomb 1).



Figure A1.13. Top: textile 38, rolled plain-weave bundle (Center Tomb 11); bottom: Textile 44, textile in a tubular bundle. The 2x1 samples are not shown (Center Tomb 11).



Figure A1.14. Textile 39, plain-weave miniature loincloth; 53 by 40 centimeters (Center Tomb 11).



Figure A1.15. Textile 105, plain-weave cloth with a fringed border (East Tomb 7).

APPENDIX 2

LATE HORIZON WEAVING BASKETS FROM THE HUACA BURIAL PLATFORM, FARFÁN

Margaret A. Jackson
University of New Mexico
mars@unm.edu

Center Tomb 11, of the Huaca Burial Platform, was particularly interesting, because it was placed at the bottom of a central shaft of the platform during its construction. It contained four sacrificed *aqllakona* (Chapter 3A, this volume) who were interred with a burial ensemble of numerous textiles, fineware ceramics, and the woven baskets that are the focus of the present report.

The women were seated facing the four cardinal directions, and their bodies were covered with plain-weave shrouds. Each one held a spondylus shell. Fineware vessels, mainly in the Late Horizon Jequetepeque Style, filled the niched chamber (see Appendices 6 and 7, this volume for more detail). Although all four women had weaving implements, baskets were found only with *aqllakona* CT 11A and CT 11B (Figure A2.1). These two women, though both elderly (over forty years of age), had distinct life histories. One of the older women (CT 11A), located on the west side, had lived in the highlands before coming to Farfán, while the other elderly woman (CT 11B), located on the south side, had lived in another coastal valley before becoming a member of the *aqllawasi* at Farfán.

The Farfán baskets are among a small sample that have been scientifically excavated. Their diagnostic features provide insight into basketry techniques of the North Coast during the Late Horizon. Perhaps most interesting, they are objects associated with a particular class of individuals. Given such a connection, they offer

a base from which to investigate various questions. If, for example, the contents of the baskets were dictated by an ideological construct related to a person's social role, should we expect a relatively standardized complement of weaving tools? Are the contents indicative of specialized aspects of weaving? Or are they completely idiosyncratic, reflecting only the personal interests of their owners?

Unfortunately, the baskets associated with individuals A and B of Center Tomb 11 were not in pristine condition. They had been crushed as the tomb contents settled, compressed, and hardened. Various areas were encrusted with chunks of mud and a hard resinous substance (Figure A2.2). With the loose dirt cleared off, fragments of cane and plaited grass were visible. Balls of yarn and clumps of thread could be seen emerging from the sides. Standard analysis of basketry, which normally includes description of form, plaiting style, types of strips used, angle(s) of intersection, materials, presence of spiraling or coiling, selvages, and decorative techniques, was made difficult by the compromised condition of the baskets. Sufficient fragments did remain intact to allow some identifications, and comparison with better-preserved examples in museum collections provide good points of reference for how the baskets originally appeared. Late Horizon Inca coastal baskets, excavated by Uhle at Chinchá (Hearst Museum #4-4027a); Supe (Hearst Museum #4-7110), and from the Ancón Necropolis (Ravines and Stothert 1976:99, 101,

184, 188, 199, 201; Rowe 1996:447), show a very recognizable and consistent style of construction that correlates directly with the Farfán examples (Figure A2.3). Additional examples of closely similar baskets, although less securely documented, are reported from Pachacamac (Squier 1967 [1869]), Ancón (Dransart 1993: 130, plate 2), and Chan Chan (Bandelier UNT 312, Museo de Arqueología, Antropología e Historia, Universidad Nacional de Trujillo, Perú).

Because the Farfán baskets no longer had any kind of structural integrity, the best strategy for opening them was much like an excavation, separating them layer by layer, documenting and drawing each successive layer. What follows is a detailed description of the layers and contents of each.

THE WEAVING BASKET ASSOCIATED WITH AQLLA A (CT 11A)¹

The basket found in a niche with the elderly female (CT 11A) had large clumps of dirt, decayed material, textile fragments, gourds, and sherds across its surface. A piece of greenish copper, red and ochre tassels, and bits of cloth could be seen. Initial cleaning revealed a much damaged, woven cane basket whose exact outlines were unclear (Figure A2.4). Based on the canes that were visible, the basket is estimated to have been roughly forty centimeters in length by fourteen centimeters in width by nine centimeters in depth. A copper spindle whorl is visible in the upper right of the photo, and is the only whorl found associated with this basket. At lower center, the pointed ends of wooden implements are visible protruding from inside the basket.

By removing the encrusted top layer, the woven structure of the basket became visible. The basket was made of spilt-cane splints, joined with plaited grass fibers. The weave patterns suggest a 2 by 2 twill, punctuated by long warp floats that spanned across the cane ribs at a Z diagonal angle (Figure A2.5). The weave was very regular and neatly finished, almost as if the basket were a textile: the grass would be like the warp, the cane splints like the weft, and the edges finished as if selvages. This method of manufacture should be considered a signature characteristic of this kind of weaving basket. Close comparison with other basketry techniques in examples from the highlands, Central Coast, and South Coast cultures supports the assertion (Dransart 1993; Jackson 2008). As such, it can be regarded as diagnostic of Late Period basketry associated with weavers on the coast.

Beneath the lid was a layer of two-ply spun yarn, arranged in long loops. These were loose skeins, arranged lengthwise, primarily of cotton, but with some camelid skeins also included. The material was not rolled into balls. In fact, it is curious that the basket had only five small balls of thread; the emphasis of the offering appears to have been on skeins of yarn and spindles of thread (Figure A2.6). With the basket lid removed, the two wooden implements were now easily identifiable as weaving swords made of very dense wood, apparently algarroba. They had no recognizable iconography and were somewhat deteriorated at one end (Figure A2.7). The basket also contained numerous small, flat, round seeds (about seven to nine centimeters in diameter) possibly *Nectandra*, as well as a lump of white chalk (Figure A2.8).

Much of the textile material around the edges was stuck with hard, brittle, resinous chunks; the exact identification of this material is uncertain. Nonetheless, the innermost yarns were well preserved. The colors were vibrant, in shades of black, brown, ochre, and red. More

¹ Excavation data: Center Tomb 11, Body A (2001), Ticket #1289.

skeins of yarn were placed under the weaving swords. Three copper needles, each ten centimeters in length, were found in this lowest layer of the basket's contents. What initially appeared to be long "quills" wrapped with thread were later recognized as thin wooden spindles that had deteriorated, leaving only the rows of coiled thread. At least twelve to fifteen of these were counted (Figure A2.9).

THE WEAVING BASKET ASSOCIATED WITH AQLLA B (CT 11B)²

The basket associated with the elderly *aqla*, CT11B, was also crushed, and its underside very deteriorated, much like the basket associated with the other older female, *aqla* CT 11A, making analysis problematic. Although most of its edges were gone, enough remained of the basket lid to see that it was essentially the same 2 by 2 plaited twill and split-cane construction as the basket found with the elderly *aqla* CT 11A (Figure A2.10). It measured roughly 38 centimeters in length by 20 centimeters in width by 5.5 centimeters in depth. Clumps of yarn and small balls of thread inside were visible escaping from the top, bottom, and sides. The presence of lengthy yarns and small balls of colored thread may very well correspond to the way in which a weaver's loom might have been set up—with long yarns forming the lengthy warp, and smaller balls of thread used as weft threads, passed back and forth across the loom).

The opened basket revealed numerous skeins of yarn in various shades of red, ochre, and brown. These had been laid lengthwise, creating long stripes. Beneath the skeins, an entire layer of small balls of thread had been placed. There were more than 80 balls of thread, in shades of red, ochre, brown, and black (Figure A2.11).

The black balls of thread disintegrated when touched, due to unstable dye components. The contrast of the skeins of variegated yarn with the balls of thread created a remarkable visual texture.

Several small items were found inside the basket, and these were considerably different from the contents of basket CT 11A. These included five small *Polinices uber* shells (Mackey 2006:333; Figure A2.12) and two unidentifiable seed pods.

A single flat copper disk (5.3 by 4.7 centimeters) was also found in the basket, wrapped inside a small piece of plain-weave cloth (8 by 7 centimeters; Figure A2.13). The copper disk had oxidized to a green patina, and featured a small hole near the edge to allow for attachment. This disk was the only metal item associated with the basket. The cloth was a cotton, 3 by 3 weave (warp was 3-ply twined, weft is 3-ply flat, with 8 warps. per centimeter by 5 wefts per centimeter). The disk wrappings also included clumps of 2-ply yarn.

Also of interest was a small, thin gourd bowl, 10.5 centimeters long by 8 centimeters wide by 2 centimeters deep, thread (2-ply camelid), as well as several very tiny spondylus beads (3 millimeter) and one *pallar* (Lima bean) seed bead. In an analysis of weaving implements, Anne Rowe points out that small bowls like this one were used for spinning cotton thread (Dran-sart 1993:136–138, citing Reiss and Stubel 1880–1887: plate 86; Rowe 1996:445–447). Additionally, Uhle's plaited basket from Ica (Hearst Museum #4-4996) included a miniature gourd bowl. The Farfán gourd may have been decorated; however, surface flaking prevented any identification of motif.

² Excavation data: Center Tomb 11, Body B (2001), Ticket #1330.

CONCLUSIONS

Although the baskets were of similar construction and were included with contemporaneous burials of individuals who, apparently, held approximately equivalent rank, it may be significant that they do not contain the same complement of objects. One was almost entirely full of skeins of dyed yarn, along with chalk, needles, spindles, and implements. The other included a rich layer of yarn carefully placed on top of more than eighty small balls of thread, along with a small collection of shells and beads. The distinctive nature and specificity of the objects in each basket suggest symbolic meaning and intentionality. Additionally, the careful relationships between objects suggests a certain degree of aesthetic deliberation on the part of whomever arranged the baskets. In a generalized sense, they are weaving baskets, but they were also highly tailored to the individual women to whom they belonged.

It is worth noting that this kind of basket was a specialized object. These were not all-purpose containers. Although various examples found at coastal sites sometimes contained small numbers of seeds, shells, and sometimes edible fruit or roots, these were likely included for their symbolic values, as for example, in Farfán basket CT 11-A and CT 11-B (see also Dransart 1993: 135; Ravines and Stothert 1976:158, 164). Similarly, the baskets did not contain much jewelry or other kinds of tools. They were closely associated with a particular occupational specialty, that of weaving and with the weavers themselves. It may be, as Gayton suggests (1982: 277), that weaving became specialized to such a high degree that there were sub-specialties. A person might be an expert carder, or expert spinner, while others were master weavers or iconography specialists. Differences in basket contents may relate to these subspecialties and perhaps signal something about the skills or occupational specialty of each individual. Perhaps *aqllakona* A and B of

Farfán were expert spinners or embroiderers—hence, the emphasis on thread and yarn.

ACKNOWLEDGEMENTS

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Portions of this analysis were originally presented as “The Weaver’s Offerings: Chimú and Chimú-Inka Work-baskets in Archaeological Context,” a paper for the Dumbarton Oaks Mesa Redonda, Trujillo, Perú, June 2008.

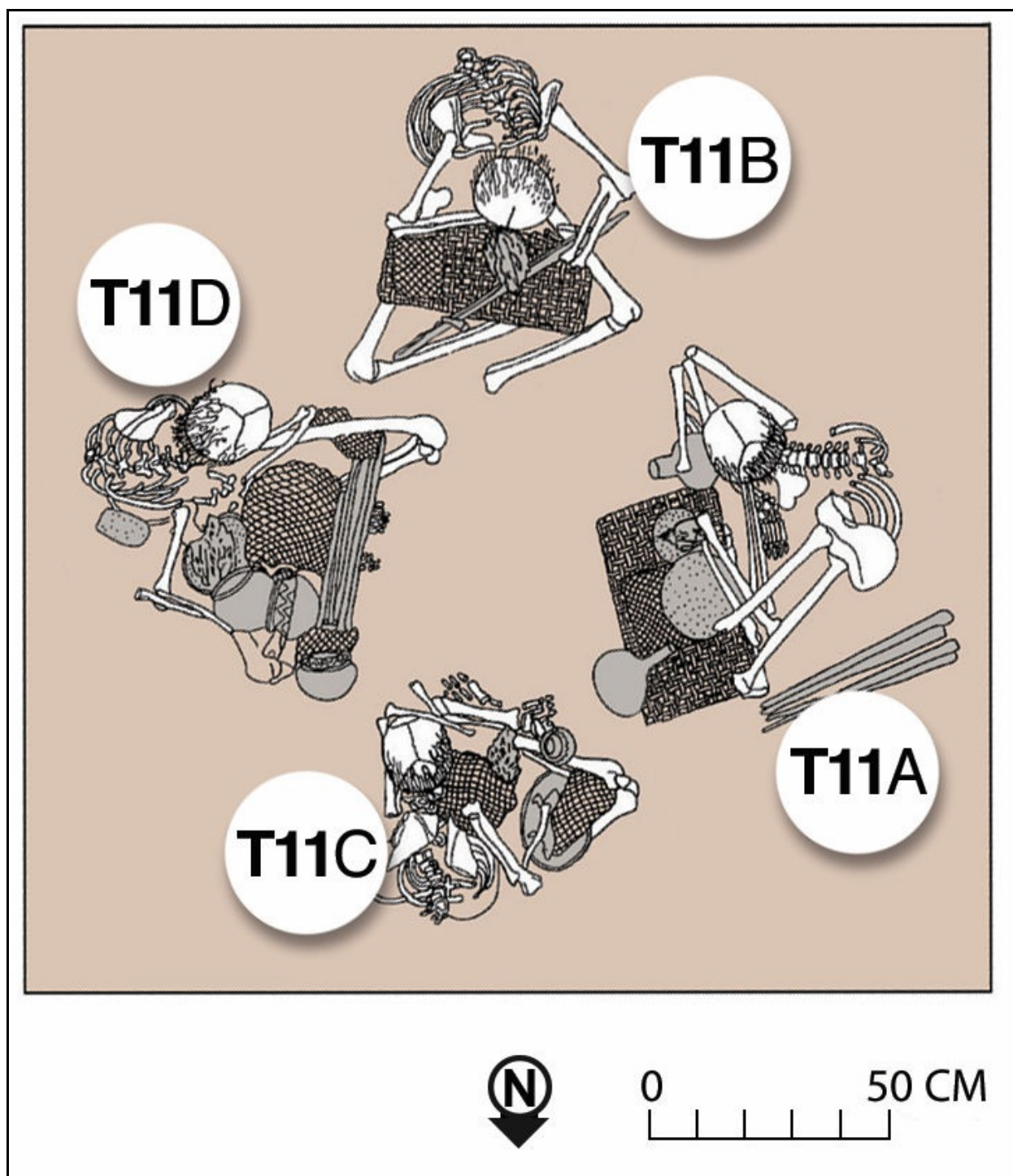


Figure A2.1. The four seated occupants of Center Tomb 11 with grave goods and weaving baskets associated with aqllakona CT 11A and CT 11B.

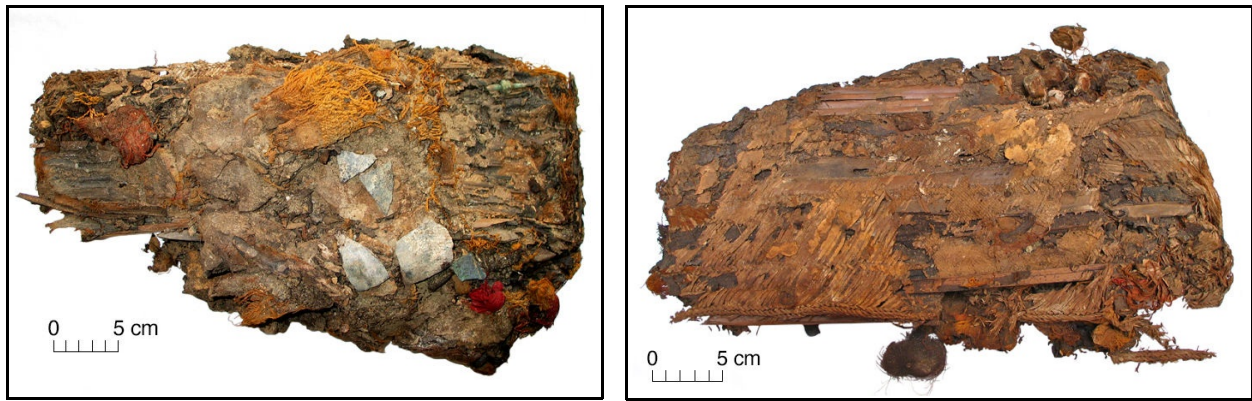


Figure A2.2. Left: basket found with aqlla A (CT 11), exterior view. Size is approximately 40 by 14 by 9 centimeters; right: basket found with aqlla B (CT 11), exterior view. Size is approximately 38.5 by 20.5 centimeters.



Figure A2.3. Top: weaving basket, 36 by 15.5 centimeters; bottom: top view. Retrieved by Uhle at Chincha, Peru (Hearst Museum #4-4027).

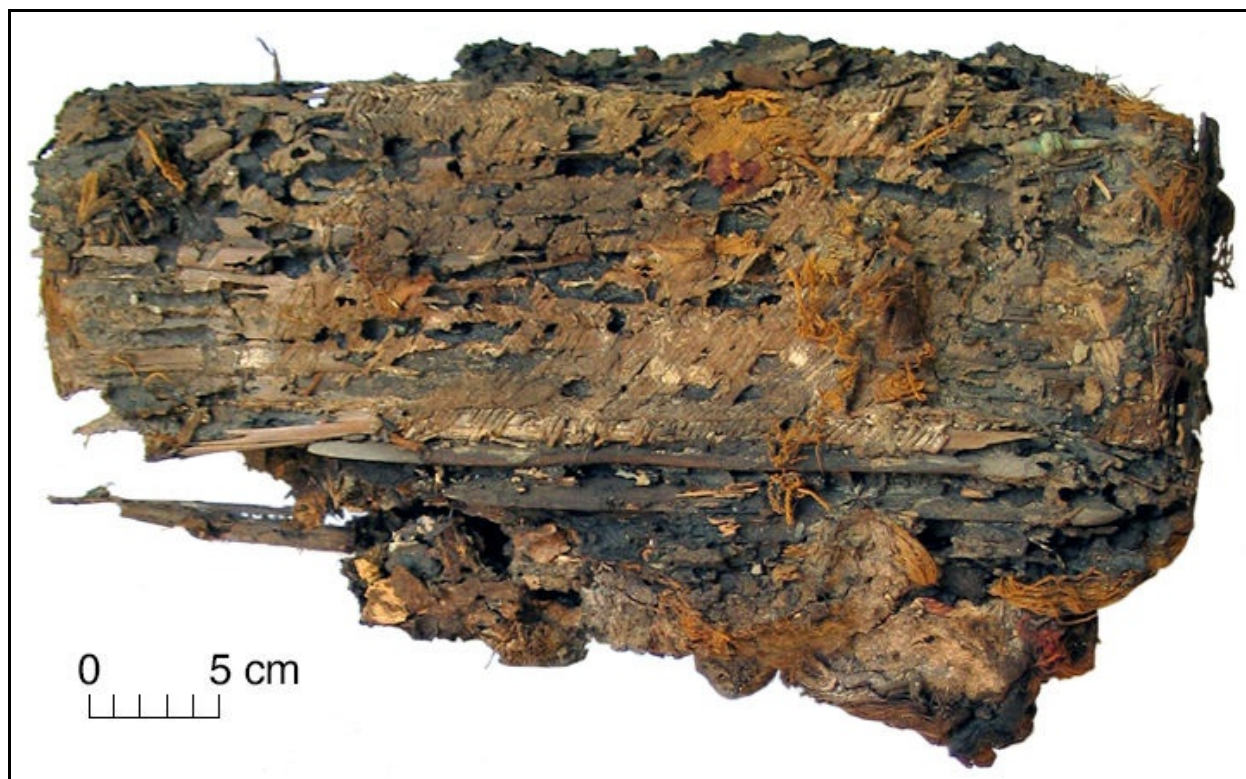


Figure A2.4. Top level of basket found with aqlla CT 11A. Split-cane construction is visible, as are remnants of textiles, a spindle whorl (upper right), and weaving implements (lower center).



Figure A2.5. Close-up of the top level of basket found with aqlla CT 11A, showing remnants of the woven grass, split-cane construction, and textile fragments. Basket selvage visible at upper left.

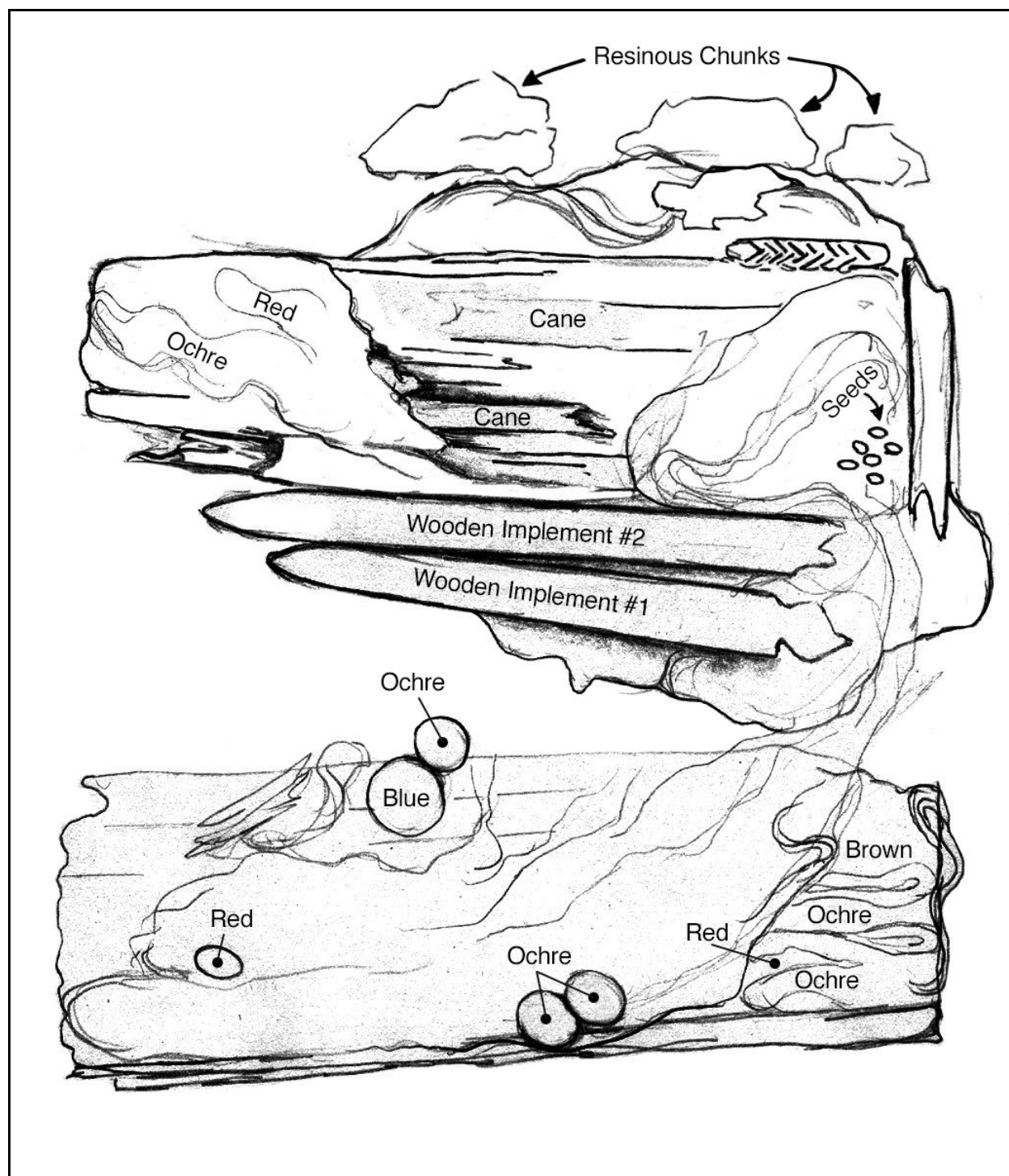


Figure A2.6. Basket found with aqlla CT 11A. Drawing indicates position of the contents in layer 2.

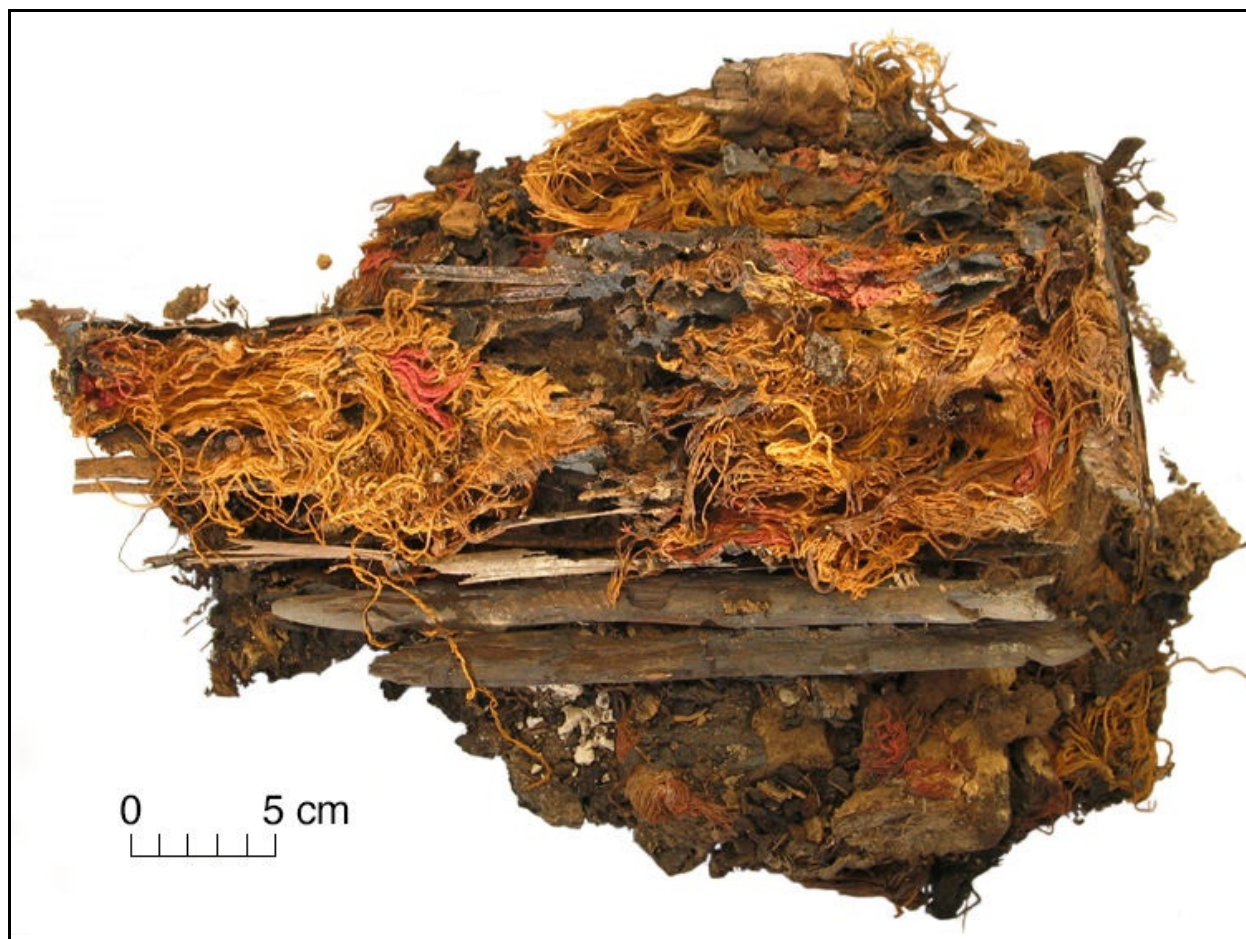


Figure A2.7. Basket found with aqlla CT 11A. Wooden weaving swords and yarn.

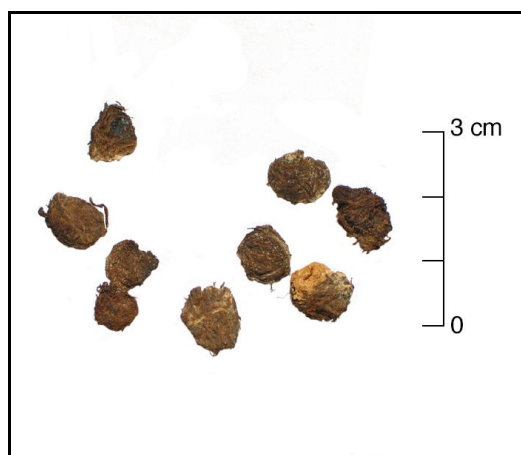


Figure A2.8. Left: detail of chalk found in the basket with aqlla CT 11A; right: small flat seeds, possibly *Nectandra*, found in the basket with aqlla CT 11A.



Figure A2.9. Basket found with aqlla CT 11A. Detail of copper needles (center right), deteriorated spindles (lower left), and skeins of yarn.



Figure A2.10. Basket found with aqlla CT 11B, detail of woven top, selvage finish visible at bottom edge.



Figure A2.11. Basket found with aqlla CT 11B, layer 2, with skeins of yarn and more than eighty small balls of colored thread. Shells are visible at lower center and lower right.



Figure A2.12. Shell and shell beads found in the basket associated with aqlla CT 11B.

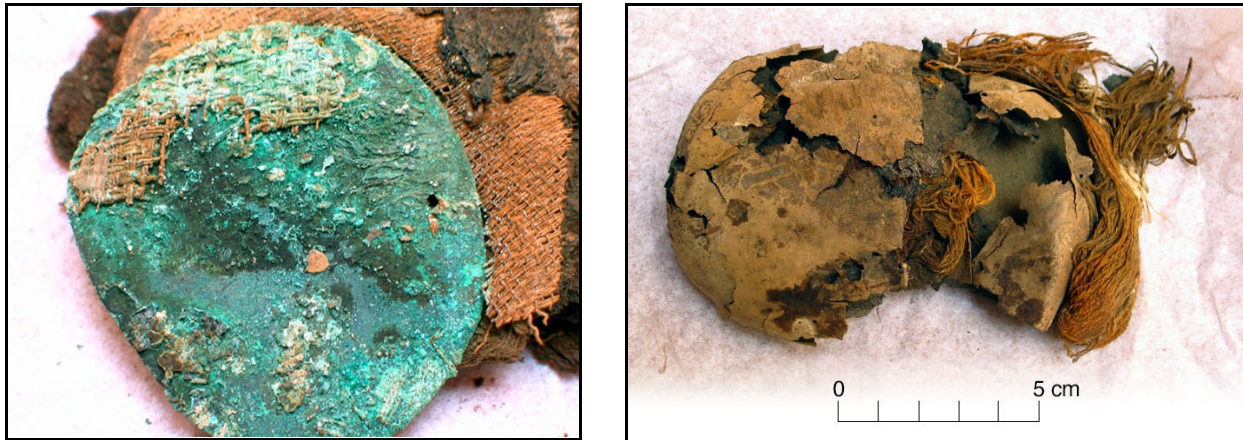


Figure A2.13. Left: detail of copper disk found in the basket associated with aqlla CT 11B; right: small gourd container that held spondylus beads.

APPENDIX 3

AN ANALYSIS OF LLAMA REMAINS AT THE INCA SITE OF FARFÁN

Regina A. Richter Lagha

When conquered by the Inca c. A.D. 1470, the Chimú Empire stood as one of the largest, most powerful states in the New World (Moore and Mackey 2008:783). The Inca conquest and rule of the North Coast was short lived, however, as the Spaniards arrived in the region less than a century later. Nonetheless, Inca conquest had significant implications for ritual and mortuary practices for the local cultures of the North Coast. This analysis assesses the animal remains found in the Late Horizon burials and tombs excavated at the site of Farfán.

While ongoing archaeological research has contributed much to our understanding of prehistoric cultures of the Peruvian North Coast, a general lack of information regarding Inca mortuary practices persists, specifically concerning the use of animals. Animals are an important aspect of prehispanic iconography found along the North Coast, although only a select few vertebrates are typically recovered from mortuary contexts. The most commonly recovered, the camelid, represents an important part of the economy in the region, serving as a beast of burden vital to trade and as a source of wool and meat (Miller 1979). Vertebrate remains recovered from Farfán illustrate a variety of ritual practices carried out as part of mortuary activities at the site.

METHODS OF ANALYSIS

Processing

The majority of faunal remains recovered from the Farfán burials were well preserved,

displaying little sign of weathering or natural bone breakdown. Specimens were first dry brushed to remove excess dirt. Water was used when necessary to allow for better assessment of potential modification and pathology.

Specimens were then measured using calipers and an osteometric board. Only full-grown, non-carbonized or non-calcined adult animal bones were measured, because heat can damage bone and alter its weight, shape, and size. Those specimens with signs of modification (e.g. cut marks, scorching) were photographed using a digital camera for the benefit of later comparison to reference collections in the United States, because materials could not be readily transported outside of Peru. All specimens were catalogued in a computer database, indicating, when possible, the fusion or wear state, fracture pattern, weathering, and sex of each identified specimen, as well as any observed taphonomic information, such as evidence of gnawing or digestion, trampling, root etching, burning, cutting, engraving and polishing.

Taxonomic Identification

Each specimen was identified first to the highest possible taxonomic unit, and then to skeletal element. Camelid specimens, by far the most ubiquitous in the assemblage, were identified using comparative collections in the United States and Peru, published manuals and past statistical studies (Altamirano 1983; von den Driesch 1976; Kent 1982; Miller and Burger 1995). Camelids were identified to species based on dentition morphology and osteological mea-

surements. As noted by Wheeler (1982), tooth morphology can be used to distinguish between the four extant camelid species. Llama and guanaco incisors are spatulate, with enamel covering all crown surfaces. Vicuña incisors are non-spatulate, rootless, and have enamel only on the labial surfaces of the crowns. Alpaca incisors are also non-spatulate, develop roots with age, and have enamel only on the labial surfaces as well. To further distinguish between the different species, the dimensions of the proximal first phalange of collected specimens were compared to known averages of the four extant American camelid species (Kent 1982: appendices IV.1–IV.3; Miller and Burger 1995: 431). Based on these characteristics, all camelid specimens recovered from Farfán are consistent with the identification of *Lama glama*.

Sex and Age at Death

Sex was determined based on differences in dental morphology, as females generally have smaller-sized canines that erupt slightly later, on average (Wheeler 1982:13–15). Determination of the relative age at death was based firstly on the tooth eruption sequence and wear pattern, as documented by Wheeler (*ibid.*), and secondly on the state of epiphyseal fusion, its location and degree (Wheeler 1999:303).

Modification

Few cut marks were found on the llama remains. In fact, the majority of remains were components of articulated, complete skeletons, indicating the individuals were buried whole. The few cut marks found were localized in the joints of disarticulated elements. There is no evidence for method of slaughter, and in the absence of visible markings, it is impossible at this time to determine cause of death. Several individuals do, however, show signs of scorching, or exposure to high flame over a short period of time.

RESULTS

Faunal remains at Farfán were found in the Huaca Burial Platform, Mound G, Cemetery I, and Cemetery J-JO S1 in three distinct mortuary contexts: primary burials, secondary burials, and offerings (Chapters 3A–6A, this volume). Llamas were by far the most ubiquitous in the assemblage. See Table A3.1 for an overview of the llama remains uncovered.

The following provides a detailed description and focused analysis of the recovered remains, organized by site location. This is followed by a more general discussion of the sacrificial llamas recovered from Farfán.

The Huaca Burial Platform

North Tomb 1 (N T1)

The remains of three complete llamas and one disarticulated lower hind limb were recovered from North Tomb 1, which contained a 40-year-old woman, a 15-year-old adolescent girl, and a 9-month-old infant. Although time-related destruction prevents reconstruction of individual animal placement in the tomb, the specimens remained largely complete, with minimal amounts of fracturation. The proximal femoral epiphyses of the oldest individual (see L1 in Figure 3.31A) are fully fused, but still evident, while the proximal humeral epiphyses remain unfused, corresponding to an individual approximately three-and-a-half years old (*ibid.*: 303). This assessment is supported by the pattern of dental eruption. The fourth premolar (P4) has almost reached full height; however, use of the left P4 was prevented by the continued presence of the fourth deciduous premolar (Pd4), which remains firmly rooted in the mandible. The third mandibular molar (M3), not yet in occlusion, has begun to erupt. This eruption pattern corresponds to an animal between three years, five months and three years, eight months

old (Wheeler 1982:15). Finally, the first mandibular canine (C1), relatively small in size, has just emerged from the crypt. Considering the timing of this eruption and the small size of the canines, this finding strongly suggests that the individual was a female.

The remains of a younger llama (see L2 in Figure 3.31A) were also found in North Tomb 1. Save for the medial metacarpals and metatarsals, the epiphyses remain unfused, including the proximal scapula, distal humerus, proximal radio-ulna, and distal tibia, corresponding to an animal between one and twelve months old (Wheeler 1999:303). Dental patterns help to narrow this range somewhat: the eruption of the first molar (M1) indicates an individual between six and nine months old (Wheeler 1982:17). Due to the young age of the individual, the sex cannot be determined.

Also recovered from the tomb were the remains of a camelid fetus (see L3 in Figure 3.31A). The epiphyses have not yet fused, including the medial metacarpals and metatarsals; in addition, many of the bones, including the carpals and tarsals, are amorphous and not fully formed. The fourth deciduous premolar (Pd4), present at birth in healthy individuals, has begun to erupt, but is not yet in occlusion (Figure A3.1), nor does it show any signs of wear. Again, due to the young age of the individual, sex cannot be determined. Considering that females begin breeding when they are between sixteen and twenty months old, and with pregnancy lasting just under a year, it is possible that the fetus originated from Llama 1; however, this cannot be confirmed.

The articulated left metatarsal and phalanges of an adult camelid were also recovered from North Tomb 1 (Figure 3.31A). Based on the fusion of the observed epiphyses, the lower limb is from an individual older than three years nine months of age. Comparison of this specimen to

Llama 1 does indicate a slightly smaller-sized animal. Despite disarticulation, there are no visible cut marks present on the limb. As diagnostic differences between the sexes in distal elements have not yet been determined in camelids, the sex of the animal from which the camelid foot was derived cannot be determined.

The articulated digit of an adult camelid was also found in association with the human remains of the neonate (N T1C) who is held by the elderly female (N T1B). Again, sex cannot be determined based on the distal elements. The deep, straight, v-shaped cut marks visible on the on first phalanges (Figure A3.2) indicate that metal tools were used to dissect the digit (Walker and Long 1977). These cut marks are unique within North Tomb 1, as no other recovered remains show evidence of butchery.

Also found in the tomb were the select few remains of a small-sized bird, including the right humerus, femur, and carpometacarpus, as well as the remains of a guinea pig (*Cavia porcellus*).

Secondary Burial 31

The secondary burial (S31), in which a middle-aged and an elderly man were interred, contained the remains of one llama and one dog (*Canis familiaris*). The distal humerus and proximal radio-ulna of the llama have not yet fused, indicating that the individual was younger than twelve months old (Wheeler 1999:303). Examination of the mandible reveals that the M1 has erupted and shows preliminary signs of wear, corresponding to an individual between nine and twelve months old (Wheeler 1982:17). Due to the young age of the individual, sex cannot be determined. The remains of a young dog were found in association with the llama. The epiphyses are unfused, including the bones of the pelvis, indicating an animal younger than four months old (see Lenehan and Van Sickle 1985: 981–982).

Burn patterns on both the llama and dog indicate superficial burning, or scorching. The bone surfaces are carbonized, or blackened, but have not yet become brittle or charcoal-like. Lack of bone calcification indicates a low-temperature fire and a short duration of heat exposure (Lyman 1994:384–392). Scorching of both the llama and the dog appears localized to the cervical and thoracic vertebrae, forelimbs, and hind limbs; while the cranium, lumbar vertebrae, sacral elements, pelvis, sternum, and scapulae show little signs of exposure to fire. The location of carbonization found on the bone indicates scorching occurred with the flesh still on the articulated limbs. Sites of articulation remain uncarbonized, while the less meaty areas of the animal, like the anterior and posterior surfaces of the carpals and tarsals, are more carbonized. Blackened gouge and puncture marks localized on the joints indicate that the animals were first modified with a broad, dull tool prior to fire exposure. Despite these marks, the limb bones remained fully articulated, indicating perhaps the use of ceremonial tools to forcibly contort the positioning of the animals, rather than purposeful disarticulation. Of note, no carbon was recovered from the tomb during excavation, indicating that the scorching occurred at a location distinct from the burial site.

Looted Chamber 2

Although Chamber 2 of the Huaca Burial Platform was found to be empty of human remains, a fully-articulated camelid was uncovered interred below the floor of the tomb's west side. Due to time constraints, the remains were not removed in their entirety. Elements available for analysis included the cranium and mandible (but not the hyoid), four cervical vertebrae (including the atlas and axis), and the left femur and tibia. The proximal and distal femoral epiphyses and the proximal tibial epiphysis are completely fused, indicating a fully-grown adult animal. All teeth have erupted and

reached their full height, and show visible signs of wear. Based on the level of attrition of the molar occlusal surfaces, the llama was likely between nine and nine-and-a-half years old. All four canines are present and large in size, suggesting a male llama.

The Ramp Offering

A fully-articulated llama skeleton was recovered from under the floor of the ramp leading to the walkway fronting the north face of the Huaca Burial Platform. The medial metacarpals and metatarsals have fused; all other epiphyses remain unfused, corresponding to an animal between one and twelve months old (Wheeler 1999:303). Examination of the skull reveals that M1 has not yet erupted, while Pd4 shows signs of wear corresponding to an animal between three and six months old. The presence of alveolar sockets for a third deciduous premolar (Pd3) suggests a male individual (Wheeler 1982:15). The skeletal remains show no sign of pathology, nor are there any indications of burning, scorching, butchering, or modification.

Mound G

Tomb 4 (G T4)

The remains of two complete llamas were recovered from G T4: a subadult (Llama 1) and a fetus (Llama 2). They were found in close association with a mid-adult seated woman, one of three occupants of the tomb, which also contained an elderly female (G T11) and a neonate (G T12). Also recovered from G T4 were individual disarticulated faunal elements, including a complete llama skull (Llama 3) found underneath the seated female, and two distinct animal offerings, each containing two llama digits (inclusive of all phalanges) and a thoracic vertebra.

The epiphyses of the subadult (Llama 1) remain wholly unfused except for the medial metacarpals and metatarsals, indicating an animal between one month and twelve months old (Wheeler 1999:303). The presence of a newly erupted M1 showing little signs of wear narrows this range to between six and nine months old (Wheeler 1982:17). Due to the young age of the individual, the sex cannot be determined.

A llama fetus (Llama 2) was recovered in front of the seated woman. The epiphyses have not yet fused, including the medial metacarpals and metatarsals, and bones have not fully formed. The deciduous teeth Pd3 and Pd4, present at birth in healthy individuals, are present but show no indication of wear. Again, due to the young age of the individual, sex cannot be determined.

Found beneath the mid-adult seated female (G T4) were the disarticulated elements of a young adult llama (Llama 3), including the complete skull and four digits (all articulated phalanges; see Figure 6.5). Examination of the mandible indicates the animal was between three years, five months old and four years old (*ibid.*: 17). M3 has achieved its full height and shows signs of light wear; the recently erupted P4 shows no sign of wear. C1 has only just begun to erupt and is relatively small, suggesting the female sex. This is supported by the sexually-dimorphic timing of canine eruption, with this skull demonstrating the late eruption of C1 characteristic of female animals. The digits are fully fused; however, it cannot be determined whether the digits belonged to the same animal as the cranium. Again, it is possible that the fetus may have originated from Llama 3; however this cannot be validated at this time.

Located to the right and left of the seated woman (G T4) were two distinct groupings of skeletal elements (not pictured in Figure 6.5),

each containing two digits (including articulated phalanges) and a single thoracic vertebra. Size differences indicate that these phalanges did not originate from the same animal as the phalanges found in association with the cranium. Cut marks found on the proximal anterior surface and articular surface of the first phalanges (P1) and on the spinous processes of the thoracic vertebrae indicate sites of disarticulation. The absence of visible cut marks on any of the other phalanges indicates that the digits were severed at the joint between the distal metapod and the P1 and then interred whole. The cut marks also differ in cross-section: the phalanges found in the distinct groups to the right and left of the seated woman exhibited fine, shallow cut marks, whereas the cut marks found on the phalanges associated with the cranium are broader, deeper, and more frequent. This suggests the use of different tools, distinct associated motions, or both in the process of butchering the animals for ritualistic use.

CEMETERY I

Tomb 3 (I10 T3)

The skeletal remains of a complete skull and four articulated forelimbs of a llama were recovered from Tomb 3 in Cemetery I, in which had been interred a four-year-old child in an extended, supine position (Figure 5.11). Although found in close association, it cannot be determined whether the llama forelimbs belonged to the same animal as the cranium. Epiphyses of the metapods are fully fused, indicating an animal older than two years, nine months. Examination of the skull indicates an adult animal. M3 has reached its full height and shows signs of wear, corresponding to an animal aged between nine years, six months and eleven years old (*ibid.*: 17). The C1 is small in size, possibly indicating the female sex.

Cut marks show sites of disarticulation of the llama along the posterior surface of the carpals and tarsals. Elements were discovered fully articulated; this is further supported by the presence of cut marks that span elements, as with the astragalus and calcaneus of the right hind limb (Figure A3.3). The site of disarticulation also varies among the limbs. While the astragalus and calcaneus of the right hind limb were recovered from the tomb, the left-sided elements were not found.

Tomb JO S1

The complete articulated skeleton of an adult llama, and a small textile offering, were recovered adjacent to the tomb of the secondary burial of an elderly disarticulated woman (JO S1). Evidence of osteophytic growth along the vertebral spinous processes, the deltoid tuberosity of the humerus, and the condyles of the femur suggest an older animal. Examination of the skull reveals that all teeth are in occlusion and show signs of extreme wear. The dentin of P4 is fully visible, while that of M1 is nearly entirely exposed, corresponding to an animal between twelve and fourteen years old. A lack of space in the mandibular alveola for the canine hinders determination of sex. Generally, healthy llamas live approximately fifteen to twenty years. At twelve to fourteen years, this is the oldest llama thus far encountered at Farfán. Scorch marks on the carpals and phalanges and on select tarsals again indicate the use of ritual fire. Also, as in the Huaca Burial Platform, no carbon was found.

DISCUSSION

The faunal remains recovered from the Huaca Burial Platform and three other cemeteries (Mound G, Cemetery I, and Tomb JO S1) at Farfán suggest a complex and varied mortuary process under Inca rule. In North Tomb 1, the two human females and an infant are found

paralleled by the two llamas and a fetus, establishing a “like with like” pattern (Gaither *et al.* 2008). The faunal remains indicate that additional practices accompanied the ritual burial events. Found among the women were unassociated camelid limbs, pointing to activities like feasting, or at least to the additional processing of the animal carcass prior to interment at the burial site.

Secondary burial 31 in the Huaca Burial Platform provides some indication as to the nature of the ceremony that accompanied these mortuary rituals, which included the use of fire and metal tools. The llama remains found below the floor in Looted Chamber 2 and beneath the Platform Ramp are an example of yet another ritual behavior: consecration. Together, the consecration of various spaces during construction, the scorching and modification of the camelid sacrifice prior to interment, the potential consumption of llama meat during feasting, and the actual burial of both complete animals and particular elements hint at a complex and procedural ritual practice.

Both Tomb JO S1 and the Mound G summit burials revealed additional examples of the “like with like” burial pattern seen in North Tomb 1 of the Huaca Burial Platform. Tomb JO S1 contains a high-status elderly female human, who was mirrored in the interment of the oldest female llama encountered to date at Farfán. The choice of this particular llama was further emphasized by its location, in a separate compartment next to her. Evidence of fire on the camelid skeletal remains, in the absence of carbon, again hints at ritualistic preparation of the sacrifice prior to interment. The primary interment in Mound G was an elderly female (G T11), her middle-aged female attendant (G T4), and a neonate (G T12). These individuals were reflected in the interment of a complete llama subadult and fetus and the skull and phalanges of an adult llama.

Individual offerings of camelid elements, specifically the lower limbs, were found in Mound G, Tomb 4, and then again in Cemetery I, Tomb 3, again suggesting the possibility of a feast accompanying the burial of these individuals.

CONCLUSIONS

The animal remains recovered during excavations at Farfán offer remarkable insight into the mortuary practices of the Late Horizon, including: (1) the range of ceremonial animal use; (2) the process behind sacrificial animal selection; and (3) the ceremonial practices accompanying burial.

First, analysis of the faunal remains points to a wide range of animal use in burial ceremonies at Farfán. Llamas were interred whole and as discrete elements, suggesting the use of sacrificial burial as well as feasting. Both activities can serve to demonstrate the power, wealth, and prestige of the deceased. By far the most ubiquitous animal found, llamas were encountered in various contexts, as tomb offerings and as consecratory offerings, marking the llama as an integral and multipurpose participant in Inca ritual.

Second, study of the animal offerings reveals some information on the process of sacrifice. The observed “like with like” pattern indicates the purposeful selection of particular animals for sacrifice during the interment of particular individuals. Animals appear healthy and of an age that often parallels the ages of the humans buried in the tombs. The frequency of animals aged around or below three years of age indicates a loss of productive capital. Female llamas at this age have begun to (or will soon) breed. Males have reached an age suitable for breeding, as well as cargo transportation. These healthy, productive animals were highly valuable, and the slaughter of these choice animals would

have represented a significant value when interred and/or consumed. Deviations from these set criteria are also of importance. For example, the older animal discovered in Tomb JO S1 connotes a different kind of animal selection, one that reflects the age of the high-status female individual in the adjoining compartment.

Finally, additional information about the ritual activities associated with Farfán’s burials can be gleaned from analysis of the recovered faunal remains. Animals were found in different stages of processing, ranging from whole animals to disarticulated limbs. As previously discussed, feasting could have been one component of these rituals. Additionally, the use of fire, as indicated by the scorched remains uncovered in secondary burial 31, hints at ritualistic practice that accompanied these ceremonies. Although the bones are scorched, no carbon was recovered from the tombs, indicating that the ceremonial burning of the animals took place in a separate location. The use of a dull, broad blade to gouge and chop the animal also points at additional ritual practice.

It is our intention that analysis of the Farfán faunal materials found in mortuary contexts will allow for a better understanding of the mortuary practices of the Late Horizon, placing our findings within the broader context of North Coast cultures. As there exists little information on the mortuary practices during the Inca occupation of the northern North Coast, this monograph will provide future researchers with a foundation for forthcoming analyses and serve as a good source of comparison.

Location	Provenience	Recovered faunal remains
Huaca Burial Platform	North Tomb 1 (N T1)	Llama, 3.5 years old Llama, 1-12 months old Llama, fetus Guinea pig (<i>Cavia porcellus</i>)
	Secondary Burial 31 (S31)	Llama, 9-12 months old Dog (<i>Canis familiaris</i>), > 4 months old
	Looted Chamber 2	Llama, 9-9.5 years old
	Ramp Offering	Llama, 3-6 months old
Mound G	Tomb 4 (G T4)	Llama, 1-12 months old Llama, fetus Llama, 3.4-4 years old (skull and digits only) Llama, indeterminate age (additional disarticulated elements)
Cemetery I Tomb JO S1	Tomb 3 (I10 T3)	Llama, 6-11 months old (skull and digits only) Llama, 12-14 years old Guinea pig (<i>Cavia porcellus</i>)

Table A3.1: Summary of the Farfán Faunal Remains.



Figure A3.1. Huaca Burial Platform, North Tomb 1, dentition of fetal camelid.



Figure A3.2. Huaca Burial Platform, North Tomb 1, cut marks located on digit of adult camelid, found articulated in situ.



Figure A3.3. Cemetery I, Tomb 3 (I10 T3), cut marks located on an astragalus and calcaneum found articulated in situ.

APPENDIX 4

MOLD-MADE POTTERY AND TEMPORAL-SPATIAL DYNAMICS AT FARFÁN DURING THE LATE HORIZON

Abigail Levine
abylevine@gmail.com

INTRODUCTION

During the 2002–2003 field seasons I conducted a study of mold-made ceramics excavated from Late Horizon mortuary contexts at Farfán. This study aimed to chart the organization of production and distribution of this distinctive vessel type, and involved comparison of ceramics from Farfán with analogous vessels from Túcume (Heyerdahl *et al.* 1995: *passim*). Results of this analysis indicate that the Farfán monkey effigy ceramics were the product of specialists, and that manufacture occurred in local workshops, rather than in a centralized facility. Because this comparison has been presented elsewhere (Levine 2011), in this paper, I present a detailed analysis of the monkey effigy vessels from Farfán, a subset of the vessels considered in the regional study. These vessels conform to the Late Horizon Jequetepeque Style and exhibit remarkable uniformity, despite the fact that they were recovered from many different mortuary contexts within Farfán (Appendix 7, this volume). Likely produced with the same molds, monkey effigy vessels can be used to establish temporal links among these distinct, archaeologically-defined contexts.

THE MONKEY EFFIGY VESSEL

The monkey effigy vessel is a globular, necked jar with a three-dimensional monkey head mounted on the vessel shoulder and a press-molded monkey body splayed around the vessel neck. The monkey effigy vessel was cho-

sen for study for two reasons. First, it is a traditional coastal form that dates back to as early as Gallinazo times (c. 200 B.C.); an example of a Gallinazo monkey effigy vessel been identified in the collections at the Universidad Nacional de Trujillo. This motif reached a sustained prominence during Moche IV–V (c. A.D. 500), and its popularity, especially in mortuary assemblages, continued into the Late Intermediate Period. Although Inca political strategy on the North Coast resulted in the attrition of the Chimú iconographic repertoire and the abandonment of certain motifs, such as the Chimú deity figure (Appendix 6, this volume), the monkey effigy vessel persisted into the Late Horizon, and figured prominently in the mortuary assemblages of Farfán when it was an Inca administrative center. Second, the monkey effigy vessel was chosen because it appears frequently throughout the North Coast. The widespread geographic distribution of this vessel form provides ample opportunities for regional comparisons. The objective of the present study is to demonstrate how this unique form can be used to cross-date the various tombs at Farfán.

SAMPLE

Although monkey effigies appear on a variety of vessel forms, only globular necked jars from Farfán were considered in this study because this was the predominant form on which these effigies appear. Restricting the sample in this way facilitated comparison of the vessels without sacrificing sample size. Moreover, only whole

vessels, including reconstructed broken vessels, were studied. The term “whole vessel” extends to those pieces that may have a broken portion, such as a missing vessel neck or monkey effigy; however, the term does not include isolated sherds that may have once been part of a monkey effigy vessel, such as a lone, loose monkey head found in fill levels. All vessels have a three-dimensional monkey head on the vessel shoulder, and most have a monkey body in low relief positioned around the vessel neck. All of these vessels in the analyzed sample were recovered from undisturbed mortuary contexts.

The core sample selected for study from Farfán consisted of twenty-nine out of thirty-six total monkey effigy vessels excavated from Late Horizon mortuary contexts during the 2000, 2001, and 2002 field seasons. Twenty-four vessels were excavated from the Huaca Burial Platform, an Inca construction on the western edge of the site (Chapter 3A, this volume; Mackey and Jáuregui 2001, 2002), and five vessels were excavated from the Compound VI Cemetery, (Chapter 7A, this volume; Mackey and Zavaleta 2000). In the Huaca Burial Platform, vessels were found in Center Tombs T2 and T11, the East Tomb Ceramic Offering, Looted Chamber 1, and two secondary burials (S31 and S21; Chapter 3A, this volume; Mackey and Jáuregui 2001, 2002). In the Compound VI Cemetery, monkey effigy vessels were excavated from I T2, I T3, II T3, III T1, and III T2 (Chapter 7A, this volume; Mackey and Zavaleta 2000). Of the total sample, twenty-seven of the jars are blackware, and two are redware; the two redware jars are significantly smaller than the blackware jars, though their three-dimensional heads were of relatively equal size.

METHODOLOGY

To examine the production and distribution of mold-made Late Horizon Inca monkey effigy vessels, I focused on quantifying the level of

variability present in the sample of pottery. The purpose of analysis was to determine the relative degree of standardization represented in these samples; standardization or homogeneity in a sample of artifacts has been argued to reflect the presence of an individual or group of specialists (Blackman *et al.* 1993; Costin 1991; Costin and Hagstrum 1995). Analysis considered three areas where the vessels might have been standardized: formation technique, metric traits, and stylistic attributes.

Vessels were examined internally and externally for evidence of seams and cracks in order to reconstruct the process of vessel formation. This allowed for the isolation of the mold-made segments used to produce each vessel, and to identify the actual number of molds required for manufacture. Together, the steps involved in vessel construction provide an index for the activities that took place in production facilities, and are therefore important to understanding the organization of production.

For the collection of metric data, six vessel dimensions of the intact vessels were measured: vessel height, maximum diameter, maximum circumference, orifice diameter, neck height, and monkey head height. Following Blackman and colleague's Standardization Hypothesis (Blackman, *et al.* 1993), the coefficient of variation (C.V.) was used to assess variability.

Analysis of stylistic attributes considered the variability of the three-dimensional monkey heads.¹ Variables considered were either presence/absence, or were restricted to no more than three possible choices. Presence/absence variables included earspools, cap, body, tail curva-

¹ Vessel 1058 did not have a monkey head; it was identified as a monkey effigy vessel by the press-molded monkey body, so data could not be collected from its facial features.

ture, and belt. Six other variables were collected from the monkey facial and body features: eye shape, eye orientation, mouth shape, nose-to-mouth ratio, ear placement, and ear protrusion. By sorting and clustering these variables, it was possible to create a typology of the monkey effigies. Once defined, each of the monkey effigy “types” was assigned a letter designation. Monkey effigies that shared similar stylistic attributes were assigned to the same typological category regardless of original context (see example in Figure A4.1).

RESULTS

Vessel Construction

Reconstructing the steps involved in the manufacture of the mold-made monkey effigy vessels from Farfán indicated production by standardized procedures. Examination of both the interiors and exteriors of the jars revealed that they had been formed from three sets of vertically-split, two-piece molds, or six molded halves. A separate set of molds was used to produce the body of the vessel, the neck of the jar, and the monkey head. The press-molded monkey body was likely part of the vessel body mold. Because these different components were used to form the body, neck, and monkey head, they could be combined in various ways. In fact, both the measurement of the vessel dimensions and the stylistic analysis indicated that, in some cases, potters interchanged the various neck, monkey head, and body molds used.

Metric Analysis

Analysis of vessel dimensions quantified the metric variation of the monkey effigy vessels. The C.V. of each vessel dimension was used to determine the relative level of standardization present in the sample. Because the C.V. is a relative measure of variability, it was necessary to establish a standard for comparison. The sample

from the Huaca Burial Platform was used to establish the C.V. because it was the largest sample (Table A4.1). When the sample is extended to include additional vessels, a change in the C.V. suggests increased or decreased variability. The C.V., standard deviation (S.D.), mean, and sample size (N) for each vessel dimension for the Huaca Burial Platform sample are presented in Table A4.1.

When the sample from the Huaca Burial Platform is extended to include the vessels from the Compound VI Cemetery, there is a decrease in the C.V. for vessel height, orifice diameter, monkey head height, and neck height (Table A4.2). This finding suggests that the inclusion of these pieces results in an overall decrease in the metric variability for the total sample. In other words, the total sample of vessels, which combines the assemblages from the Huaca Burial Platform and from the Compound VI Cemetery, is relatively more standardized than the sample from the Huaca Burial Platform alone. In sum, the total sample is fairly homogenous with respect to metric features.

Stylistic Analysis of the Monkey Effigy

Stylistic traits were also used to assess the variability of the monkey effigy vessels, and to assign them to a typological category.² The most important features were those that could not be altered by joining the two monkey head halves, as this junction runs vertically through the center of the monkey face. Such variables include eye shape and ear placement. Features that were affected by this seam, including the nose and the mouth, were excluded because they were subject to unacceptable levels of distortion. Analysis of these variables produced seven

² Only the stylistic variables pertaining to the monkey head were used to define the effigy types.

unique categories of monkey effigies, Types A–G (Table A4.3).

Although multiple monkey effigy types were found at Farfán, there is significant repetition of these types, suggesting a high level of uniformity for the total sample. The Huaca Burial Platform contained six Types: A, B, C, D, E, and F. The Compound VI Cemetery contained Types A, B, and F, as well as Type G, which was not found in the Burial Platform. Importantly, as shown in Table A4.4, typological categories were not restricted to a single mortuary context.

Mold-Mates and Cross-Dating

It is possible to determine the presence of “mold-mates” in the sample using the typology developed for the stylistic analysis. “Mold-mates” are monkey effigies that were produced in the same mold. These ceramic siblings are important because they can be used to cross-date different archaeological features. Because ceramic molds deteriorate over time, monkey effigies that are recognizable as mold-mates had to have been produced within a restricted span of time. The inclusion of mold-mates from different tombs or architectural contexts would therefore suggest that these features are contemporaneous. Identifying mold-mates strictly through visual analysis can be difficult, because it is common practice to modify the effigies after they have been removed from the mold. By grouping the effigies by their facial features, however, the division of the sample into smaller groups of Types facilitates the identification of mold-mates.

Upon close examination, all of the fourteen Type A monkeys were found to be mold-mates (Figure A4.1). As shown in Table A4.4, this type is the most common of all of the monkey effigy types, and is found in four different tombs and as part of an offering in the Huaca Burial Platform, as well as in two of the tombs in the Compound VI Cemetery. Assuming that these jars were not

stored for long periods after they were produced, these interments were probably very close in time, if not made at the same time. Furthermore, the presence of these mold-mates suggests that the Huaca Burial Platform was constructed at some point during the Inca occupation of Compound VI. Other sets of mold-mates substantiate the hypothesis that Compound VI and the Burial Platform were contemporaneous. The three Type B monkeys are mold-mates, and these vessels were found in two distinct mortuary contexts: Looted Chamber 1, in the Huaca Burial Platform, and in the the Compound VI Cemetery, II T3. Likewise, the two Type F monkey effigies are mold-mates; one of these was discovered in Looted Chamber 1, in the Huaca Burial Platform, while the second was found in the Compound VI Cemetery, III T1. Again, the distribution of these mold-mates serves to link the two separate contexts.

Mold-mates also serve to temporally link the various tombs within the Huaca Burial Platform. Type A mold-mates were found in Looted Chamber 1, Center Tomb 2, the East Tomb Offering, and in the secondary burial S31. Despite the fact that they are attached to very different kinds of vessel bodies, the four Type C monkey effigies are all mold-mates. Vessel 1143, one of the Type C monkey effigies, appears to have been modified or distorted after it was removed from the mold; however, it nevertheless shares important distinguishing molded features with the three other monkey effigies. The two redware Type C monkey effigies (900 and 892) were found in Looted Chamber 1, while 1143 and 1217 were found in the East Tomb Offering and Center Tomb 11, respectively. The two Type E monkey effigies are mold-mates; these were also excavated from Looted Chamber 1 and secondary burial S21. Finally, the two Type D effigies are mold-mates and link Center Tomb 2 with Center Tomb 11.

These connections demonstrate connection among the tombs (see Table A4.4). Center Tomb 2 is linked to Looted Chamber 1, the East Tomb Offering, and secondary burial S31 by the Type A mold-mates. The Type D mold-mates link Center Tomb 2 with Center Tomb 11. Looted Chamber 1 is also connected to Center Tomb 11 and to the East Tomb Offering through the Type C mold-mates, as well as to the other secondary burial S21 through the Type E mold-mates. When considered together, these connections suggest that Center Tomb 2, Center Tomb 11, Looted Chamber 1, the East Tomb Offering, and the two secondary burials (S21 and S31) are all contemporaneous. All of these contexts can also be linked to the burials in Cemetery Mound VI through mold-mates.

TESTING THE MODEL

Following completion of the original study, two additional blackware monkey effigy vessels were discovered in Cemetery J, another Late Horizon cemetery at Farfán. These pieces were not included in the original study; however, it is possible use them to test the monkey effigy typology. Although I did not handle the vessels directly, it was possible to assess their stylistic attributes from drawings. Upon analysis of their features, these two vessels clearly conform to the established typology. In Cemetery J, Vessel 3154 is a Type B monkey effigy, and is likely a mold-mate of the other Type B monkey effigies. Vessel 3152 from Cemetery J belongs to the Type F category, and is a mold-mate of the other Type F monkey effigies. This finding links Cemetery J with both the Huaca Burial Platform and the Compound VI Cemetery, which also each contain Type B and Type F monkey effigies.

CONCLUSIONS

Analysis of Late Horizon Inca monkey effigy vessels from Farfán suggests a high level of homogeneity with respect to their metric and

stylistic attributes, as well as their pattern of manufacture. Using the C.V. as a proxy for variability, the metric variability of the Burial Platform sample is very low. Combining this sample with that from Compound VI does not result in increased variability; four of the six variables show a decrease in the C.V. for the extended sample. The stylistic data are also relatively standardized; six effigy Types are repeated in multiple contexts throughout the site, either in the same tomb, or in a separate mortuary context. Analysis of the mold-mates revealed that only seven sets of molds were used to produce all twenty-eight monkey effigies considered in this study. One of these molds—that used to produce the Type A mold-mates—was used with greater frequency than any other mold. In fact, four isolated monkey heads found in the fill during the excavation of the Huaca Burial Platform (not included in the analyzed sample) conform to the Type A category, and are mold-mates with the other Type A monkey effigies. Following Costin (1991) and Blackman and colleagues (1993), this level of standardization is evidence for the presence of specialized producers.

Another important finding in this study was that mold-mates could be used to cross-date archaeological features. Mold-mates are produced during a restricted time period, and, barring any long-term storage of finished products, the inclusion of mold-mates in separate, sealed contexts indicates the temporal similarity of the associated materials. In the original study, mold-mates were used to link the Inca Huaca Burial Platform with the Compound VI Cemetery. Mold-mates were also used to cross-date the multiple tombs interred *within* each of these mortuary contexts. In fact, the presence of mold-mates in different tombs suggests that the construction of the Huaca Burial Platform occurred within a very short period of time, and was an event focused around the interment of individuals and associated burial offerings.

Two additional Late Horizon Inca monkey effigy vessels from Cemetery J were used to test the typological categories proposed in the original study. These vessels did, in fact, conform to the typology, and serve to link Cemetery J with both the Huaca Burial Platform and the Compound VI Cemetery. This success suggests that this typology may be applied to other Inca monkey effigy vessels from the North Coast. Moreover, the methodology used in formulating this typology may be replicated for use with other mold-made vessel forms.

<i>Measurement</i>	<i>N</i>	<i>Mean</i>	<i>S.D.</i>	<i>C.V.</i>
Vessel height (cm)	22	19.23	1.31	6.83
Maximum diameter (cm)	21	16.35	1.03	6.30
Maximum circumference (cm)	19	51.15	3.01	5.89
Orifice diameter (cm)	22	6.32	0.46	7.22
Monkey head height (cm)	23	3.34	0.33	10.02
Neck height (cm)	22	4.65	0.62	13.30

Table A4.1. Huaca Burial Platform metric data.

<i>Measurement</i>	<i>N</i>	<i>Mean</i>	<i>S.D.</i>	<i>C.V.</i>
Vessel height (cm)	26	19.05	1.28	6.74
Maximum diameter (cm)	26	16.47	1.27	7.70
Maximum circumference (cm)	24	51.31	3.49	6.80
Orifice diameter (cm)	26	6.33	0.45	7.12
Monkey head height (cm)	27	3.32	0.31	9.43
Neck height (cm)	26	4.63	0.58	12.52

Table A4.2. Huaca Burial Platform and Compound VI Cemetery metric data.

Type	Black	Red	Face					
			Eye	Ear place- ment	Ears protrusion	Earspools	Eye Orientation	Cap
A	X		Almond	Center	Yes	No	Horizontal	Yes
B	X		Almond	Top	Yes	Yes	Horizontal	No
C	X	X	Almond	Center	Yes	Yes	Horizontal	Yes
D	X		Almond	Center	No	No	Oblique	No
E	X		Almond	Top	Yes	No	Oblique	No
F	X		Almond	Center	Yes	No	Horizontal	No
G	X		Almond	Top	No	No	Horizontal	Yes

Table A4.3. Summary of monkey effigy types.

Mold-mate type	N	Location	Context(s)	Vessel ID Number
A	14	Huaca Burial Platform	Center Tomb 2; East Tomb Offering; Looted Chamber 1; S31	728, 737, 738, 739, 742, 904, 950, 981, 1025, 1117, 1129, 1842
		Compound VI Cemetery	I T2; I T3	81, 84
B	3	Huaca Burial Platform	Looted Chamber 1	730, 1002
		Compound VI Cemetery	II T3	141
C	4	Huaca Burial Platform	East Tomb Offering; Center Tomb 11; Looted Chamber 1	892, 900, 1143, 1217
D	2	Huaca Burial Platform	Center Tomb 2; Center Tomb 11	740, 1236
E	2	Huaca Burial Platform	Looted Chamber 1; S21	729, 1967
F	2	Huaca Burial Platform	Looted Chamber 1	1057
		Compound VI Cemetery	III T1	252

Table A4.4. Location of mold-mate types.

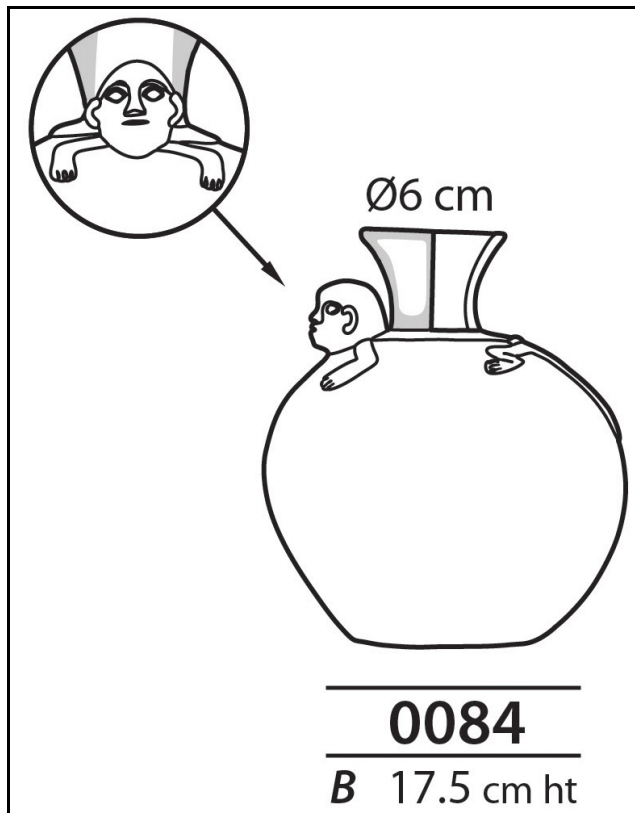


Figure A4.1. Type A monkey effigy vessel from the Compound VI Cemetery (17.5 centimeters high).

APPENDIX 5

THE STABLE ISOTOPIC ANALYSIS OF THE INCA PERIOD HUMAN SKELETAL REMAINS FROM FARFÁN, PERÚ

Christine D. White white2@uwo.ca

Fred J. Longstaffe flongsta@uwo.ca

and

Andrew J. Nelson anelson@uwo.ca

all of *The University of Western Ontario*

INTRODUCTION

The isotopic analysis of bones and teeth from individuals sampled from Farfán forms an important part of the interpretation of this site. The study of stable carbon and nitrogen isotopes allows a reconstruction of diet and the study of oxygen isotopes allows the reconstruction of geographic mobility. Both are key components for understanding the position of Farfán within the ancient landscape, and how its occupants interacted within that landscape. This study is part of a growing isotopic literature for pre-Columbian Andean samples, including several from the North Coast of Peru. Examples include studies of the mass burial context at Pacatnamú (Verano and DeNiro 1993); geographic mobility at the same site (White *et al.* 2009); the sacrificial contexts at Huacas de Moche (Toyne *et al.* 2014), Túcume (Hewitt 2013), and Chotuna (Turner *et al.* 2013); and reconstructions of political economy using camelid tissues (Szpak *et al.* 2014a, 2015; Szpak, Chicone, Millaire, White, Parry, and Longstaffe 2016; Szpak, Millaire, White, Bourget, and Longstaffe 2016). The objective of this contribution is to present summary data for the sample of human remains recovered from Farfán and the methods by which they were obtained. A broader analysis, which will place these data within the context of the above mentioned and other studies, is

beyond the scope of this publication and will be presented in other venues.

PRINCIPLES OF STABLE ISOTOPIC ANALYSIS

The key theoretical assumptions for the isotopes used here to reconstruct diet are that our skeletal tissues incorporate the isotopic composition of the foods we eat and the liquids we drink. Hence, we are chemically what we eat (carbon and nitrogen isotopes) and drink (oxygen isotopes). In this study we analyzed the carbon and nitrogen isotopic compositions ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) of the organic component of bone (collagen) and the composition of phosphate ($\delta^{18}\text{O}_\text{p}$) in bone and enamel, the dominant mineral in those tissues. The stable isotopes of carbon, nitrogen, and oxygen are expressed in per mil (‰) as δ -values:

$$\delta = [(R_{\text{sample}}/R_{\text{standard}}) - 1]$$

where R is the ratio of the heavy to light isotope (e.g. $^{13}\text{C}/^{12}\text{C}$, $^{15}\text{N}/^{14}\text{N}$, $^{18}\text{O}/^{16}\text{O}$) in the sample and standard respectively, and the standards are Vienna PDB (VPDB) for carbon, AIR for nitrogen, and Vienna Standard Mean Ocean Water (VSMOW) for oxygen (Coplen 1994:274).

Because a detailed description of the theoretical principles of isotopic analysis may be

found in reviews elsewhere (e.g. Sharp 2007), they are only briefly covered here. Isotopic variation in plants, which forms the base of the food chain, falls into three categories of photosynthetic dynamics. C_3 plants have the lowest or most negative $\delta^{13}C$ values (average of $-27.1 \pm 2.0\text{‰}$; O'Leary 1988:334) and include most vegetable cultigens, nuts, fruits, wild plants, and grains such as wheat, barley, and rice. Plants from northern Peru are dominantly C_3 (Szpak *et al.* 2013). C_4 plants have higher or more positive $\delta^{13}C$ values (average of $-13.1 \pm 1.2\text{‰}$; O'Leary 1988:334) and include maize, sorghum, and millet. Maize is the only major C_4 cultigen in Peru, and it can only be grown at lower altitudes. The remaining plant category (CAM or Crassulacean acid metabolism) consists of cacti and succulents with a range of $\delta^{13}C$ values (-27 to -12‰) that overlaps with C_3 and C_4 plants. Some CAM plants may have been included in ancient Peruvian diets, particularly in areas a thousand meters above sea level where they have a mean value close to that of local maize (-12.9‰ ; Tieszen and Chapman 1992: Figure 1). This overlap may introduce some interpretive error if any individuals in this study were from the highlands. Marine plants can also emulate C_3 or C_4 compositions, so fishing cultures can have widely ranging $\delta^{13}C$ values (van der Merwe *et al.* 1993:66–67). The $\delta^{13}C$ values of plants are affected by the sources of carbon dioxide in the atmosphere. In particular, plants grown before the Industrial Revolution have $\delta^{13}C$ values that are $\sim 1.5\text{‰}$ higher than modern plants, because the burning of ^{12}C -rich fossil fuel has altered the isotopic composition of atmospheric carbon dioxide (Friedli *et al.* 1986).

The source of protein, and the trophic level (*i.e.* level in the food chain), are established using $\delta^{15}N$ values. Legumes and blue-green algae are the only plants that fix nitrogen, and therefore have distinctive $\delta^{15}N$ values, *i.e.* close to 0‰ , compared with other terrestrial and marine plants, which have $\delta^{15}N$ values ranging

from $+2$ to $+6\text{‰}$. The use of organic fertilizers, especially guano, can significantly increase $\delta^{15}N$ values by more than 25.5‰ (Szpak 2014; Szpak *et al.* 2012, 2013, 2014b). Because $\delta^{15}N$ values increase by about $+3$ to $+4\text{‰}$ with each step up the food chain (DeNiro and Epstein 1981; Schoeninger and DeNiro 1984:625), they reflect the trophic level from which the diet comes. Marine food webs have higher baseline (plant) $\delta^{15}N$ values and many more trophic levels. Therefore, marine diets are typically associated with high $\delta^{15}N$ values. The trophic level principle also creates variation within human populations because breast feeding creates a trophic level effect in nursing infants and children (Fogel *et al.* 1989). A general model of the Peruvian isotopic food web (after White *et al.* 2009:1530) is shown in Figure A5.1. Trophic level differences in $\delta^{15}N$ values can, however, be obscured by climate, physiology, and pathological conditions (Ambrose 1986; Aufderheide *et al.* 1988; Heaton *et al.* 1986; Olsen *et al.* 2014). The high degree of aridity of the North Coast can be expected to raise $\delta^{15}N$ values fairly systematically throughout the sample unless some individuals had come from the highlands.

Isotopic analysis of carbon and nitrogen can also be useful for detecting geographic relocations in Peru because the isotopic composition of foods from highland and coastal regions differs (Szpak *et al.* 2013). In general, coastal diets should contain more C_4 foods and marine resources and, therefore, be quite different from highland diets where most foods will be C_3 -based and come from lower trophic levels. In addition, $\delta^{13}C$ values vary by latitude (Katzenberg and Krouse 1989), and $\delta^{15}N$ values by altitude (Sparks and Ehleringer 1997). Oxygen isotopes ($\delta^{18}O$) are, however, more commonly used for reconstructing geographic mobility because the oxygen-isotope composition of meteoric water is affected by environmental variables such as rainfall, humidity, temperature,

altitude, and distance from the ocean (Dansgaard 1964). The isotopic composition of imbibed water is reflected in body water, and then in mineralized tissues, *e.g.* bone and dental phosphate (Longinelli 1984). Water oxygen isotopic compositions ($\delta^{18}\text{O}_w$) are translated into skeletal phosphate oxygen isotopic compositions ($\delta^{18}\text{O}_p$) using the conversion equation developed by Daux and colleagues (2008:1138). Intra-site variability in $\delta^{18}\text{O}_p$ values of skeletal tissues can be caused by seasonality, the use of water coming from sources subject to different degrees of evaporation, by consuming significant quantities of foreign foods with high water content, or imported beverages, or by significant differences in cooking practices *i.e.* boiling times/frequency.

In northern Peru, the dominant water sources are the rivers that run from the Andes to the coast, which should vary in their isotopic composition by the amount of glacial melt water they carry. Although the waters available at most sites have shared highland origins, there are some latitudinal differences in their oxygen isotopic composition among Peruvian valleys, with northern valleys generally having higher values than valleys to the south. When the conversion is made from water values to bone phosphate values (*ibid.* 2008), the differences among valleys range from $\sim +13.4$ to $+20.0\text{‰}$ (Hewitt 2013:89). Located in an intermediate north/south position on the North Coast, the Jequetepeque River has water with an oxygen isotopic composition that produces an expected $\delta^{18}\text{O}_p$ value of $\sim +16.4\text{‰}$ (*ibid.*), which is consistent with the isotopic composition of most of Farfán's Late Horizon population (*i.e.* between $+15$ and $+17\text{‰}$), whom we assume represent local inhabitants.

MATERIALS AND METHODS

Extensive Late Horizon Inca sampling of the Farfán skeletal collection was undertaken for

isotopic analysis (forty-eight individuals). Thirty-eight individuals were sampled for carbon and nitrogen isotopic analysis of collagen, mostly from rib bone fragments. For oxygen isotopic analysis of bioapatite phosphate, the remaining bone fragments of thirty individuals and thirty-six teeth from twenty-two individuals were sampled. Where possible, dental samples (*i.e.* early and late forming teeth) were selected to reflect tissues that were forming during both childhood and adulthood. Seven teeth had insufficient enamel for analysis. All samples were analyzed using the facilities of the Laboratory for Stable Isotope Science at The University of Western Ontario, in London, Ontario, Canada.

A modification of the collagen extraction procedure described by Longin (1971) was used to produce a collagen-based “gelatin” (hereafter referred to as collagen). Stable carbon and nitrogen isotopic analyses of collagen ($\delta^{13}\text{C}_{\text{col}}$, $\delta^{15}\text{N}_{\text{col}}$) were performed using an automated carbon and nitrogen analyzer coupled to a continuous-flow stable isotope ratio mass spectrometer (Costech elemental analyzer interfaced with a Thermo Scientific Deltaplus XL mass spectrometer). Reproducibility of sample carbon and nitrogen isotopic results was typically better than $\pm 0.2\text{‰}$.

Carbon/nitrogen (C/N) ratios are the most commonly used measures of post-mortem alteration of bone collagen. Values in the range of 2.9 and 3.6 indicate well-preserved collagen that should accurately reflect the original biogenic isotopic composition (DeNiro 1985:807). C/N for this sample was measured using the Costech Elemental Analyzer and has a mean value of 3.1. There is also no correlation between C/N and δ -values that would suggest post-mortem alteration.

Samples for isotopic analysis of phosphate oxygen ($\delta^{18}\text{O}_p$) were prepared by removing

calcium and organic material using a number of chemical intermediaries (lead phosphate, lead sulphate) according to the method outlined by Stuart-Williams and Schwarcz (1995). Silver orthophosphate (Ag_3PO_4) was isolated and precipitated using Firsching's (1961) ammonia volatilization method. The Ag_3PO_4 was reacted with bromine pentafluoride (BrF_5) at 600°C for ≥ 16 hours and converted to CO_2 over red-hot graphite in order to extract the oxygen (Clayton and Mayeda 1963; Crowson *et al.* 1991). The oxygen-isotope ratios of the CO_2 were measured using an Optima dual-inlet, triple-collecting, gas-source stable isotope mass spectrometer. Replicate analyses of the Aldrich standard Ag_3PO_4 (No. 33, 738-2) indicated that precision was normally better than $\pm 0.4\text{‰}$, and there were no significant correlations between the amount of Ag_3PO_4 precipitated from either bone or enamel and $\delta^{18}\text{O}_\text{p}$ values.

RESULTS

Only summary results for the entire sample are presented here. Data for individuals are presented in the text of this volume and in Table 1. Of the samples obtained for oxygen-isotope analysis, seven dental samples did not have sufficient silver phosphate to analyze. The CI values of the remaining samples indicate that they had not undergone sufficient diagenesis to affect the primary isotopic signature (*cf.* Shemesh 1990). The bone CI ranges from 2.5 to 3.1, averaging 2.8; the tooth CI ranges from 2.5 to 3.2, averaging 2.7. Of the samples recovered for carbon and nitrogen isotopic analysis, thirteen had low collagen yields, *i.e.* below 1.0% (DeNiro 1985:807), which could indicate diagenetic alteration. These individuals were clustered in two contexts—Compound VICemetery and Huaca Burial Platform Center Tomb 2, and were not analyzed isotopically. The poor collagen preservation in these two contexts could be a product of extended exposure of the burials to the elements (Chapter 3B, this vol-

ume) for a variety of these burial contexts. All other collagen samples had yields greater than 1 percent and acceptable C/N ratios.

The average $\delta^{13}\text{C}_\text{col}$ values for Farfán are -10.8‰ ($\text{SD}=0.8\text{‰}$, range -12.3 to -9.6‰ , $N=25$), which suggests heavy consumption of maize and, likely, marine resources as well. The $\delta^{15}\text{N}_\text{col}$ values are much more variable with a high average of $+10.9\text{‰}$ ($\text{SD}=1.4\text{‰}$, range $+8.2$ to $+13.6\text{‰}$, $N=25$). Because there are no data from infants of breast feeding age who would contribute to this high average, these isotopic compositions can be explained best by the underlying arid environmental conditions overlain by either consumption of high trophic level marine resources and/or plants that have been fertilized with organic matter.

The overall mean value for $\delta^{18}\text{O}_\text{p}$ of bone is $+16.2\text{‰}$ ($\text{SD}=1.6\text{‰}$, $N=29$), which falls well within the predicted local range of oxygen isotopic compositions. Bone $\delta^{18}\text{O}_\text{p}$ values range from $+11.4$ to $+20.0\text{‰}$, with four individuals who lie outside of the local range. The overall mean value for $\delta^{18}\text{O}_\text{p}$ of teeth is $+16.5\text{‰}$ ($\text{SD}=1.5\text{‰}$, $N=30$). Although enamel values fall within a similar range (from $+13.4$ to $+19.7\text{‰}$), they reveal many more individuals ($N=10$) who lie outside of the local range. These ranges suggest that at least thirty percent of the individuals sampled were born outside of the Jequetepeque Valley, but migrated to this area, while a smaller number of adults had come to the valley within a decade or so of their death. At least one individual (Huaca Burial Platform CT11D) moved from the coast to the highlands during her adult years and came to Farfán either before her death, or after her death for burial. Several individuals had $\delta^{18}\text{O}_\text{p}$ values lower than $+15\text{‰}$, which suggests that they may have spent some time in the highlands. The geographic origins of individuals with $\delta^{18}\text{O}_\text{p}$ values higher than $+17\text{‰}$ (particularly those in the $+19$ to $+20\text{‰}$ range) have yet to be deter-

mined, but may be other river valleys. For the moment we are calling them “non-local coast”. An extensive water sampling program conducted by Laboratory of Stable Isotope Science members at The University of Western Ontario should enable better identification of these ranges within the near future.

There is a statistically significant correlation between $\delta^{18}\text{O}_p$ and $\delta^{13}\text{C}_{col}$ values of bone (Pearson's $r=.430$, $df=23$, $P=.05$), which suggests that diet is associated with geographic location. The statistical relationship between $\delta^{18}\text{O}_p$ and $\delta^{15}\text{N}_{col}$ values of bone is stronger still (Pearson's $r=.934$, $df=23$, $P=.0001$) and further reinforces the premise that many Farfán adults had different geographic origins.

CONCLUSIONS

The dietary isotopic data indicate high consumption of maize and marine resources as expected in coastal Peruvian sites from this time. The $\delta^{15}\text{N}_{col}$ values are much more variable and suggest the use of organic fertilizers and/or trophic level variation in protein resource consumption, likely related to geographic location. The $\delta^{18}\text{O}_p$ values are also highly variable and indicate that among a group of people who were born and lived locally all their lives, there were a significant number of inhabitants who had grown up in other locations. These people likely emigrated to Farfán mostly from other river valleys, but there is some evidence of highland connections and multiple relocations, *e.g.* from the coast to another river valley/highlands and back. The correlation between diet and the oxygen isotopic composition of water further supports the assertion that the Farfán population was comprised of individuals who reflected environmental conditions present in different latitudinal and altitudinal locations.

ACKNOWLEDGMENTS

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Individual	Element	Sex	Age	$\delta^{18}\text{Op}$	Yield CO_2	Yield Ag_3PO_4	CI	Tooth	$\delta^{18}\text{Op}$	Yield CO_2	Yield Ag_3PO_4	CI	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Yield Collagen	C/N
<i>Huaca Burial Platform</i>																
ET1	bone	F	AD	15.7	4.8	1.0	2.8	n/a	n/a	n/a	n/a	n/a	-11.5	10.5	n/a	3.2
ET1	tooth	F	AD	n/a	n/a	n/a	n/a	I1	15.9	5.2	1.5	2.6	n/a	n/a	n/a	n/a
ET1	tooth	F	AD	n/a	n/a	n/a	n/a	M3	15.0	5.5	1.7	2.6	n/a	n/a	n/a	n/a
ET4	bone	F	AD	15.5	4.8	1.1	2.8	n/a	n/a	n/a	n/a	n/a	-11.2	10.5	n/a	3.1
ET4	tooth	F	AD	n/a	n/a	n/a	n/a	I1	17.2	5.0	n/a	n/a	n/a	n/a	n/a	n/a
ET4	tooth	F	AD	n/a	n/a	n/a	n/a	M3	17.0	4.7	1.4	2.6	n/a	n/a	n/a	n/a
ET5	bone	F	MA	15.5	5.0	1.0	2.7	n/a	n/a	n/a	n/a	n/a	-10.5	10.4	n/a	3.1
ET5	tooth	F	MA	n/a	n/a	n/a	n/a	I1	14.5	5.0	1.2	2.6	n/a	n/a	n/a	n/a
ET5	tooth	F	MA	n/a	n/a	n/a	n/a	M3	13.4	4.9	1.5	3.0	n/a	n/a	n/a	n/a
ET6	bone	?	AD	15.2	5.2	1.0	2.8	n/a	n/a	n/a	n/a	n/a	-12.2	8.2	n/a	3.1
ET6	tooth	?	AD	n/a	n/a	n/a	n/a	I1	19.1	5.1	1.4	2.7	n/a	n/a	n/a	n/a
ET6	tooth	?	AD	n/a	n/a	n/a	n/a	M2	18.4	4.8	1.5	2.8	n/a	n/a	n/a	n/a
ET7	bone	F	OA	15.1	4.7	1.0	2.8	n/a	n/a	n/a	n/a	n/a	-9.7	12.3	n/a	3.1
ET7	tooth	F	OA	n/a	n/a	n/a	n/a	I2*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ET7	tooth	F	OA	n/a	n/a	n/a	n/a	M3	16.3	5.0	1.3	2.6	n/a	n/a	n/a	n/a
ET9	bone	?	JUV	16.3	n/a	1.1	2.8	n/a	n/a	n/a	n/a	n/a	-10.5	10.2	n/a	3.1
ET10	bone	?	JUV	15.3	4.8	1.0	2.7	n/a	n/a	n/a	n/a	n/a	-10.4	10.6	n/a	3.1
ET10	tooth	?	JUV	n/a	n/a	n/a	n/a	I1	17.5	4.9	1.3	2.6	n/a	n/a	n/a	n/a
CT2A	bone?	F	YA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.7	n/a
CT2B	bone	F	AD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-10.1	12.0	n/a	3.2
CT2C	bone	?	AD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-10.1	13.6	n/a	1.9
CT2D	bone	?	JUV	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.4	n/a
CT2E	bone	?	CH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.9	n/a
CT2F	bone	?	JUV	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	na/	n/a	0.6	n/a
CT11A	bone	F	OA	15.5	n/a	1.1	2.8	n/a	n/a	n/a	n/a	n/a	-11.8	10.0	n/a	3.1
CT11A	tooth	F	OA	n/a	n/a	n/a	n/a	I1	14.3	4.8	1.5	2.6	n/a	n/a	n/a	n/a
CT11A	tooth	F	OA	n/a	n/a	n/a	n/a	M3	14.1	5.1	n/a	n/a	n/a	n/a	n/a	n/a
CT11B	bone	F	OA	15.5	n/a	1.0	2.8	n/a	n/a	n/a	n/a	n/a	-11.0	10.9	n/a	3.1
CT11B	tooth	F	OA	n/a	n/a	n/a	n/a	I2	18.3	4.8	1.7	2.7	n/a	n/a	n/a	n/a
CT11B	tooth	F	OA	n/a	n/a	n/a	n/a	M3	n/a	n/a	1.6	2.6	n/a	n/a	n/a	n/a
CT11C	bone	F	AD	15.9	n/a	0.9	2.8	n/a	n/a	n/a	n/a	n/a	-11.1	11.0	n/a	3.1
CT11C	tooth	F	AD	n/a	n/a	n/a	n/a	I2*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CT11C	tooth	F	AD	n/a	n/a	n/a	n/a	M3	16.0	n/a	1.5	2.8	n/a	n/a	n/a	n/a

Table A5.1. Entire Sample, Summary Results.

Individual	Element	Sex	Age	$\delta^{18}\text{O}_\text{p}$	Yield CO_2	Yield Ag_3PO_4	CI	Tooth	$\delta^{18}\text{O}_\text{p}$	Yield CO_2	Yield Ag_3PO_4	CI	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Yield Collagen	C/N
<i>Huaca Burial Platform (cont.)</i>																
CT11D	tooth	F	OA	11.4	4.4	1.2	2.7	n/a	n/a	n/a	n/a	n/a	-11.1	10.6	n/a	3.1
CT11D	tooth	F	OA	n/a	n/a	n/a	n/a	I2*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CT11D	bone	F	OA	n/a	n/a	n/a	n/a	M2	19.7	4.7	1.5	2.8	n/a	n/a	n/a	n/a
NT1A	bone	F	AD	16.7	4.8	1.4	2.7	n/a	n/a	n/a	n/a	n/a	-10.9	12.4	n/a	3.3
NT1A	tooth	F	AD	n/a	n/a	n/a	n/a	I1*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NT1A	tooth	F	AD	n/a	n/a	n/a	n/a	M3	16.1	5.1	1.7	3.0	n/a	n/a	n/a	n/a
NT1B	bone	F	OA	15.3	4.7	1.0	2.7	n/a	n/a	n/a	n/a	n/a	-9.6	12.7	n/a	3.2
NT1B	tooth	F	OA	n/a	4.9	n/a	n/a	M3	15.1	4.7	1.7	2.8	n/a	n/a	n/a	n/a
NT1C	bone	F	NEO	16.9	4.9	1.2	2.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NT1C	tooth	?	NEO	n/a	n/a	n/a	n/a	frags*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CH1A	tooth	M	MA	n/a	n/a	n/a	n/a	PM1	16.9	4.6	1.2	3.2	-12.0	13.3	n/a	n/a
S21B	bone	F	OA	17.3	4.8	1.3	2.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S26A1	bone	F	OA	15.0	n/a	1.6	2.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S26A1	tooth	F	OA	n/a	n/a	n/a	n/a	I1*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S26A1	tooth	F	OA	n/a	n/a	n/a	n/a	M3	15.9	5.0	1.6	3.2	n/a	n/a	n/a	n/a
S26A3	tooth	?	IN	n/a	n/a	n/a	n/a	frags*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S26B1	bone	F	OA	15.7	n/a	1.0	2.9	n/a	n/a	n/a	n/a	n/a	-10.7	11.0	n/a	3.1
S26B1	tooth	F	OA	n/a	n/a	n/a	n/a	I1	15.0	5.0	1.6	2.8	n/a	n/a	n/a	n/a
S26B1	tooth	F	OA	n/a	n/a	n/a	n/a	M1	15.8	4.8	1.5	2.8	n/a	n/a	n/a	n/a
<i>Mound G</i>																
GT4	bone	F	MA	16.7	4.8	0.6	n/a	n/a	n/a	n/a	n/a	n/a	-12.3	10.4	n/a	3.4
GT4	tooth	F	MA	n/a	n/a	n/a	n/a	n/a	17.5	4.9	1.3	n/a	n/a	n/a	n/a	n/a
GT11	bone	F	OA	16.4	4.8	0.7	n/a	n/a	n/a	n/a	n/a	n/a	-10.2	12.1	n/a	3.3
GT11	tooth	F	OA	n/a	n/a	n/a	n/a	n/a	16.6	4.7	1.0	n/a	n/a	n/a	n/a	n/a
<i>Cemetery VI</i>																
IT1	bone	?	IN	19.5	5.0	1.0	2.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IT3	bone	M	AD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.5	n/a
IT4	bone	?	IN	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.5	n/a
IIT1	bone	F	OA	20.0	5.0	1.1	2.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
IIT2	bone	F	AD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.6	n/a
IIT3	bone	M	OA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.6	n/a
IIT4	bone	M	MA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.4	n/a
IIIT1	bone	F	OA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.6	n/a
IIIT2	bone	M	MA	19.0	5.0	1.1	2.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.6	n/a
IIIT3	bone	?	NEO	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-10.7	8.4	n/a	n/a

Table A5.1. Entire Sample, Summary Results (cont.).

Individual	Element	Sex	Age	$\delta^{18}\text{Op}$	Yield CO_2	Yield Ag_3PO_4	CI	Tooth	$\delta^{18}\text{Op}$	Yield CO_2	Yield Ag_3PO_4	CI	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Yield Collagen	C/N
Cemetery J																
J14T2	bone	F	YA	16.4	5.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.54	n/a
J25T6	bone	M	MA	16.9	5.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-9.6	11.5	3	3.2
J25T6	tooth	M	MA	n/a	n/a	n/a	n/a	I2	17.5	5.1	n/a	n/a	n/a	n/a	n/a	n/a
J25T9	bone	F	YA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-10.5	8.3	5.08	3.1
J25T9	tooth	F	YA	n/a	n/a	n/a	n/a	I1	17.2	5.1	n/a	n/a	n/a	n/a	n/a	n/a
J25S1	bone	M	YA	15.6	5.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-11.2	9.1	2.29	3.1
J25S1	tooth	M	YA	n/a	n/a	n/a	n/a	I1	16.9	4.9	n/a	n/a	n/a	n/a	n/a	n/a
J26S1	bone	F	MA	15.2	5.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-10.4	10.5	5.03	3.1
J26S1	tooth	F	MA	n/a	n/a	n/a	n/a	I2	15.3	5.0	n/a	n/a	n/a	n/a	n/a	n/a
JOS1	bone	F	OA	16.2	n/a	1.2	2.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cemetery I																
I3T1a	bone	M	MA	16.8	5.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-10.2	11.0	9.77	3.1
I10T2	tooth	F	MA	n/a	n/a	n/a	n/a	M3	16.4	5.1	n/a	n/a	n/a	n/a	n/a	n/a
I10T3	bone	?	CH	17.0	5.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.77	n/a
I10T3	tooth	?	CH	n/a	n/a	n/a	n/a	M1	17.9	5.1	n/a	n/a	n/a	n/a	n/a	n/a
I10S1	tooth	F	OA	n/a	n/a	n/a	n/a	M2	17.9	5.1	n/a	n/a	n/a	n/a	n/a	n/a
Averages				16.2					16.5				-10.8	10.9		
Standard deviation				1.6					1.5				0.8	1.4		
Minimum				11.4					13.4				-12.3	8.2		
Maximum				20.0					19.7				-9.6	13.6		
Count				29					30				25	25		
Total samples: 81																

Table Key

Age: NEO=neonate (0–0.9 years), IN=infant (1–2.9 years), CH=child (3–5.9 years), JUV=juvenile (6–11.9 years), AD=adolescent (12–19.9 years), YA=young adult (c. 20–29 years), MA=mid-adult (c. 30–39 years), and OA=old adult (c. 40+ years).

Sex: F=female, M=male, ?=not available.

* indicates insufficient sample.

Table A5.1. Entire Sample, Summary Results (cont. 2).

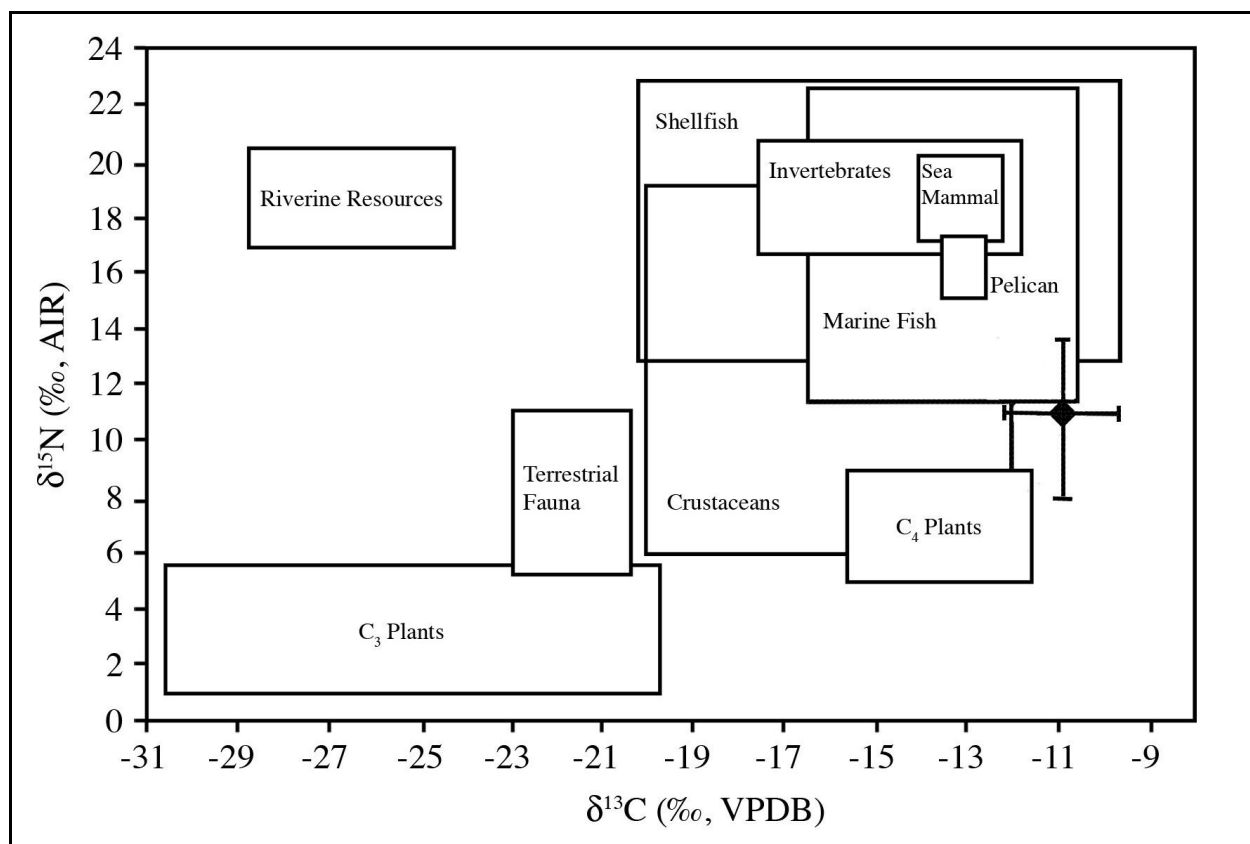


Figure A5.1. Trophic levels in the Peruvian food web.

APPENDIX 6

THE CERAMICS FROM FARFÁN'S TOMBS: A CASE STUDY OF STYLES IN TRANSITION

Carol J. Mackey

INTRODUCTION

The Inca occupation of Farfán instituted many changes in a variety of media including architecture and textiles. The large Late Horizon ceramic assemblage excavated from both primary and secondary burials (N=423) also showed significant changes. Ceramic styles from the earlier Chimú occupation of Farfán were changed after the arrival of the Inca in the Jequetepeque Valley. Though some features persisted, a majority of ceramic characteristics of both form and iconography were eliminated. Before turning to a discussion of the ceramic styles present at Farfán, I present a brief examination of the vessel forms as seen in Appendix 7.

VESSEL FORMS

A variety of ceramic forms were excavated in Farfán's tombs. Figure A6.1 shows the frequency of all the forms from burial contexts at the site (N=423). These vessels consist of jars, stirrup spout vessels, ollas, plates, jars with handles, and miniatures. Figure A6.2 shows that over half of the vessels excavated at the site were associated with the *aqllakona*, or chosen women interred in the Huaca Burial Platform (N=249). Several important points emerge from a comparison of the two figures. First, there is a greater diversity of forms in the general sample than in the Huaca Burial Platform. Second, in the Huaca Burial Platform the fineware forms, such as jars and stirrup spout vessels, are dominant and attest to the Huaca's high status. Third, utilitarian ollas have a high

representation in the general sample (Figure A6.1) and a low number (N=16) in the Huaca. It is of interest, however, that when an *aqlla* is interred with her individual ceramics, an olla is often included. This may have been her vessel, or alternatively, it could be a vessel that contained a food offering. Fourth, many forms at Farfán are innovative in nature and not seen in other assemblages. These occur in a low frequency, as, for instance, a vessel consisting of three plates connected by bridges. The presence of these vessels indicates that potters were either given "special orders" for vessels, or that they had the liberty to invent new forms. Fifth, miniaturized vessels (under ten centimeters) occur in most of the cemeteries, although they have a higher frequency in the Huaca Burial Platform.

CERAMIC STYLES

The large Late Horizon ceramic assemblage from Farfán exhibits stylistic characteristics from the coast and highlands, as well as innovative forms. The large corpus of associated ceramics from the Farfán burials (N=423) permits a detailed discussion of these styles, one that was not possible prior to these excavations.

The Cuzco-Inca Style

Eight diagnostic Cuzco-Inca types (they are not defined by form alone) were described by John Rowe (1944:48), and later expanded upon by Catherine Julien (1987–89 [2004]) and George Miller (1987–89 [2004]). A defining characteristic of the Cuzco-Inca style is that its vessels were produced in the highlands, the Inca heartland. At

Farfán analysis by Maria-Louise Sidoroff (2005: 191, 196) showed that one or more sherds of an aryballo (also known as a Cuzco bottle; Julien 1987–89 [2004]:7) had possible highland affiliation, as is typical of such vessels found at most coastal sites. However, knowledge of the Cuzco-Inca Style is crucial, because many of the features found in Farfán's Late Horizon Hybrid Style are elements borrowed directly from the Cuzco-Inca ceramic forms.

Provincial Inca

This style imitates the Cuzco-Inca style in morphology and motifs; however, as the name indicates, these ceramics are produced in Inca-conquered areas outside of the heartland. Analyses of Farfán's ceramics, based on different lines of evidence, failed to identify the presence of this category within this large sample.

Late Horizon Hybrid Style

A North Coast Late Horizon Hybrid Style has been difficult to define, due to the lack of a large sample of excavated Late Horizon ceramics. Therefore, the definition of hybrids was limited to museum collections of Inca aryballos that displayed coastal motifs (e.g. Costin 2011). The Farfán study has been able to expand this definition, so that the Late Horizon Hybrid Style now includes not only whole vessel forms, but also specific formal features found in the Cuzco-Inca Style. These Cuzco features are combined with both coastal forms and motifs.

Several observations were important in formulating the Late Horizon Hybrid definition. First, in addition to the aryballo jar, other Cuzco-Inca vessel forms are present in the Farfán sample. Second, specific elements were taken from the Cuzco-Inca style, such as strap

handles or press-molded faces, and were added to local coastal ceramic forms. Third, the motifs that occur on these vessels are not exact copies of former Chimú designs. While the motifs retain their themes, such as a sea-based category, their renderings differ, and are transformed from their earlier Chimú counterparts. To summarize, this definition states that the North Coast Late Horizon Hybrid Style is composed of Cuzco-Inca vessel forms and traits combined with coastal forms and earlier Chimú motifs that have been transformed.

Late Horizon Jequetepeque Style (LHJS)

A local style, and one not previously identified in the literature, is present in this valley. This Late Horizon Jequetepeque Style, the most prevalent in the sample, shows some continuity with the previous coastal and Chimú ceramic traditions. However, several features separate this style from its antecedents. First, the main changes occur on the rim and neck rather than on the vessel's body. As will be shown below, some Chimú rim forms continue, but new ones also appear. Second, as found in the Late Horizon Hybrid Style, the main iconographic themes persist, but their renderings differ from those in the Chimú tradition. In summary, the LHJS is a new assemblage that does not contain any Cuzco-Inca features. New formal features are introduced, while other Chimú traits are retained. Like the Late Horizon Hybrid Style, the renderings of the motifs undergo significant change.

Lambayeque Style

Aspects of Lambayeque architecture and ceramics continued into the Late Horizon in spite of the conquests by the Chimú and Inca polities (Sandweiss 1995a in Heyerdahl *et al.* 1995:66; Narváez 1995a in Heyerdahl *et al.* 1995:79–114, 191–197; Mackey 2011 [2011]; Sapp 2002: 51–75). There is very strong evidence, based on architectural features and ceramics, as well as on bioarchaeological features (Chapter 8, this vol-

ume) that at Farfán the Inca co-ruled with Lambayeque lords (Mackey 2011 [2016]). Vessels such as ollas, jars, jar and handle vessels, and ring base bowls show Lambayeque features in firing technique, use of red and white slip, and Lambayeque-inspired iconography. Thus, the Lambayeque Style, as exhibited in this Farfán collection, shows a continuation of Lambayeque features in vessel forms and motifs. Additionally, it employs elements from other ceramic styles, such as rim forms from the LHJS and strap handles from the Late Horizon Hybrid Style.

Of the five styles that have been discussed for the North Coast, only the Late Horizon Hybrid, Late Horizon Jequetepeque, and Lambayeque Styles are found in Farfán's ceramic sample. The only possible exception is the fragmentary aryballo mentioned above. The entire Farfán ceramic assemblage is illustrated in Appendix 7. The vessels are arranged by cemetery, unit, tomb, and ticket number. For example, "Cem J14 T3/3207" is a vessel from Cemetery J, Unit J14, Tomb T3, with ticket number 3207, one of a series of accession numbers used by the Project for all finds. The abbreviation of HBP stands for "Huaca Burial Platform".

THE THREE CERAMIC STYLES IDENTIFIED AT FARFÁN

The Late Horizon Hybrid Style

The ceramic vessels in this category demonstrate a greater variety of form and decoration than has previously been described in the archaeological literature. The Hybrid vessels in the Farfán sample (N=52, or 12.3 percent) consist of several forms such as aryballos and jars (Figure A6.3), as well as jar and handle vessels, stirrup spout vessels, and several innovative forms.

Aryballo Vessel Forms

Four aryballos (Cem I16 S4/2671, Cem J25 T6/2870, Cem J14 S1/3191, and Cem J14 T3/3207), three of which are shown below, exhibit features found in the Cuzco-Inca Style. These features include a long neck ending in a flared rim, vertical strap handles, and a pointed base. The average height of the four aryballos is twenty centimeters, and three of the four have vertical strap handles. The flare-lip aryballo rim (Figure A6.3) and pointed base are present on all four. Three are blackware and burnished, while the fourth vessel is a redware, painted, face-neck aryballo that has the body of a hunchback (J14 T3/3207; Figure A6.4).

Not all the hybrid aryballo vessels exhibit traditional coastal motifs. In fact, two of these vessels have the distinctive press-molded face that appears on aryballos and face-neck jars in the Cuzco-Inca Style (Julien 1987–1989 [2004]:8, Forma 1c; 66, figure 7a, 7b). The eyes on the face are oval in shape, while the mouth is generally closed. Ears may be shown, often with an ear ornament, and hair may be indicated. The defining feature, however, is the prognathic lower jaw (Figures A6.4, A6.8, A6.9, and A6.13). This face, most likely a male, may be a portrayal of an Inca overlord (Bray 2000:173). Aryballos and other Late Horizon Hybrid forms are often anthropomorphized by the addition of arms on the vessel body.

The redware, face-neck aryballo is decorated with a diamond motif in black, outlined with vertical black lines filled in with white slip (J14 T3/3207; Figure A6.4). A blackware aryballo (Cem J14 S1/3191) has a serpent decoration on its exterior, a motif with deep Andean roots. This aryballo is also an example of an Inca *paccha*, a vessel thought to be used in divination rituals (Figure A6.5). *Pacchas* have a unique interior design. Water poured into the top of the aryballo passes through a series of tubes in the vessel's

interior, and exits through a lower spout that could be put to the lips for drinking.

One aryballo (Cemetery I16 S4/2671) has motifs with coastal origins—sea birds (Figure A6.6). Although at first glance they appear to be copies of Chimú motifs, closer examination reveals that one bird has a geometric rendering, and the second bird holds a fish in its beak. It appears that although the bird motif is a familiar coastal theme, the depictions of these birds change in the Late Horizon Hybrid Style.

Jars

Hybrid jars (N=7) are noted for several important characteristics. Many jars utilize the flaring neck found on Cuzco-Inca *aryballos* as shown in Figure A6.3. Other jars have a flat, rather than a round or pointed base, a form similar to those found in the Cuzco-Inca Style (see figure 15 in Miller 1987–89 [2004]). Similar Farfán jars have small strap handles on the vessel's shoulder (Cem I3 T1/2605; Figure A6.7). In addition, the jar from Cem I3 T1/2605 has an incised Inca diamond motif on the body. Although the motif is from the Cuzco-Inca tradition, the technique of incision is common to the coast and is a chronological marker for the Late Horizon.

Several jars (for example HBP C T2/0983; Figure A6.8) exhibit the Cuzco-Inca press-molded face on the vessel's neck, a face found on Cuzco-Inca *aryballos* and face-neck jars. It should be noted that the majority of the jar bodies with this face in the Farfán sample are not Cuzco-Inca forms, but rather are in the stylistic tradition of the North Coast. Jars, therefore, may belong to the Late Horizon Hybrid Style based on a combination of morphological and design traits rooted in both the highlands and the coast.

Jar and Handle Vessels

These vessels (N=39) are defined as part of the Late Horizon Hybrid Style based on two Cuzco-Inca characteristics—a strap handle and/or a press-molded face on the jar neck (Figure A6.9). Face-neck jars are a diagnostic feature in the Cuzco-Inca tradition and are also found in the earlier North Coast Moche culture (A.D. 200–800).

Jar and Handle vessel bodies were produced in a two-piece mold with the jar neck and handle added separately. The height of these vessels ranges from 12 to 21 centimeters with an average height of 15.4 centimeters. The strap handles are attached to the body and the vessel's neck, and the width of the handles varies from 1.7 to 2.4 centimeters. Most handles are unadorned, although one (see Cem J26 T1/2879) is decorated, a characteristic of the Cuzco-Inca Style. Jar and Handle vessels are divided into three types based on their rim profiles, which are either cylinder, flare, or incurving (Figure A6.10).

Jar and Handle Cylinder Rim Profiles. This rim profile is the most common of the three types (N=30) and is the only one to display the Cuzco-Inca press-molded face (Figure A6.9). Twelve of these vessels exhibit the press-molded face, while the others are decorated with marine or faunal designs on the vessel's body. Most of the Jar and Handle vessels with a cylinder rim profile are found in the Huaca Burial Platform (N=23).

Jar and Handle Flared (N=5) or Incurving Neck (N=4) Rim Profiles. The second type of jar and handle vessel, flared-neck Jar and Handle vessels, have been fired in an oxidized atmosphere resulting in a red paste color. These vessels are decorated with white slip on their necks and shoulders.

The third type of jar and handle vessels, those with incurving rim profiles, are divided equally between the red and blackware firing techniques,

and all are decorated with a bird face on the lip of the jar neck (Figure A6.11). The bird face motif is diagnostic of the Late Horizon and did not exist in the Chimú ceramic tradition.

Other Hybrid Forms

Distinct elements found in diagnostic Cuzco-Inca vessels were selected and added to local forms as noted by Hayashida (1995: 53–54, 153–154, 270–271). For instance, a flared lip is commonly added to the spout of a stirrup vessel (Figure A6.12; and see Cem J25 T1/2954). Handles in the form of animals, mentioned and depicted by Julien (1987–1989 [2004]:10, Forma 8; figures 122–124), are often added to jar and handle vessels (see Cem J14 T2/3135).

There are two Late Horizon Hybrid forms that stand apart. One combines a plate of the Late Horizon Jequetepeque Style with a flared Inca-style jar neck that has a Cuzco-Inca press-molded face (Figure A6.13). Arms are shown; however, in this vessel the arms become handles connecting the plate with the sides of the jar's neck.

The second distinctive Hybrid vessel (Cem JO S1 3114; Figure A6.14) is a goblet, consisting of a cup and pedestal. Each side of the pedestal base includes an Inca-style press-molded face. One face has the typical prognathic jaw, while the other does not. It may be that these portrayals are meant to represent a male and a female. This goblet from Tomb JO S1 was buried with a high-status, elderly female who was interred next to one of the oldest sacrificed llamas at Farfán. The pairing of the woman and the llama is an excellent example of the “like-with-like” concept, as defined by Gaither *et al.* (2008). The goblet form is reminiscent of one found in the earlier Moche culture associated with a priestess (Donnan and Castillo 1992:40). The persistence of the

goblet suggests not only continuity of the form, but also of the priestesses associated with this vessel type. It is also interesting that the tomb occupant's head deformation, Form D, has Moche antecedents (Nelson, Chapter 4, this volume).

Summary

Several important points emerge from this discussion of the ceramics that comprise the Late Horizon Hybrid Style. Ceramics of this style are found primarily in the four earthen cemetery mounds, and have a low representation in the Huaca Burial Platform, supporting the notion that the *aqllakona* are mainly buried with local ceramics of the Late Horizon Jequetepeque Style.

This study was able to expand the definition of North Coast Late Horizon Hybrid vessels by demonstrating that hybrids are composed of several highland vessel forms and specific formal features associated with the Cuzco-Inca style. These features, such as the flared rim lip, strap handles, and press-molded faces, are combined with both forms and motifs found in traditional coastal ceramics.

The motifs on Late Horizon Hybrid vessels are not necessarily copies of those found in the earlier Chimú ceramic tradition. Although they often adhere to the same themes as in the earlier tradition, they are rendered in a different fashion, such as a geometric form.

A surprising result of this study was that one of the dominant motifs in the Late Horizon Hybrid Style was not from the coast, but was instead the press-molded Cuzco-Inca face found on a variety of Farfán's forms: aryballos, jars, jars with handles, stirrup spout vessels, and a goblet. Placing this face on a variety of forms breaks with the Cuzco-Inca tradition where it is only found on aryballos and face-neck jars. The addition of this press-molded face had the desired effect of associ-

ating these vessels with the Inca, rather than with the Chimu ceramic tradition.

The concept of hybridization, as seen in ceramics, was part of a larger strategy of the Inca in the occupation of newly-conquered territories. This political strategy consisted of leaving intact elements of the familiar local culture while simultaneously introducing imperial concepts and practices.

The Late Horizon Jequetepeque Style (LHJS)

During the Late Horizon, ceramic vessels from the earlier Chimu culture—including ollas, jars, plates, and stirrup spout vessels—underwent significant transformations in morphology and motif. These changes, found in the ceramics from all the mortuary facilities at Farfán, have not been previously described in publications. New rim forms and motifs are so standardized within the site and occur with such frequency (82.5 percent of the total ceramic assemblage) that a new designation of the Late Horizon Jequetepeque Style (LHJS) is warranted. These changes in vessel forms and motifs are described below.

Ollas

All ollas in the Farfán ceramic assemblage are categorized as LHJS (N=75, or 17.7 percent). These vessels, mainly used for cooking, show layers of carbonization and surface flaking from exposure to an open fire. Ollas are identified by five main characteristics: a round body and base, a short neck and a wide mouth to facilitate stirring and serving, and a design field located around the vessel's shoulder, as the lower portion is often fire blackened.

These vessels consist of two parts—a rounded body that was fabricated in a two-piece mold and the short rim that most likely was not mold made. A clay coil, visible from the inte-

rior of the vessel, attaches the rim to the body. Further, the clay of the rim is often coarser, with more temper added than in the body. This characteristic has been noted at Cañoncillo as well as in earlier Chimu *ollas* from the Moche Valley (Mackey 1973).

Rim forms in this category show the most variation of any vessel type, and can be divided into two groups: rims of the previous Chimu tradition and new rim forms introduced in the Late Horizon (Figure A6.15). Rim Types 1, 2, 3, and 4 were present during late Chimu and continue into the Inca occupation, while Rims 5, 6, 7, and 8 reflect the Late Horizon changes. It may be that the olla, a form so closely tied to food preparation, changes more slowly than others, and the earlier forms continued to be produced.

A comparison of Rims 4 and 6 (Figure A6.15) exemplifies the change between the Chimu and the new olla rims. The former, often called “cambered rims,” was a hallmark of the Chimu tradition, while Rim 6 epitomizes the new form. The salient feature of Rim 6 and other Late Horizon olla rims is that the rim is not set directly above the neck join, but is set back and appears to have a “seat” before rising to its height (Figure A6.16). The seated rim is not a one-off or experimental form—it is a chronological marker of the Late Horizon, and is found with rims 5, 6, 7, and 8 (Figure A6.15).

Ollas range in size from 10 to 21.2 centimeters with an average height of 12.7 centimeters and a mouth opening of 8.4 centimeters. Tomb 11 in the Mound G Cemetery contains ollas with larger mouth openings whose diameters range from 14 to 16 centimeters. The rim height for standard size ollas ranges from 1.2 to 2.3 centimeters and even the largest ollas, with the widest mouth openings, have rims that fall within this range. There is a change in their paste color due to the firing methods of Farfán's Late Horizon ceramics, from reduced blackware to oxidized redware. In the

Farfán sample the majority of ollas (62.7 percent) are redware. At Farfán ollas appear to change their paste color before any other form, as the majority of other vessel forms continue to be reduced blackware. Keatinge noted a similar trend in the change from blackware (1973:94) in his statistical seriation of three excavated sites— the Chimu sites of El Milagro de San José (*ibid.*: 15–34) and Cerro La Virgin (*ibid.*: 34–51) and the Chimu-to-colonial site of Medanos La Joyada (*ibid.*: 51–62).

The practice of placing handles on olla rims began at the end of the Chimu Period and continues into the Late Horizon (Donnan and Mackey 1978:368, figure 2). Generally, these small handles, round or strap, range in width from 1 to 1.5 centimeters. They were most likely ornamental, because they are not strong enough to hold the vessel, especially when it is filled. One handle stands apart with an hour-glass shape, narrow in its mid-section (Figure A6.17). I noted this handle shape in the Late Horizon ceramics from Chiquito Viejo in the Chicama Valley and two sites in the Jequetepeque Valley, Farfán and El Algarrobal de Moro, part of the larger archaeological complex of San José de Moro. It is a firm chronological indicator of the Late Horizon.

Three techniques were used to create a decorative field around the shoulders of both red and blackware ollas: incising, the use of white slip, and press molding. Though incising was used to create a few designs, mainly it was used to decorate handles. White slip, executed in a careless fashion on the rims and shoulders of redware ollas, is the most common decorative technique (46 percent) within the olla category. Press-molded design motifs may be mythical, such as the anthropomorphized wave, or geometric, as exemplified by the wave, step, or hook designs. During the Late Intermediate Period, the Staff God or Front-Facing Deity, the main religious figure of the Chimu, always

appeared on finely burnished jars. In the LHJS this image is found on ollas in what appears to be a conscious effort by the Inca administrators to place this figure in a domestic context.

Ollas have an unequal distribution at Farfán, occurring more frequently outside of the Huaca Burial Platform. Of the 75 excavated ollas, only 16 (21.3 percent) were found in tombs in the Huaca Burial Platform. It is of interest, however, that in the few tombs of the *aqllakona* that contain personal ceramics, the vessels are generally ollas.

Jars

The most common vessel form in the LHJS is the jar, numbering 92 (89.3 percent) of the 103 total jars in the Farfán sample (Figure A6.15). The characteristic shape of the jar is oblong, round, or an oblate spheroid with a flat bottom. Jars were used for storing liquids, and in several cases, they had detachable gourd lids that fit inside the jar neck. The vessel body is composed of two mold-made pieces and a neck that was formed separately and then attached. The jar neck is often a different paste than the body—usually finer with less temper. A visible coil of clay in the interior attaches the neck to the body. The jar bodies are often composed of coarse-tempered clay. This added temper expands the clay matrix in the body enabling the jars to “sweat”. The damp surface is then cooled by the air, keeping the contents at a lower temperature.

Three rim types were identified for LHJS jars. Everted Jar Rim 1 was noted in two styles: in the Late Horizon Hybrid Style where it is associated with Cuzco-Inca traits (Figure A6.3), and with the LHJS where Inca traits are absent (Figure A6.15). Rim 2 of the LHJS is not as common, though tall neck jars are identified with the Late Horizon. LHJS Jar Rim 3 is associated with a new decorative motif, the bird-neck. This incurving rim form also occurs in the Late Horizon Hybrid Style, but

under the Jar and Handle category (Figure A6.10).

Jars in the LHJS are most commonly reduced blackware (86.5 percent). They range in height from 10 to 36 centimeters with an average height of 21.3 centimeters, while the diameter of the jar mouth averages 5.7 centimeters. Oversized jars, between 24 and 36 centimeters in height, are associated with high-status tombs. Their placement is not random—they are found only in large tombs that have the room to accommodate them.

Based on the labor invested and the quality of the finish of the vessels, jars are considered one of the fineware categories. The majority of blackware jars show some burnishing. There is, however, an interesting new technique introduced in the Late Horizon—pattern burnishing. This technique does not cover the jar's entire surface. Instead, lines of burnish alternate with the matte finish of the vessel body (Figure A6.8).

The decoration field on jars is generally confined to the upper three-quarters of the vessel body. The designs are often enclosed by a "frame" consisting of raised or incised lines. Designs are created by press molding, incision and, on rare occurrences, paint. However, jars have undergone change in the Late Horizon, not in body form, but in the presence/absence of motifs and the rendering of the images. One of the most frequent jar motifs, accounting for over 30 percent of the images, is the monkey effigy (N=36) associated with Rim 1. The overall design consists of a three-dimensional monkey head that is placed at the join of the jar's neck. An outline of the monkey's body is press-molded around the vessel's shoulder (Figure A6.18). Similar monkey effigy vessels were common in the late Chimú ceramic tradition and the concept, albeit changed in

the monkey's facial details, continued into the Late Horizon (Levine, Appendix 4, this volume).

Several important politico-religious motifs common during the Chimú Period are all but absent in the LHJS. One example is the Front-Facing Deity that only occurs on four vessels in the Farfán jar sample. The removal of an important Chimú symbol appears to have been one of the objectives of the Inca officials supervising the production of pottery. One of the few surviving supernatural deities is the Moon Animal which continues on jars and ollas (Mackey and Vogel 2001).

Marine themes such as the spondylus shell or the wave design are the motifs that survived the Inca occupation. Depictions of sea birds also continue as a common theme. However, the rendering of the sea birds as geometric forms or with the head facing backward rather than forward is a change from their earlier Chimú representations (Figure A6.19). These marine-based motifs may have persisted because in Inca cosmology the ocean was considered to be the ultimate source of water (Gose 1993:501).

Though jars are found in tombs in all the cemeteries, the majority of all jars (69 percent of the sample) are found in the Huaca Burial Platform. Monkey effigies, the most common decoration, are found on vessels in the Huaca Burial Platform, Mound G, Tomb JO S1 and Cemetery VI, constituting 35 percent of all jars (Levine Appendix 4, this volume).

Plates

Fifty-one plates comprise 12.1 percent of Farfán's total ceramic sample. Several features characterize this form. Plates are wide open, have slightly flaring low sides, and sharp angles formed where the vertical sides meet the plates' flat bottoms (Figure A6.15). These features distinguish plates from bowls which have rounded sides

and bottoms. The design field is located on the exterior bottom of the plate, not on the vertical sides or the interior.

Plates, manufactured using a single mold, exhibit three rim types (Figure A6.15). Rim 1, a round lip, was common during the Chimú Period but has a low frequency in this sample (N=2). Rim 2, an angled lip, is the diagnostic plate rim for the Late Horizon at Farfán (N=28). A variant of this plate, with a small hook on the rim, is found in an Inca context at Cañoncillo in the southern Jequetepeque Valley (Donnan 1997:38, figure 7b). Rim 3, with a square lip, also has a high frequency in the LHJS (N=19). Plates are reduced blackware except for one plate in the sample which is oxidized redware.

The flared sides of plates vary from 3.5 to 6 centimeters in height, averaging 4.2 centimeters. The average diameter of the plates is 15.9 centimeters. There are, however, oversize plates, as in Tomb JO S1, that have a diameter of 24 centimeters. All Farfán plates are burnished on their interior, the eating surface; the exterior of the plate may be burnished or exhibit pattern burnishing. The majority of plates at Farfán (N=29; 57 percent) are decorated on their bottom exteriors, a technique also noted at the Jequetepeque site of Cañoncillo (*ibid.*: 35, figure 4c). The decorations are all press-molded and mainly limited to geometric and marine motifs. Sea birds, shown on jars, are also present on plates (Figure A6.19). Another motif represented on the bottom exterior of plates is presumed to be a shark's egg sack (Figure A6.20; see also vessel 1103, HBP, Appendix 7). Decoration on the exterior flat bottom of plates is a marker for the Late Horizon, and was not found in the large ceramic sample from Chan Chan (Mackey 1973). During the Late Horizon, as was true in the Late Intermediate Period, plates are almost always associated with high-status burials. At

Farfán they were found mainly in the Huaca Burial Platform and in Mound G, Cemetery I, and Tomb JO S1.

Stirrup Spout Vessels

Attention was devoted to this form during the Inca Period because of its long history on the North Coast. Significant changes were made to this vessel form to ensure that it was markedly different from its predecessors. This is another example of the Inca strategy of combining traditional with new elements and of a ceramic form undergoing transition.

Stirrup spout vessels (N=79, 18.7 percent) are identified by the stirrup, spout, flat base, and bodies that are either round or have a sharp shoulder. The design field is in the center of the vessel's body; designs located on the flat portion of the square stirrup are a trait only found in the Late Horizon (Figure A6.21). The manufacture of these vessels was generally done in the traditional manner—by using a two-part mold for forming the body, and by attaching a separate stirrup and spout to the body.¹

Two rim types were found in the LHJS stirrup spout form. Rim 1 is an earlier Chimú form that continued into the Late Horizon, while Rim 2, with its incurving or barrel shape, is the dominant form of the Late Horizon Jequetepeque Style (Figure A6.15). Stirrup spout vessels range in size from 13.2 to 26.7 centimeters with the average height falling at 22.3 centimeters and the average spout opening at 2.1 centimeters. All but one of the Late Horizon stirrup spouts are blackware, and all have been finely burnished. Pattern burnishing does not occur on this form.

¹ Late Period (Late Intermediate Period/Late Horizon) examples of two piece molds that include the stirrup, spout, and body have been noted at Manchan (Mackey field notes, Casma Valley 1982).

Significant changes were made to stirrup spout vessels in the Late Horizon Jequetepeque Style. First, the stirrup is now square, in cross-section (67.9 percent) as opposed to the earlier round shape characteristic of the Chimu Period (Figure A6.21). The portion underneath the spout, the top of the vessel body, was rounded during the Chimu Period, and this feature continues (39 percent); however, in the LHJS the top of the vessel is sometimes now pointed (28 percent; Figure A6.21). During the Chimu Period the *adorno*, found at the join of the spout and the stirrup, was a monkey; this *adorno* continues to be a common feature in the Late Horizon sample (89.7 percent; Figure A6.22). New *adornos*, such as a pierced circle, a duck, or a step, were replacing the iconic Chimu monkey (Figure A6.23). A noteworthy addition to the placement of *adornos* is their position at the join of the stirrup and the vessel body, and these usually take the form of a frog or duck (Figure A6.21).

Images of either sea birds or ducks were placed on the flat outer surface of the square stirrup during the Late Horizon (Figure A6.21). The most common motifs exhibited on the stirrup spout body are representations of animals such as birds, felines, lizards, snakes, and llamas. Though the avian category continues from the earlier Chimu, the renderings of birds differ. There are no geometric designs on Late Horizon stirrup spout vessels. The largest percentage of stirrup spout vessels (86 percent) is found with the sacrificed *aqllakona* in the Huaca Burial Platform. The remainder of the stirrup spout vessels are distributed among the other four burial facilities.

Miniatures

Although miniatures are found in earlier cultures, during the Late Horizon they occur in several media such as ceramics (Figure A6.1) and textiles. Miniature cups, called *ofrendas*

(Donnan 2006:155–156, figure 8) or *crisoles* (Costin 1999), are not included in this category because they are unfired. Miniature vessels (N=49 or 11.6 percent) occur in only four forms: ollas (N=31), jars (N=12), jar and handle vessels (N=4), and double vessels with a bridge (N=2).

Miniatures have a limited size range—from 6.1 to 9.9 centimeters in height. They are fired with the majority being reduced blackware. Miniature *ollas* are not utilitarian in nature as they never show use over a fire. The press-molded designs on miniatures, such as birds, lizards, or marine motifs, mimic those on the larger forms in Farfán's sample. White slip is found on several redware miniatures. Miniature jars and jar and handle vessels are found exclusively in the Huaca Burial Platform while miniature ollas are found in all burial facilities.

Summary

This analysis has resulted in the formulation of a new style—the Late Horizon Jequetepeque Style. The following comments are germane to this assemblage:

The characteristics of this assemblage, the formation of which appears to have been an intentional effort by the Inca administrators, combines both Chimu and new ceramic features. Many of these new vessel and rim forms have been noted at other Late Horizon Inca centers in the Lambayeque and Chicama Valleys. However, future research will determine if this is a dominant style in these valleys.

Vessels that comprised the earlier Late Intermediate Period Chimu ceramic style have been altered, either in their morphology or motif. However, some rim forms have persisted, as shown in Figure A6.15.

Iconographic themes common in the Late Intermediate Period were continued, but their

renderings changed. Motifs in the marine theme have been noted most frequently; however, there was attrition in the number of animal and plant forms that had previously been represented. Instances of the Chimú Staff God, formerly found on high-status vessel forms such as jars or stirrup spout vessels, decreased, and were mainly relegated to the utilitarian forms. The hand of the Inca is very clear in the selection and transition of motifs.

Vessels of the Late Horizon Jequetepeque and Hybrid Styles were most likely produced in the same workshops, because they both show many of the same motifs and employ a reduced firing technique.

Miniature vessels were part of the Late Horizon Jequetepeque Style and did not appear among the earlier Chimú vessel forms.

One of the most important contributions of this large corpus of archaeologically-excavated ceramic vessels is that it calls into question whether the term “Chimú-Inca” is valid for the North Coast during the Late Horizon. The main reason given for using the term Chimú-Inca was the continuing presence of the earlier Chimú reduction technology that resulted in blackware ceramics. However, this firing technology and the few remaining Chimú morphological and motif traits do not make a strong argument for the continuation of the term Chimú-Inca.

Many authors, for example Hayashida (1995:271), have lamented the fact that on the North Coast it has been difficult to distinguish Late Intermediate Period Chimú ceramics from those of the Inca occupation during the Late Horizon. This study is an initial attempt to make this distinction.

LAMBAYEQUE

Groups identified as ethnic Lambayeque by cultural characteristics in architecture, ceramics, and cranial deformation persisted into the Late Horizon at Farfán and elsewhere in the Jequetepeque Valley (Cutright 2013:5; Mackey 2011; Prieto n.d.; Sapp 2002:142; Chapter 2B, this volume). Lambayeque ceramic traits continued at Farfán and further north at Túcume in spite of the conquest by the Chimú and Inca polities (Sandweiss 1995b: 154; Mackey 2011 [2016]). Defined by both form and decoration, the Lambayeque vessels in the sample (N=22, or 5.2 percent) include ollas, jars, jar and handle vessels, and ring base bowls.

Ollas

The ollas found in Lambayeque-affiliated tombs at Farfán are a hybrid form that combines a vessel form and rim type from the Late Horizon Jequetepeque Style (Figure A6.24) with a traditional Lambayeque decorative technique. The *paletteada* (paddle stamping) decoration seen in Figure A6.25 is a traditional Lambayeque surface treatment achieved by pressing a paddle, marked with a design, onto the vessel body before the clay has dried. This olla example illustrates two decorative techniques; the use of *paletteada* and the application of white slip, a combination seen only in the Late Horizon.

Jars

The rim profile illustrated in Figure A6.26 is common to the Lambayeque Style. Tschauner (2001:668, figure A.9) shows similar “bulge” neck jar rims from the Lambayeque region that he dates to the Chimú and Chimú-Inca periods. The jars associated with this rim type often have a whole animal, usually a monkey, placed on top of the vessel (Chapter 6, this volume, Figure 6.8). The depiction of the monkeys is distinct in body form and facial characteristics from those identified as

LHJS Farfán monkey effigy vessels described by Levine in Appendix 4, this volume.

One of the more interesting Lambayeque jars depicts a woman with a child on her back (Huaca Burial Platform S21; Figure A6.27). This female figure, said to be associated with the Tallan culture, was first represented in Moche and later in Lambayeque ceramics (Cordy-Collins 2001). Such women are characterized by the labret they wear and the drum they carry. While this vessel has a Lambayeque rim profile and theme, the face associated with the figure is typical of the Cuzco-Inca style, suggesting that the vessel is a hybrid. The use of this motif was in keeping with the Inca strategy of employing North Coast iconography of long antiquity.

Jar and Handle

A jar and handle vessel from a secondary tomb in the Huaca Burial Platform (S21, Figure A6.28) exhibits two traditional Lambayeque characteristics: an individual with a pointed ear shape such as those found on vessels termed *Huaco Rey* that represent the principal Lambayeque deity (Narváez 1995a: 104, 171; Narváez 1995b: figure 149; Mackey 2001) and a small bird *adorno* on the handle. However, the jar neck has the typical Cuzco-Inca press-molded face. This vessel, like the jar described above, illustrates a hybridization of Lambayeque Style that combines a Cuzco-Inca trait with Lambayeque features.

Ring Base Bowls

Low ring based bowls, as shown in Figure A6.29, are of oxidized redware and are generally seven centimeters in height, including the base and body. They are often painted on the interior and exterior with white slip (Figure A6.30). Low ring base bowls are placed within the Early Phase of the Lambayeque chronology,

but are also found in a Late Horizon context at Farfán in Cemetery I, indicating that this feature continued through time.

Vessels with Lambayeque rim forms and decorations have a restricted distribution at Farfán. They occur in cemeteries where Lambayeque burials are noted, such as Mound G, Cemetery I, and the Huaca Burial Platform S21.

Summary

Though the sample is small, several observations can be made regarding the Lambayeque Style at Farfán:

Traditional features of Lambayeque Style continue into the Inca occupation of Farfán. One probable reason for the stylistic continuity is that Lambayeque lords resided at Farfán (Compounds I and V), and more than likely co-ruled with the Inca.

Some vessels within the Late Horizon Lambayeque Style show hybridization. Rim forms and motifs found in the Late Horizon Jequetepeque and the Cuzco-Inca Styles were combined with Lambayeque features.

The most enduring of all the Lambayeque decorative techniques is *paleteada*, or paddle stamping. This technique was first found in the Lambayeque heartland and remained a distinctive cultural trait.

The use of one or more decorative traits, such as *paleteada* combined with white slip, is limited to the Late Horizon.

CONCLUSION

This study of the Farfán ceramics is an initial attempt to make a distinction between the Chimú Late Intermediate Period ceramic tradition and that found in the Late Horizon. In the Late Hori-

zon Farfán assemblage, only three styles were identified from the large number of intact vessels (N=423): Hybrid, Late Horizon Jequetepeque, and Lambayeque. The styles are not evenly represented, as there are only a small number of Hybrid and Lambayeque vessels—the majority belong to the Late Horizon Jequetepeque Style.

One of the results of this study is a broader definition of the Inca North Coast Late Horizon Hybrid Style that includes diagnostic Cuzco-Inca ceramic forms and features (Rowe 1944). For example, the Farfán sample not only includes complete Cuzco-Inca forms, such as the *aryballo*, but also several Cuzco diagnostic features such as strap handles and press-molded faces on jar necks. Farfán's Hybrids show a combination of Cuzco attributes together with North Coast forms and motifs that have undergone modification.

The dominant style at Farfán, now referred to as Late Horizon Jequetepeque, represents 82.5 percent of the total assemblage. This style incorporates some of the vessel forms from the Chimú Period but adds new rim forms and renderings of motifs. The vast majority of Chimú iconography dropped out of the repertoire, though some familiar themes remained, such as representations of monkeys, lizards, and marine images.

Lambayeque ceramic style is represented at Farfán in a small proportion, even after the conquest of the Chimú and Inca polities. Many typical Lambayeque features continue, such as ring base bowls and paddle-stamped jars. These Lambayeque stylistic ceramic characteristics probably persisted at Farfán because the Inca chose Lambayeque lords to share rule (Mackey 2011 [2016]).

The ceramics that constitute Farfán's Hybrid, Late Horizon Jequetepeque, and Lambayeque Styles are an excellent example of ceramic traditions in transition. Utilization of familiar characteristics combined with new elements was a dominant political strategy of the Inca in their incorporation of conquered groups. Whether in architecture, textiles, ceramics, or burials, enough of the former tradition was left to be visually familiar, but new elements, either innovated or derived from the Inca canon, were added. This intentional manipulation of the material culture of the previous Chimú polity is a clear indication of Inca dominance and control in their subjugation of Farfán.

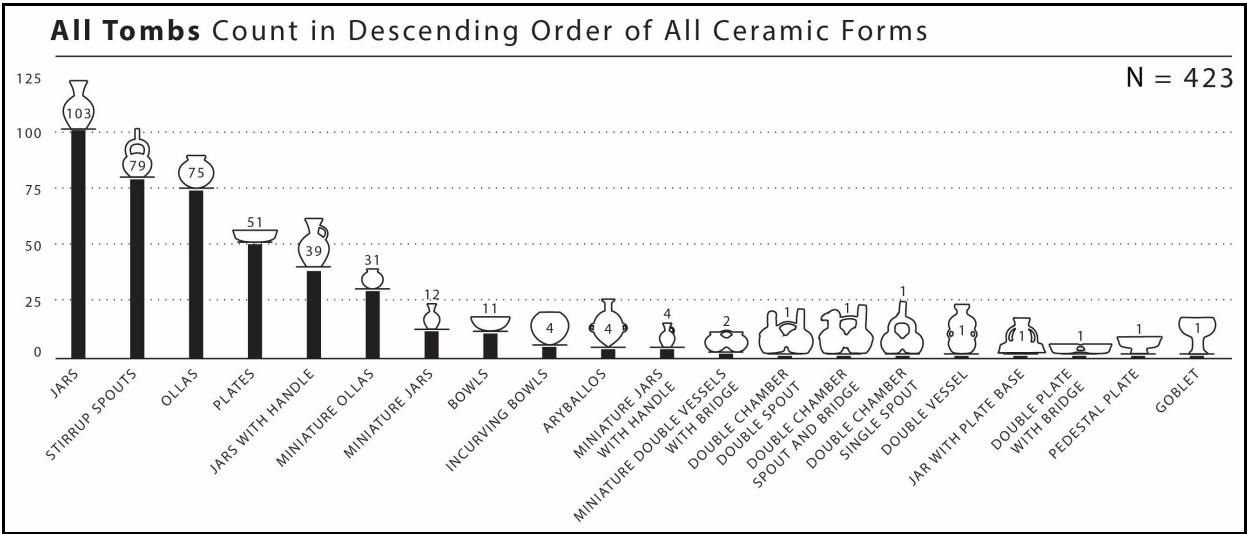


Figure A6.1. Vessel forms from the General Sample.

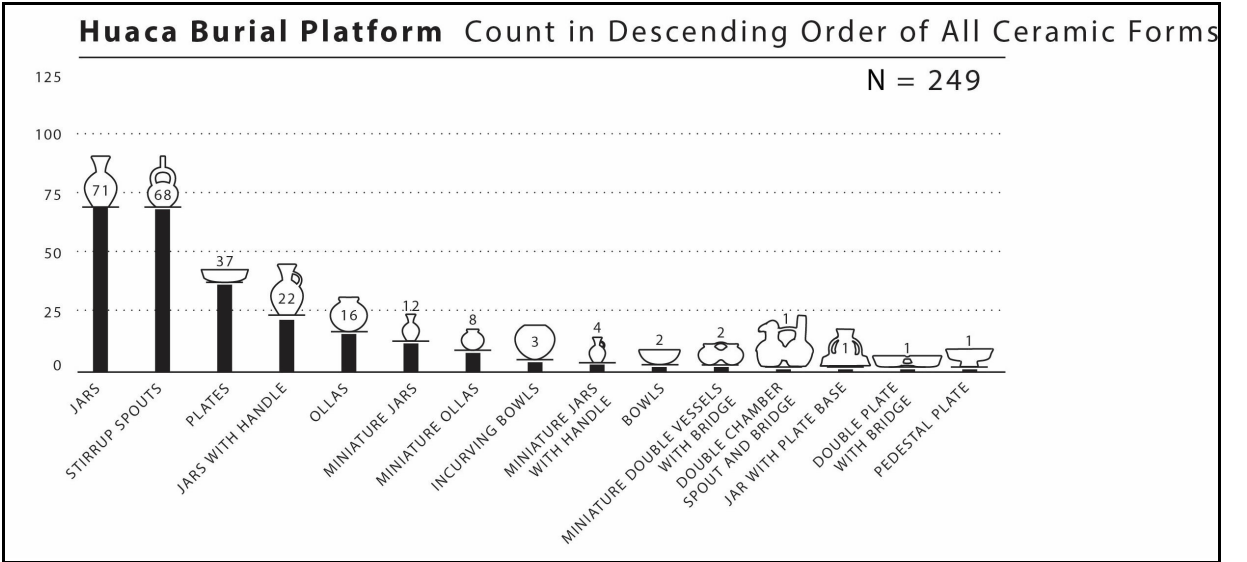


Figure A6.2. Vessel forms from the Huaca Burial Platform.

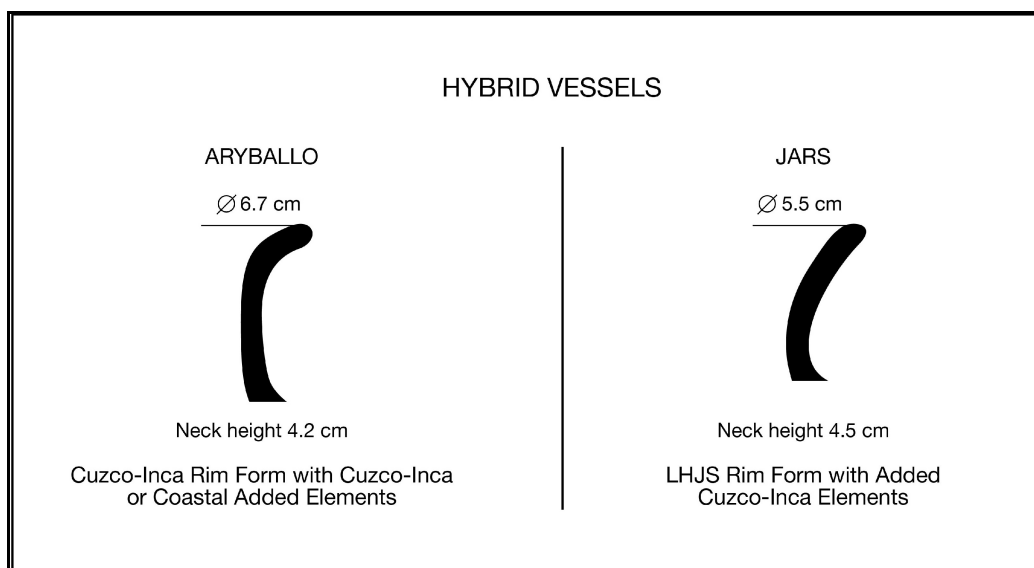


Figure A6.3. Hybrid vessel rim forms.

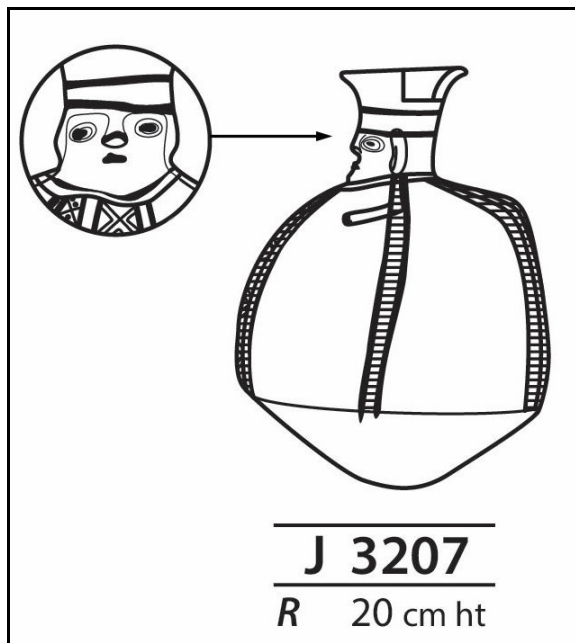


Figure A6.4. Redware, face-neck arbayllo vessel representing a hunchback. Cemetery J14 T3/3207. Height: 20 centimeters.

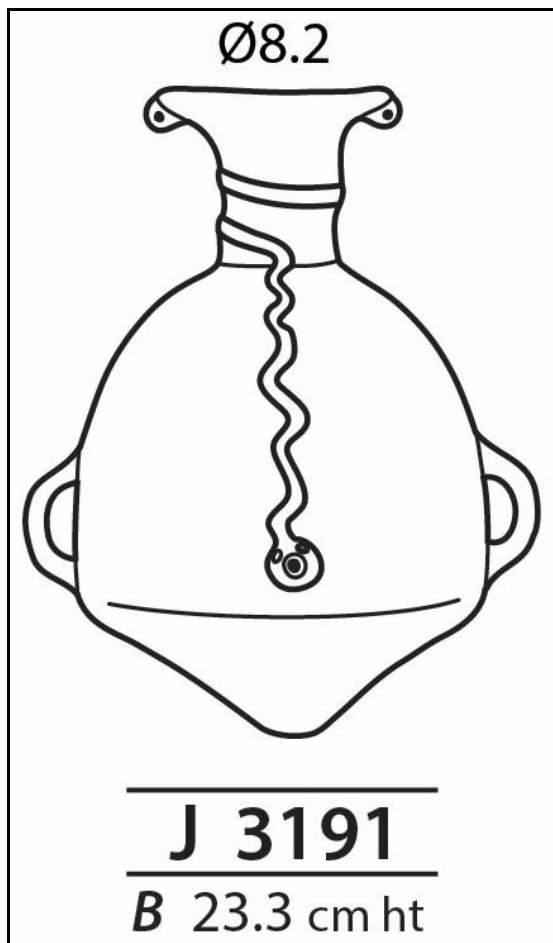


Figure A6.5. An arbayllo that is also an Inca paacha. This vessel is designed to carry water through a series of interior tubes and was possibly used in water rituals. Cemetery J14 S1/3191. Height: 23.3 centimeters.

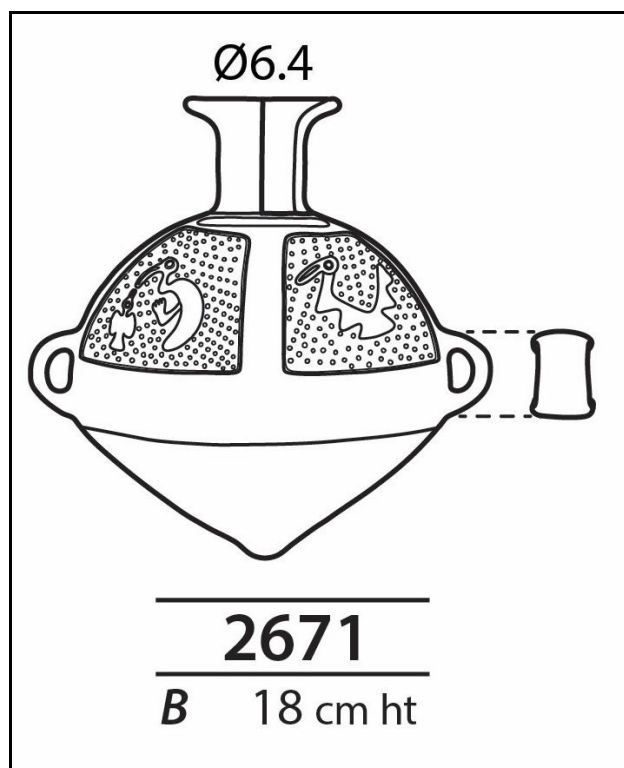


Figure A6.6. Blackware aryballo with motifs representing marine themes. Cemetery I 16 S4/2671. Height: 18.0 centimeters.

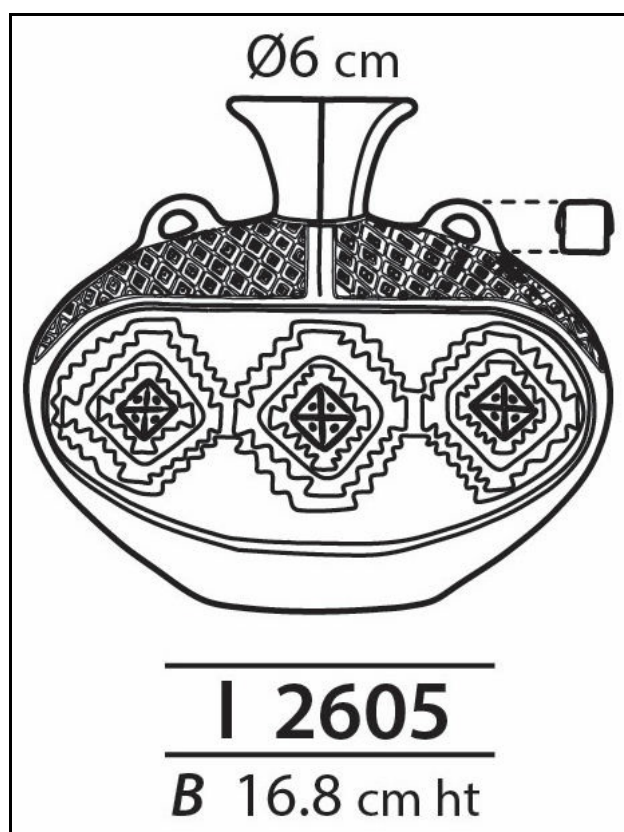


Figure A6.7. Hybrid blackware jar showing an incised diamond motif. Cemetery I 3 T1/2605. Height: 16.8 centimeters high.

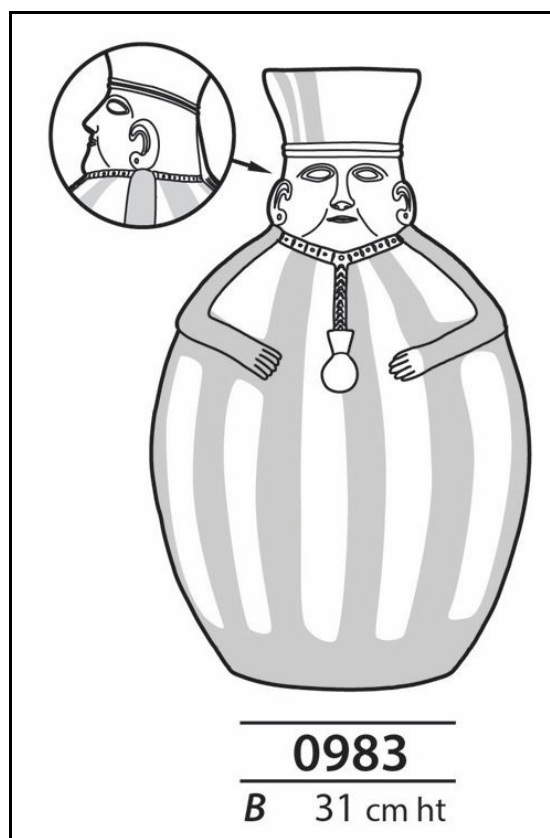


Figure A6.8. Hybrid blackware jar. Surface treatment shows pattern burnishing. HBP C T2/0983. Height: 31 centimeters high.

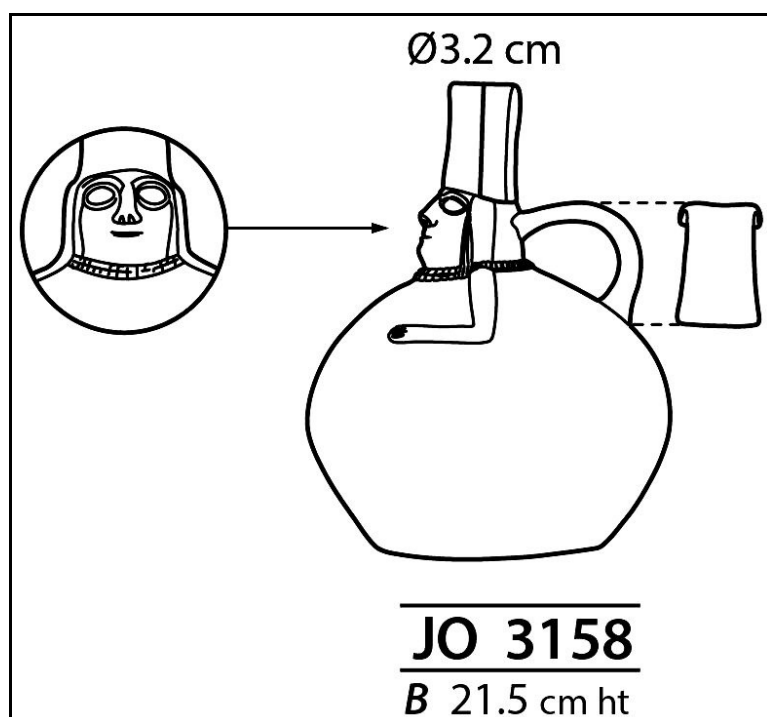


Figure A6.9. Jar and handle vessel with a press-molded Inca style face on the neck. Cemetery JO S1/3158. Height: 21.5 centimeters.

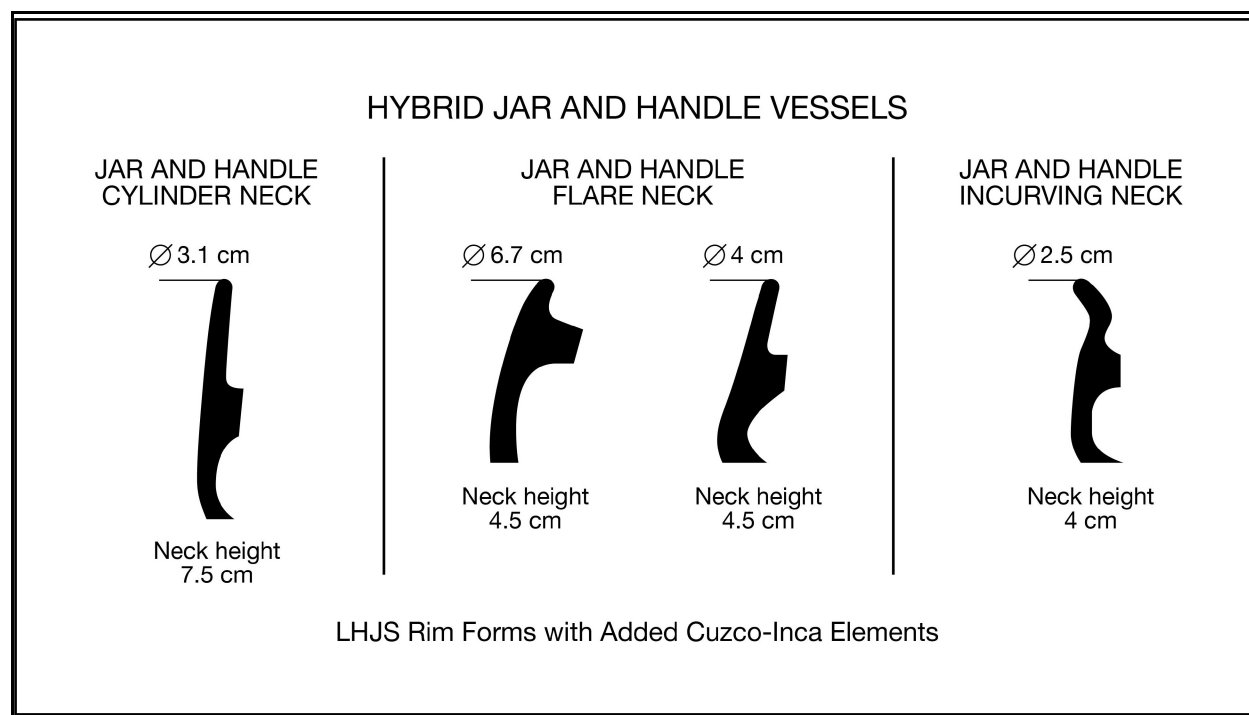


Figure A6.10. Three rim profile types of jar and handle vessels have been identified.

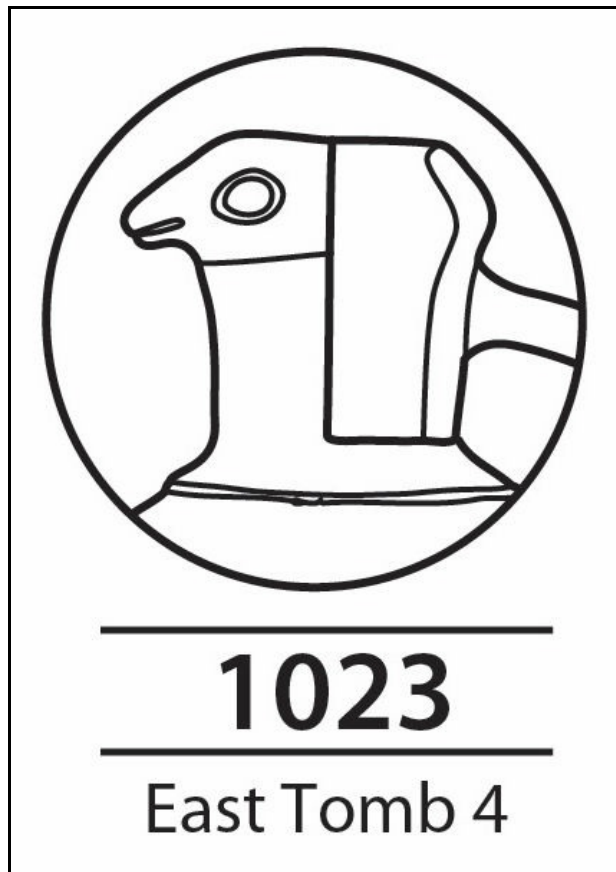


Figure A6.11. Press-molded bird's head on an incurving rim type.

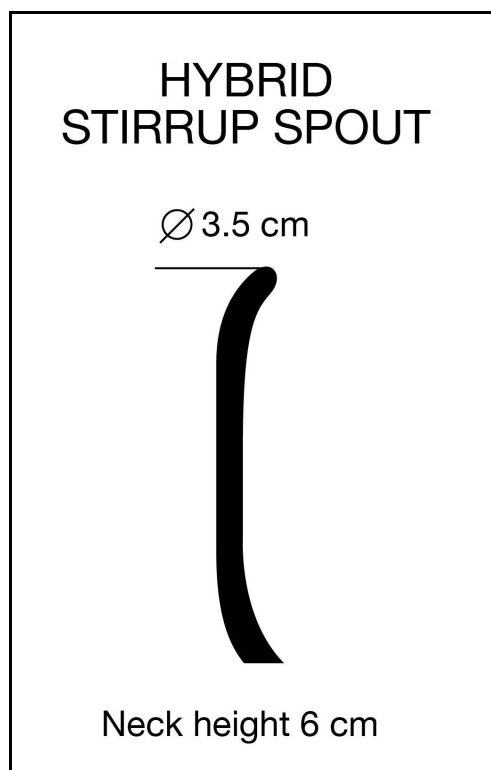


Figure A6.12. Example of a Late Horizon flare rim spout.

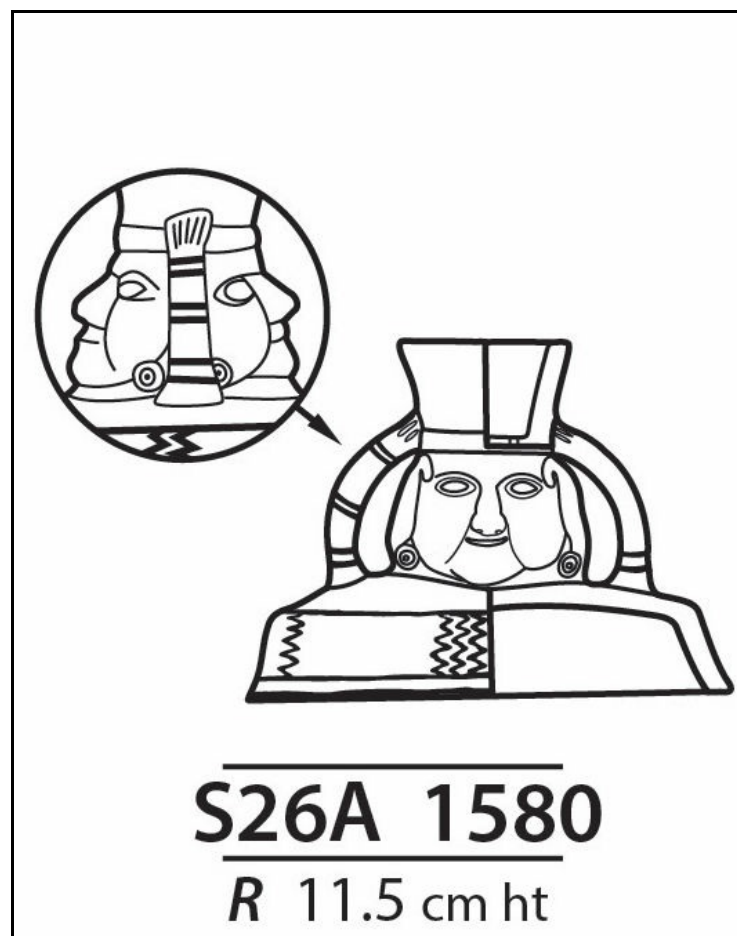


Figure A6.13. Composite, redware Hybrid vessel composed of an inverted plate topped by a jar neck with an Inca-style face. HBP S26B/1580. Height: 11.5 centimeters.

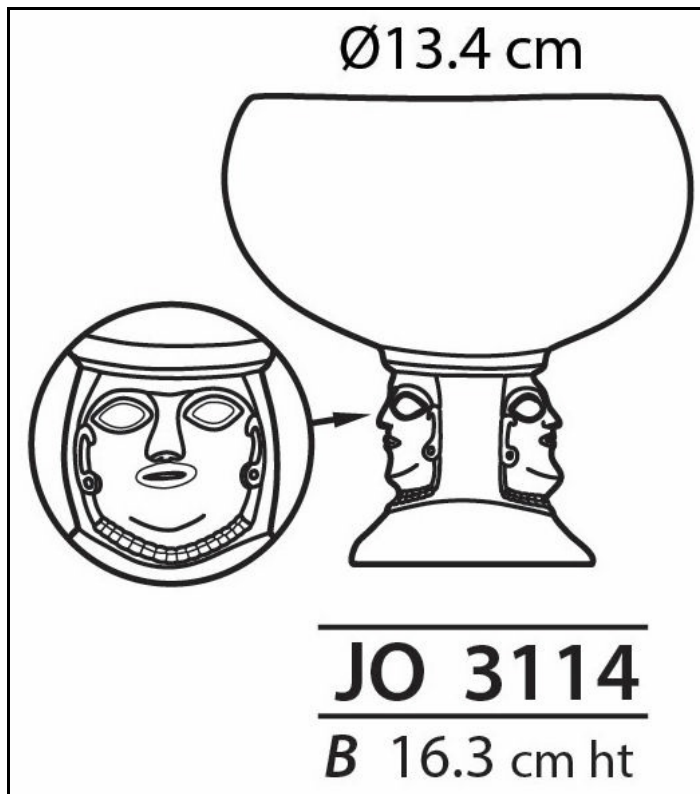


Figure A6.14. A Hybrid blackware goblet differs from its Moche antecedents because of the Inca-style faces on its pedestal base. Cemetery JO S1/3114. Height: 16.3 centimeters.

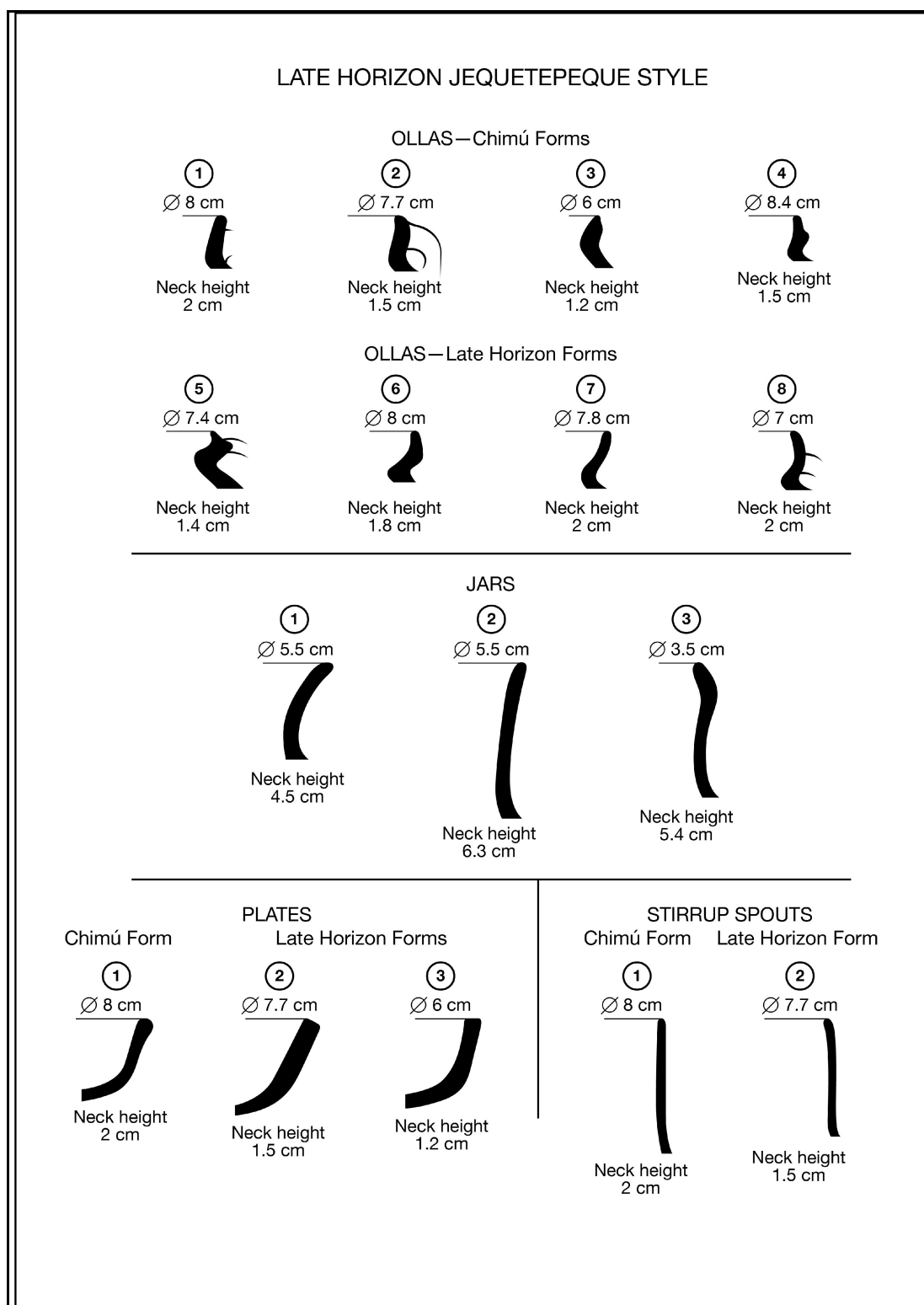


Figure A6.15. Four Late Horizon Jequetepeque Style vessel forms with their corresponding rims.

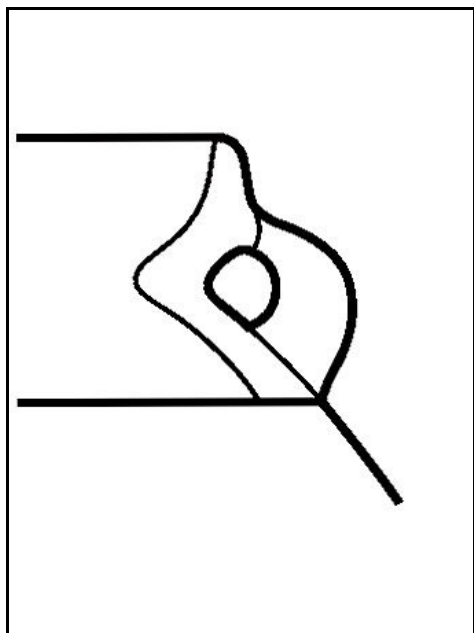


Figure A6.16. Distinctive "seated" rim profile found on Late Horizon Jequetepeque Style ollas.

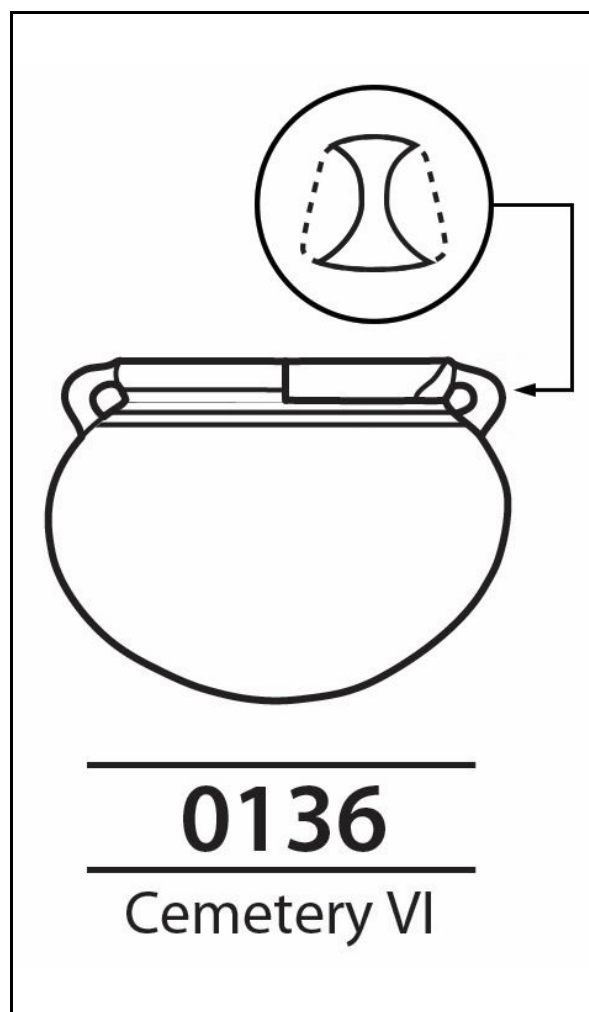


Figure A6.17. Hourglass shaped handle found only on ollas. Cemetery VI II T2/0136.
Height: 9.5 centimeters.

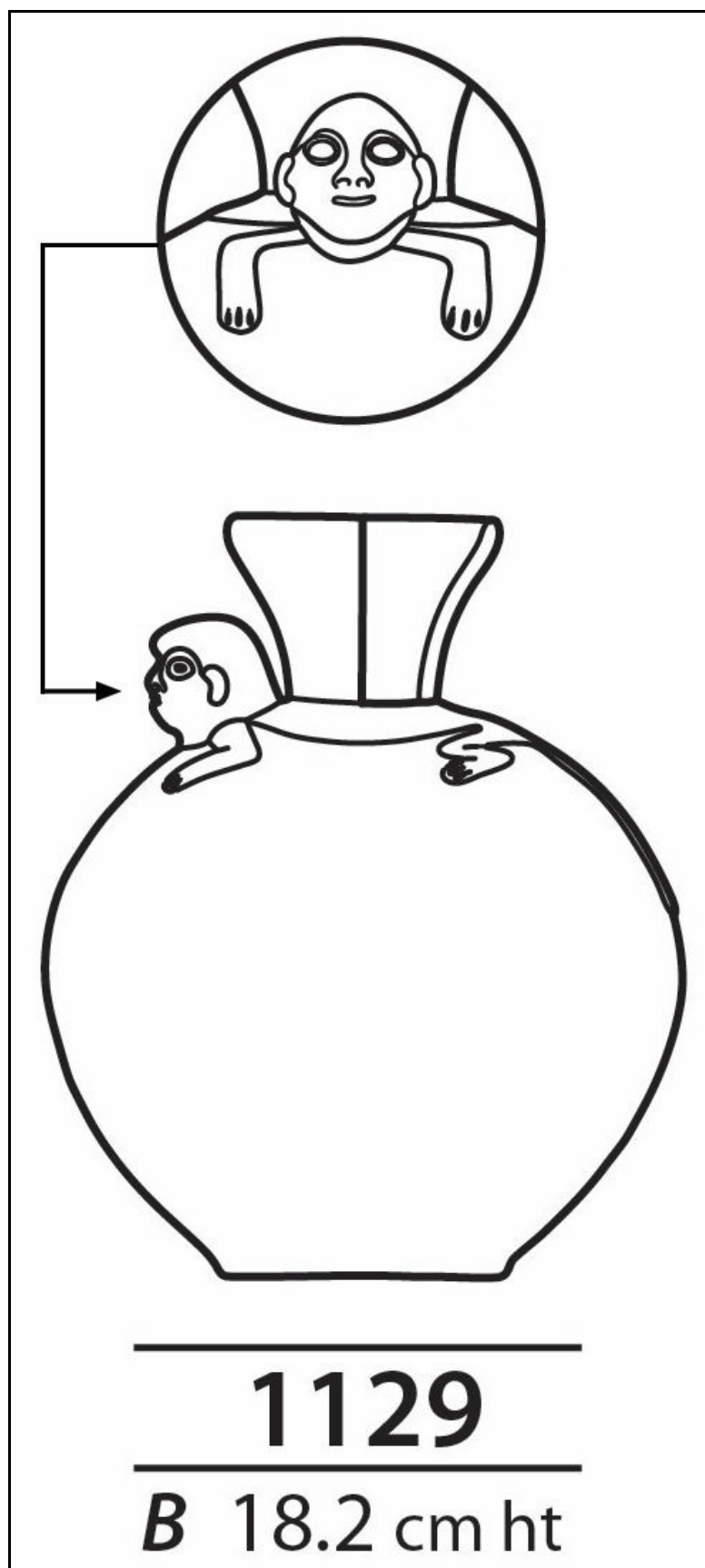


Figure A6.18. Example of a monkey effigy jar. HBP E/1129.
Height: 18.2 centimeters.

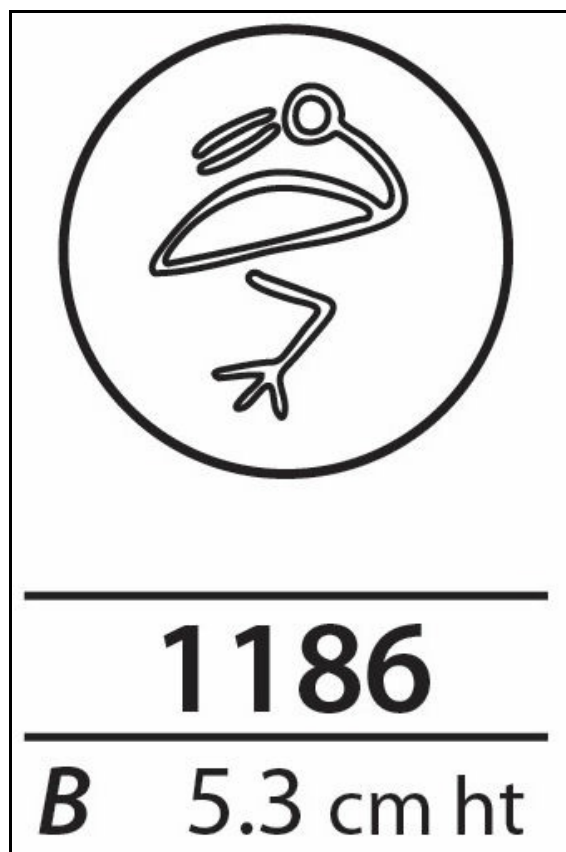


Figure A6.19. Decorative motifs of sea birds, common in the earlier Chimu Period, continue into the Late Horizon, but their rendering shows marked changes. HBP C T11/1186.

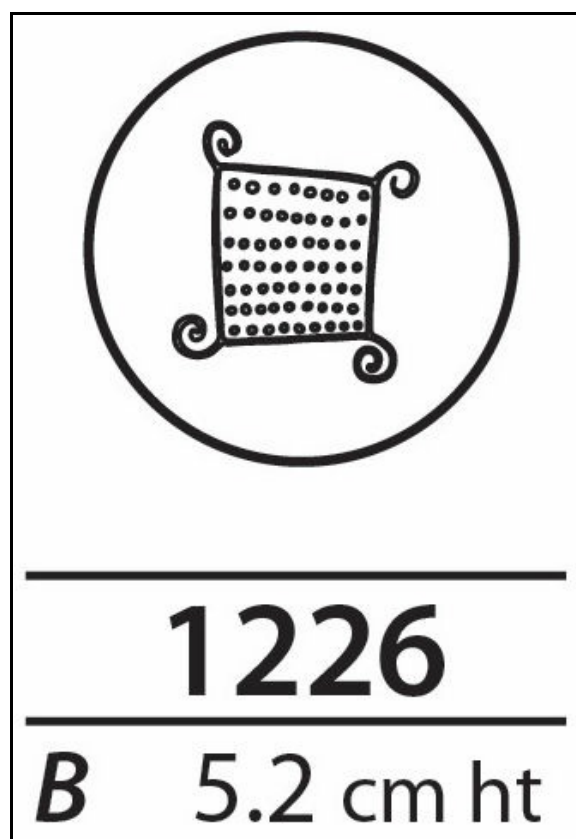


Figure A6.20. Representation of a shark's egg sack on the bottom exterior of a plate. HBP CT 11/1226.

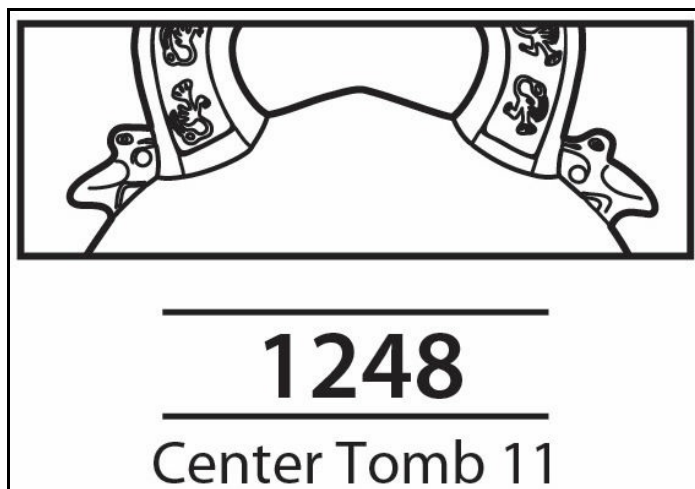


Figure A6.21. A pointed, rather than a round, body top for stirrup spout vessels was introduced in the Late Horizon. HBP C T11/1248.

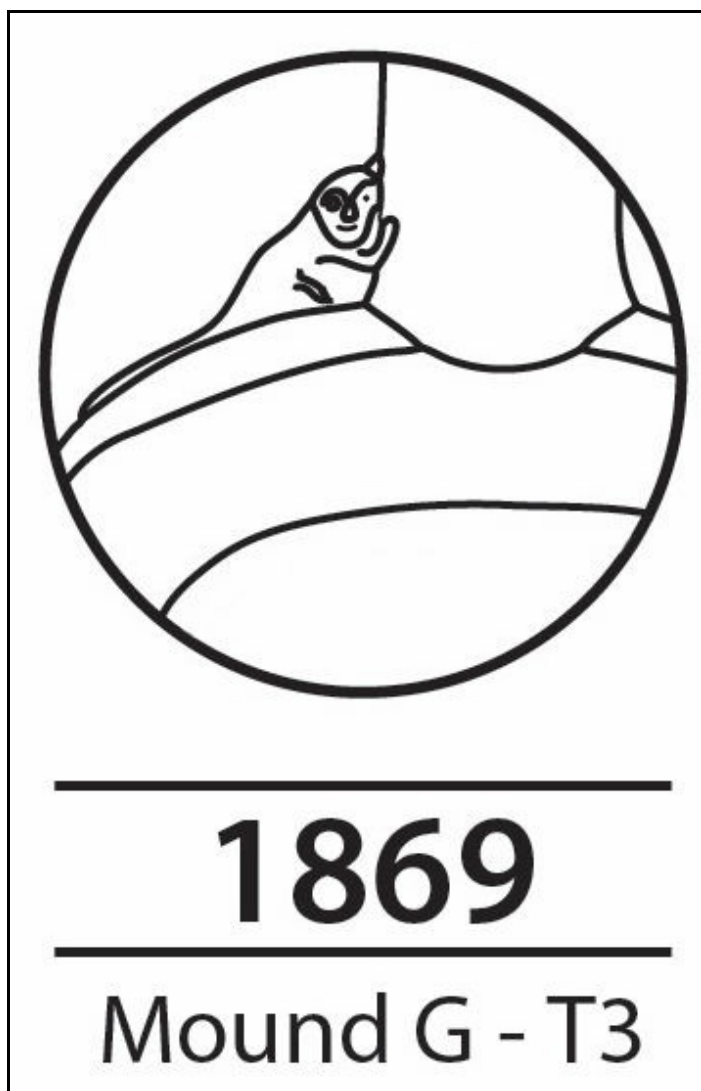


Figure A6.22. The most common form of the stirrup in the Late Horizon Jequetepeque Style is square in cross section. Mound G T11/1869.

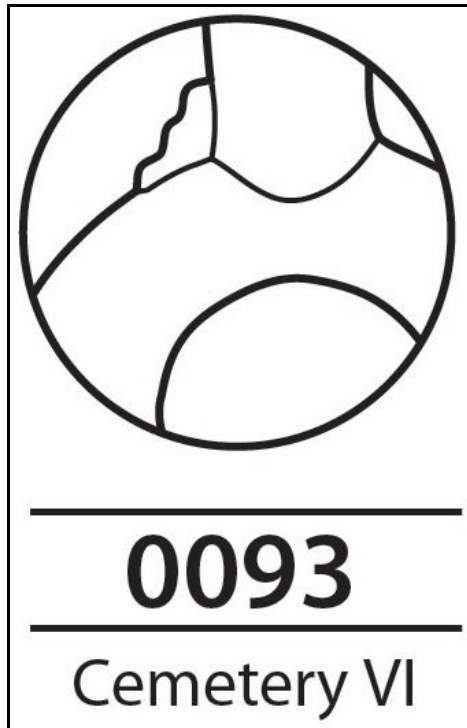


Figure A6.23. During the Late Horizon new adornos such as a step, located at the join of the spout and stirrup, make an appearance. Cemetery VI I T4/0093.

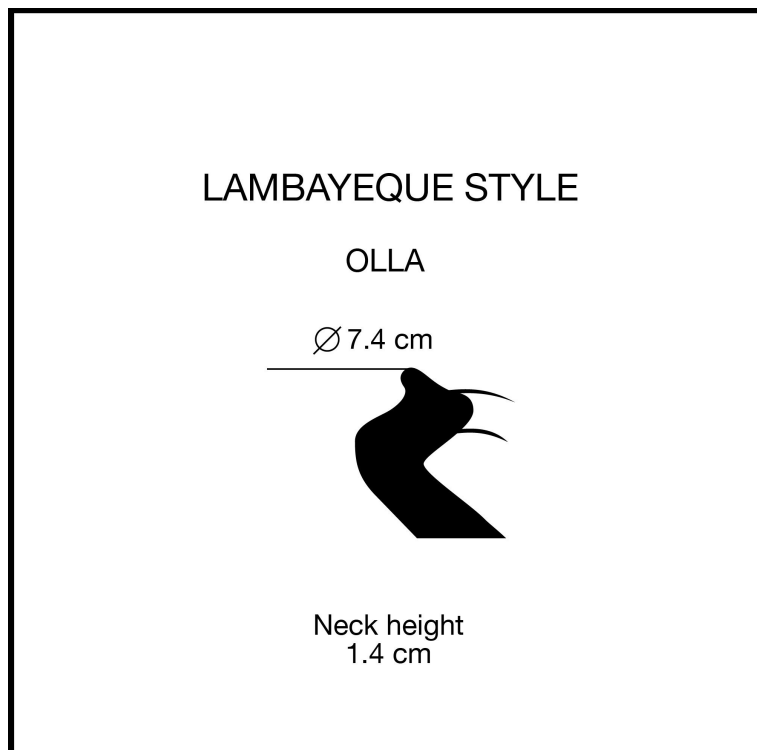


Figure A6.24. Example of a rim associated with the Lambayeque Style. This olla rim form is found in the LHJS; however, there it occurs with Lambayeque decoration.

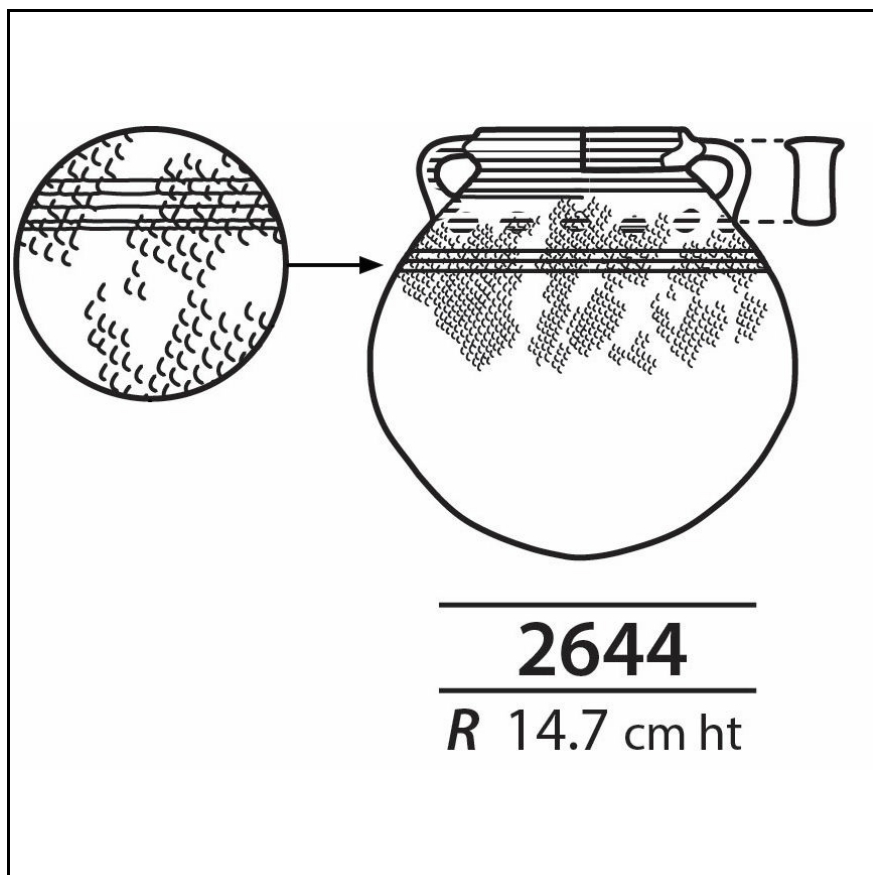


Figure A6.25. This vessel combines two decorative techniques, Lambayeque paddle stamping which is covered with white slip. Cemetery I 10 T2/2644. Height: 14.7 centimeters.

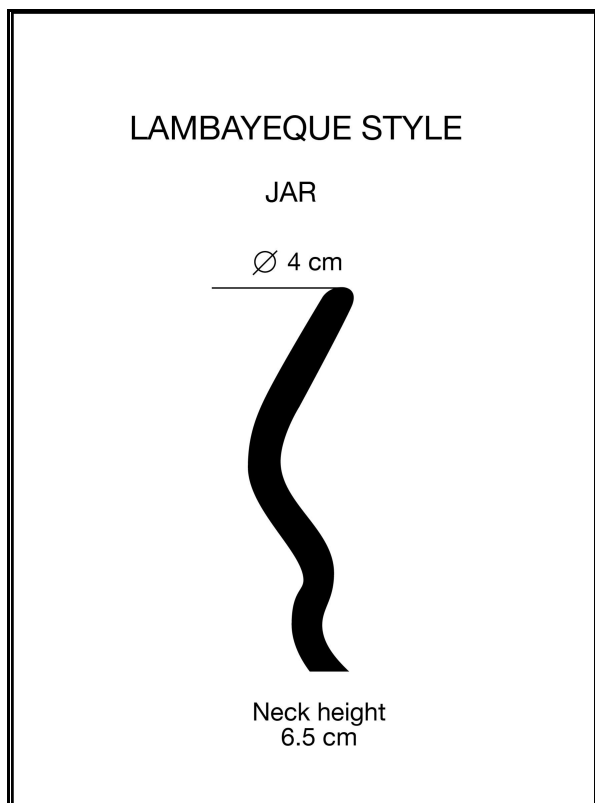


Figure A6.26. Lambayeque jar showing “bulge neck”.

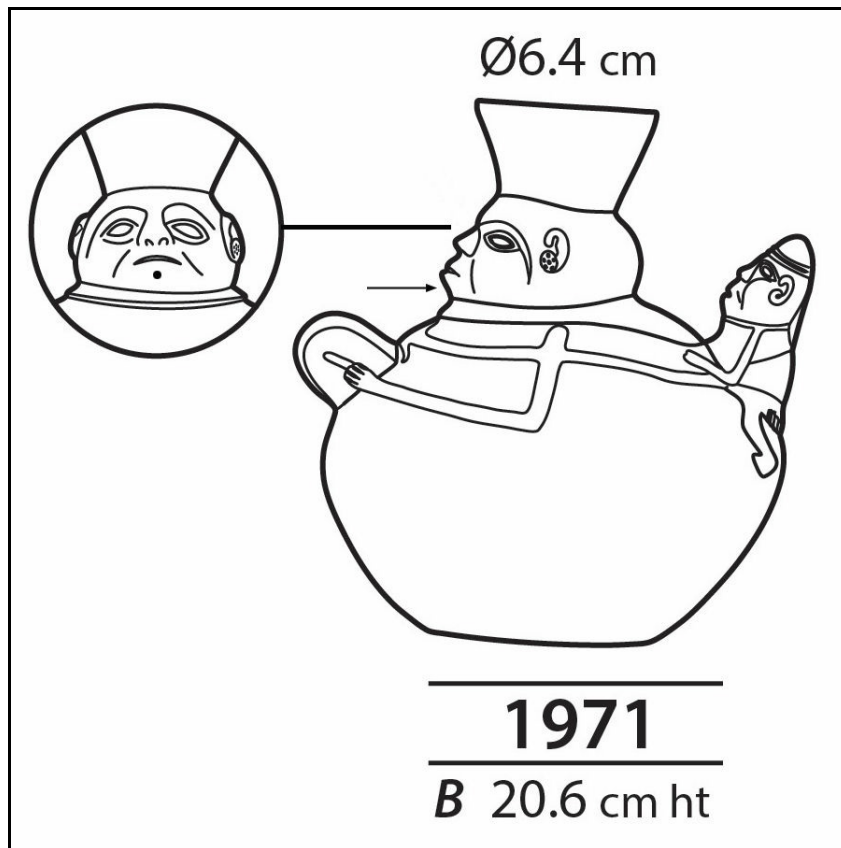


Figure A6.27. A woman with a labret. A labret existed on the chin of this vessel, but it was broken in antiquity (see arrow). HBP S21/1971. Height: 20.6 centimeters.

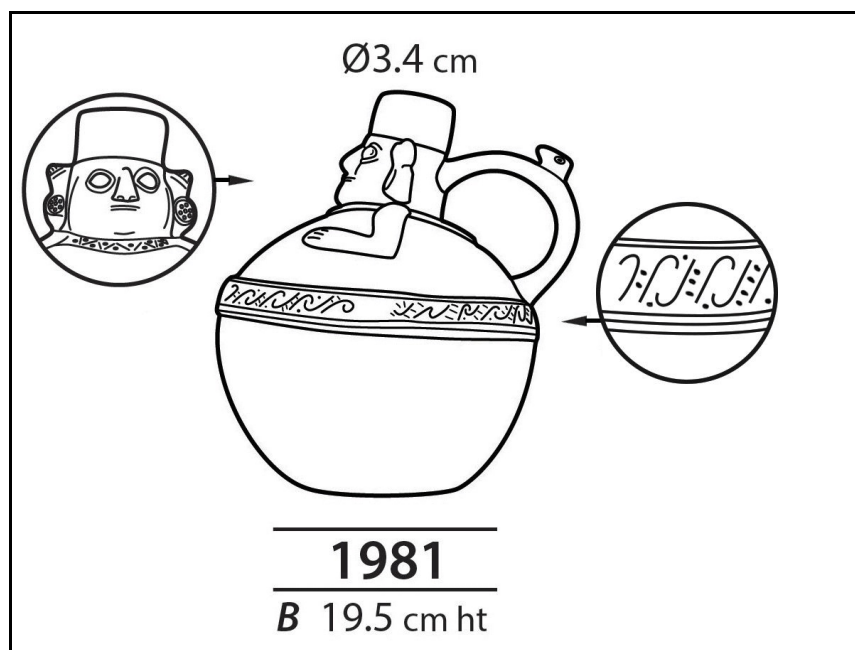


Figure A6.28. Jar and handle vessel with typical Lambayeque features. HBP S21/1981. Height: 19.5 centimeters.

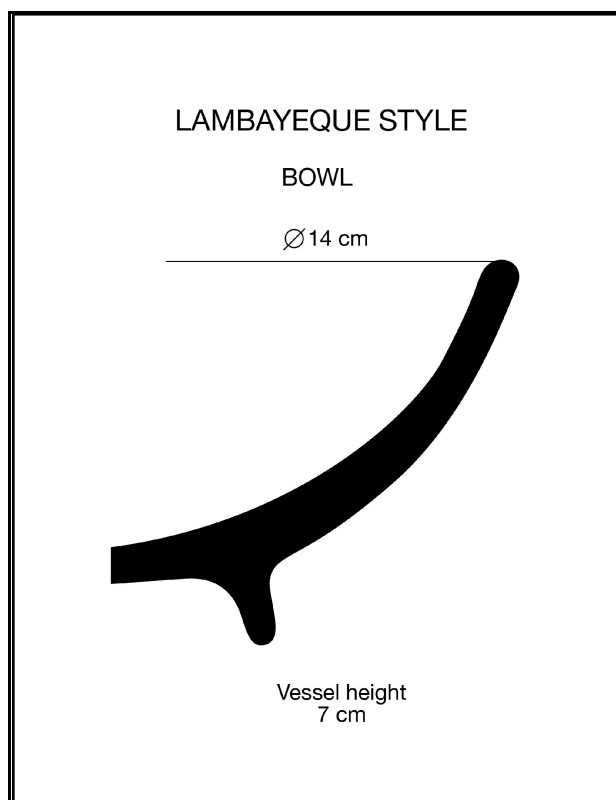


Figure A6.29. One of the most typical Lambayeque ceramic forms—the ring base bowl. Cemetery I 10 T3/2661. Height: 7 centimeters.

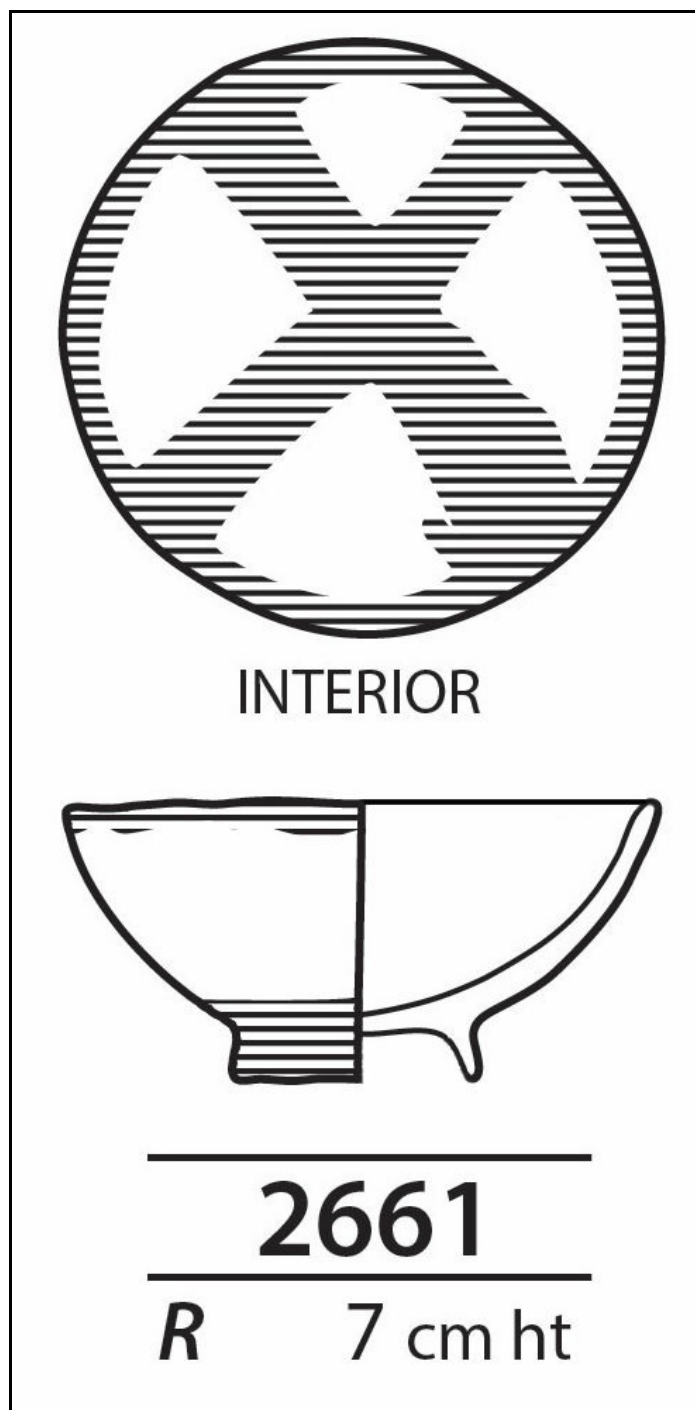


Figure A6.30. One of the most typical Lambayeque ceramic forms—the ring base bowl. Cemetery I 10 T3/2661. Height: 7 centimeters.

APPENDIX 7

THE CERAMICS FROM FARFÁN EXCAVATED TOMBS

Carol J. Mackey

INTRODUCTION

This appendix presents illustrations of ceramics from the tombs excavated by the Farfán Project (1999–2004). These Late Horizon ceramics from Farfán's five cemeteries, together with those excavated at the administrative center of Túcume in the La Leche Valley (Heyerdahl *et al.* 1995) are among the largest ceramic collections associated with the Inca occupation on the North Coast. Farfán's cemeteries and many of the tombs they contain are described in the preceding chapters of this monograph.

Farfán's tombs contained 423 complete vessels. Though the number of vessels varied within each tomb, over half of the sample (249 vessels) was excavated in the tombs of the *aqllakona* or Inca Chosen Women in the Huaca Burial Platform (see Chapter 3, this volume). In addition to ceramics, tombs contained burial goods made of metal (silver and copper), textiles, wooden objects, and gourds. Many of these non-ceramic objects are illustrated in this monograph.

The tombs and their associated ceramics are important for several reasons. First, the illustrated pottery offers an overview of the styles present in the Jequetepeque Valley during the Late Horizon and described in Appendix 6. These include hybrid vessels (those that share attributes found in the highlands and/or on the coast) as well as coastal styles. Many of the vessels' motifs are shown, as well as the principal

decorative techniques used in the manufacture of the vessels (Figure 7.1).

Secondly, these ceramics, from undisturbed tombs, are a valuable asset for cross-dating with other ceramic collections. Finally, this sample can be compared with the previous Chimu style to highlight the presence and/or absence of earlier traits in the Late Horizon.

The illustrations of the ceramics excavated in the tombs appear in the order they are discussed in this monograph. Each of the ceramic vessels from a tomb is referred to by the letter "T", indicating provenience in an intact tomb, and is also referred to by its vessel or ticket number, that is, its internal project accession reference. The letter "S" indicates a secondary burial, that is, one that has been modified after initial deposition, and is often a partial burial. However, all of the burials designated by T and by S were undisturbed by looters and the contents were recovered as they were originally buried. The letter "O" is used to indicate an offering, generally of ceramics. Our intention is that the illustrations of Farfán's associated tomb ceramics will become an important resource for archaeologists working on Peru's North Coast.

The order of the illustrations is as follows:

- Huaca Burial Platform (HBP)
Center Tomb 2 (C T2). pages 403–406
- Huaca Burial Platform
Center Tomb 11 (C T11). 407–415

Huaca Burial Platform	
North Tomb 1 (N T1).....	415– 418
Huaca Burial Platform	
East Tomb (E T1, 4, 5, 6, 7, 9).	419–427
Huaca Burial Platform	
Looted Chamber.	428–430
Huaca Burial Platform	
Secondary Burials (S 21, S 31, S 26B).	430–436
Cemetery J (Tombs in J25, J26, J14).	437–444
Cemetery J (Tomb JO S1).....	445–446
Cemetery I (Tombs in I3, I 16, I 5, I 10	
Offering)	447–451
Mound G (Tombs G T 3A, T 11, T 12	
T 4.	451–456
Compound VI Cemetery (Tombs in I, II, and	
III).	457–462

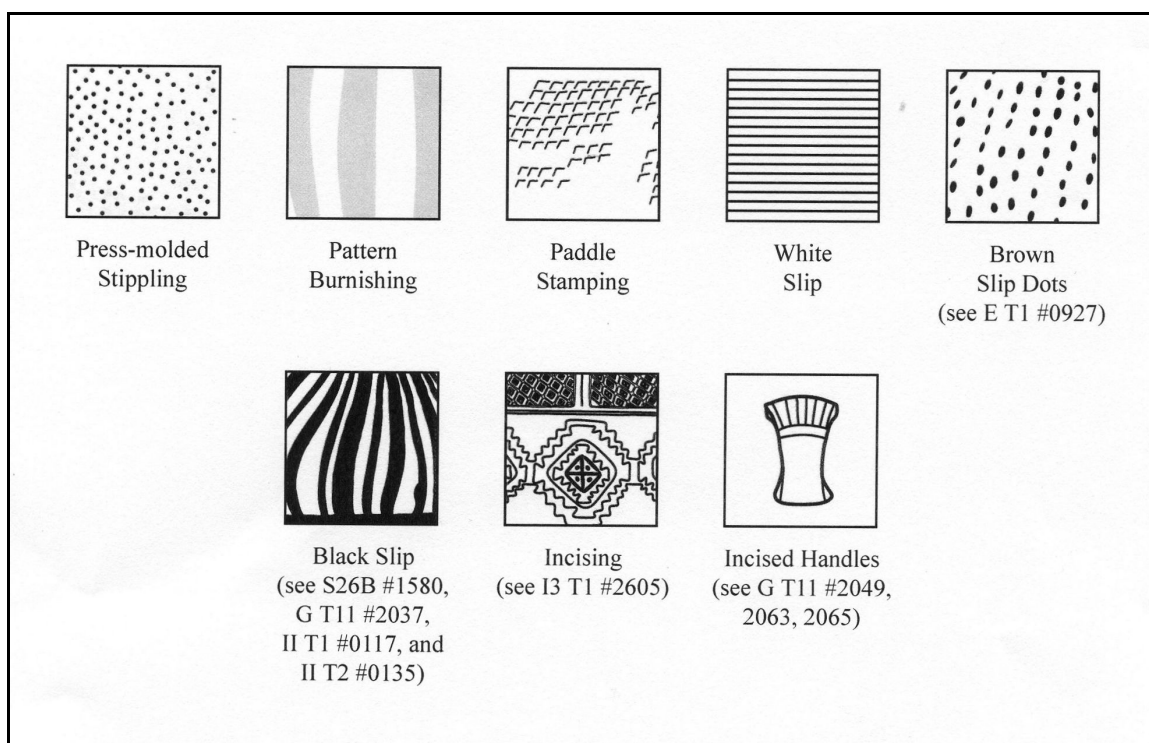


Figure A7.1. Key to decorative techniques. In the ceramic sample the majority of designs are press-molded. Surface treatments and decorative techniques are indicated in this key. Vessels are distinguished by paste color and accession number: R = redware vessel; B = blackware vessel.

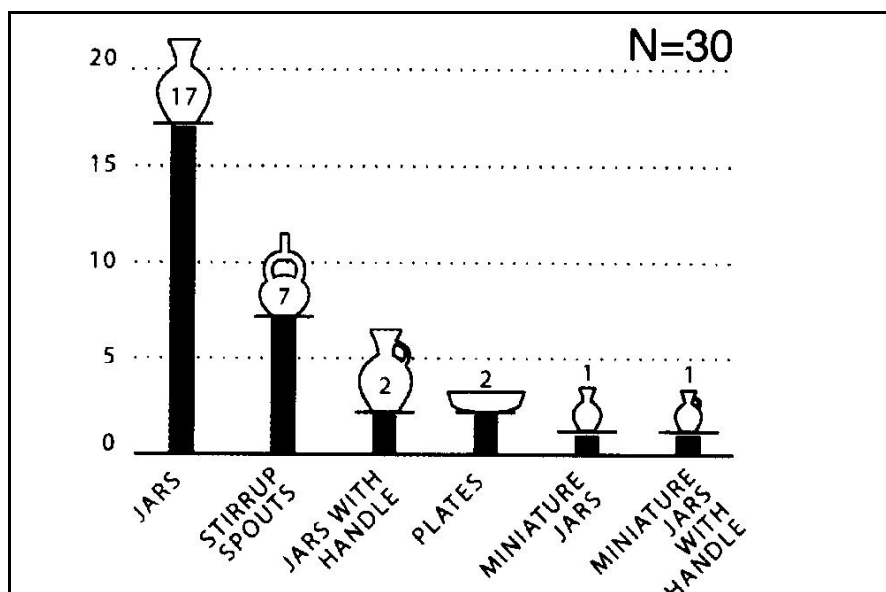


Figure A7.2. Huaca Burial Platform, Center Tomb 2: count of ceramic forms in descending order.

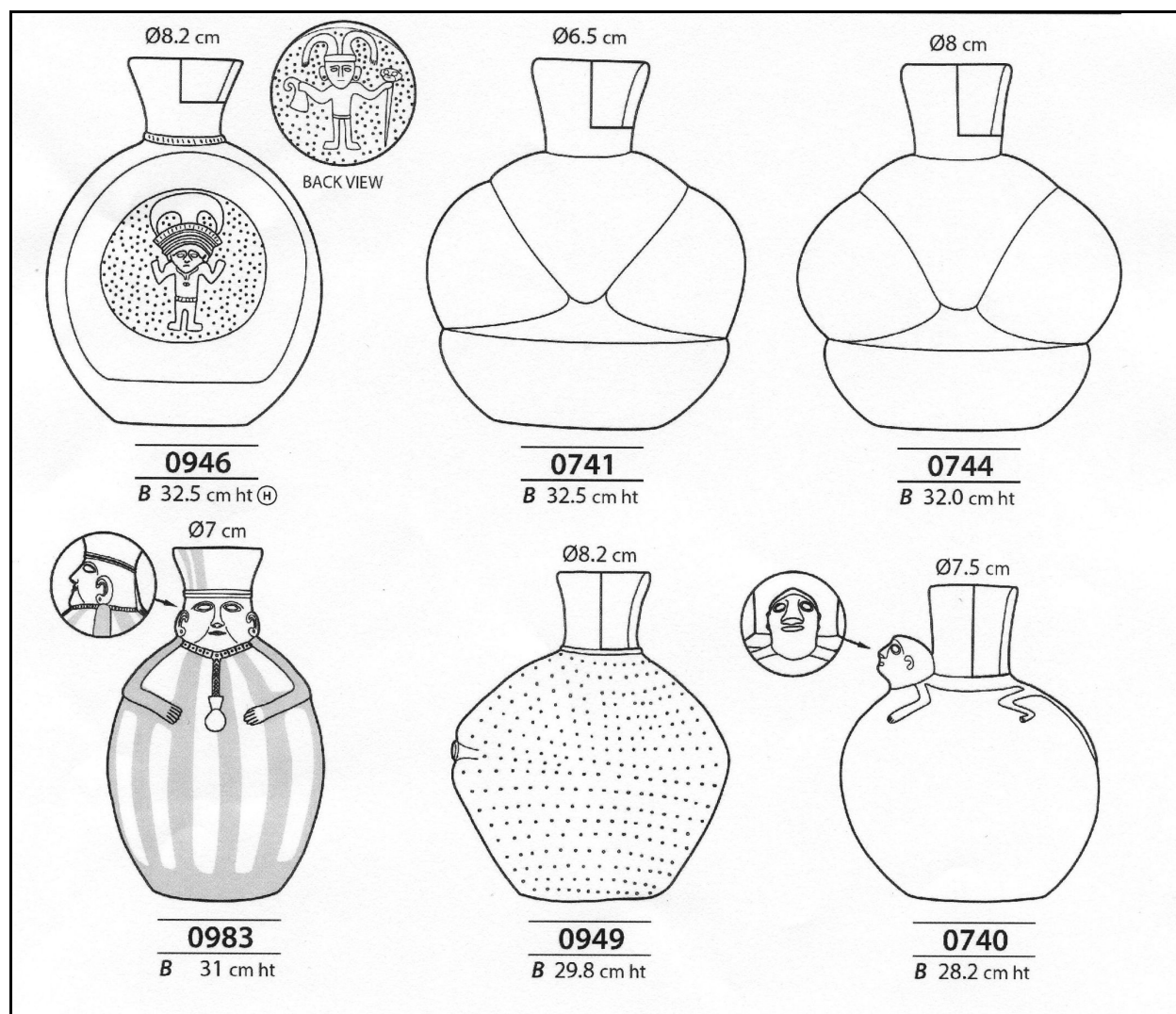


Figure A7.3. Huaca Burial Platform, Center Tomb 2, ceramics.

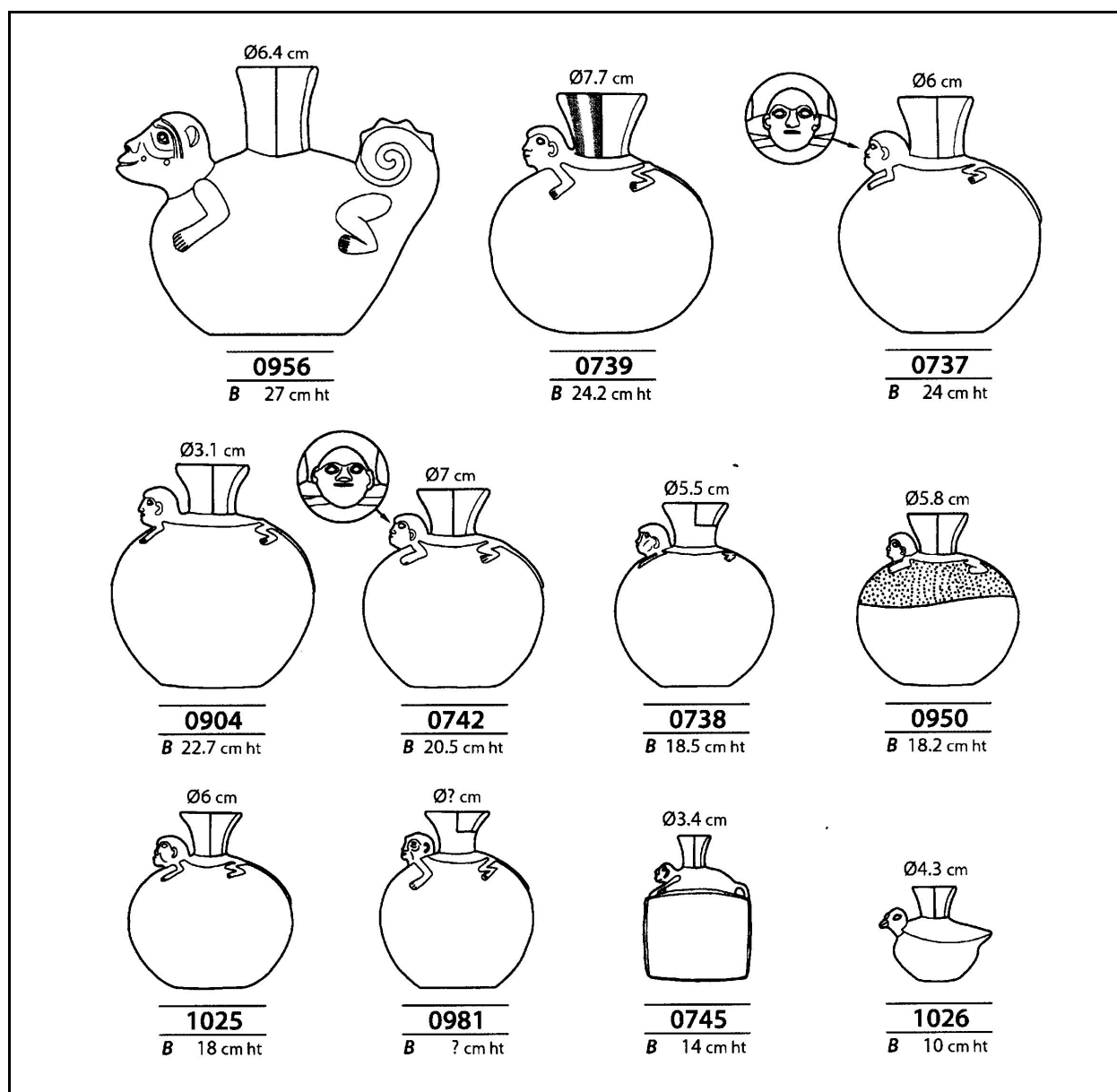


Figure A7.3. Huaca Burial Platform, Center Tomb 2, ceramics (cont.).

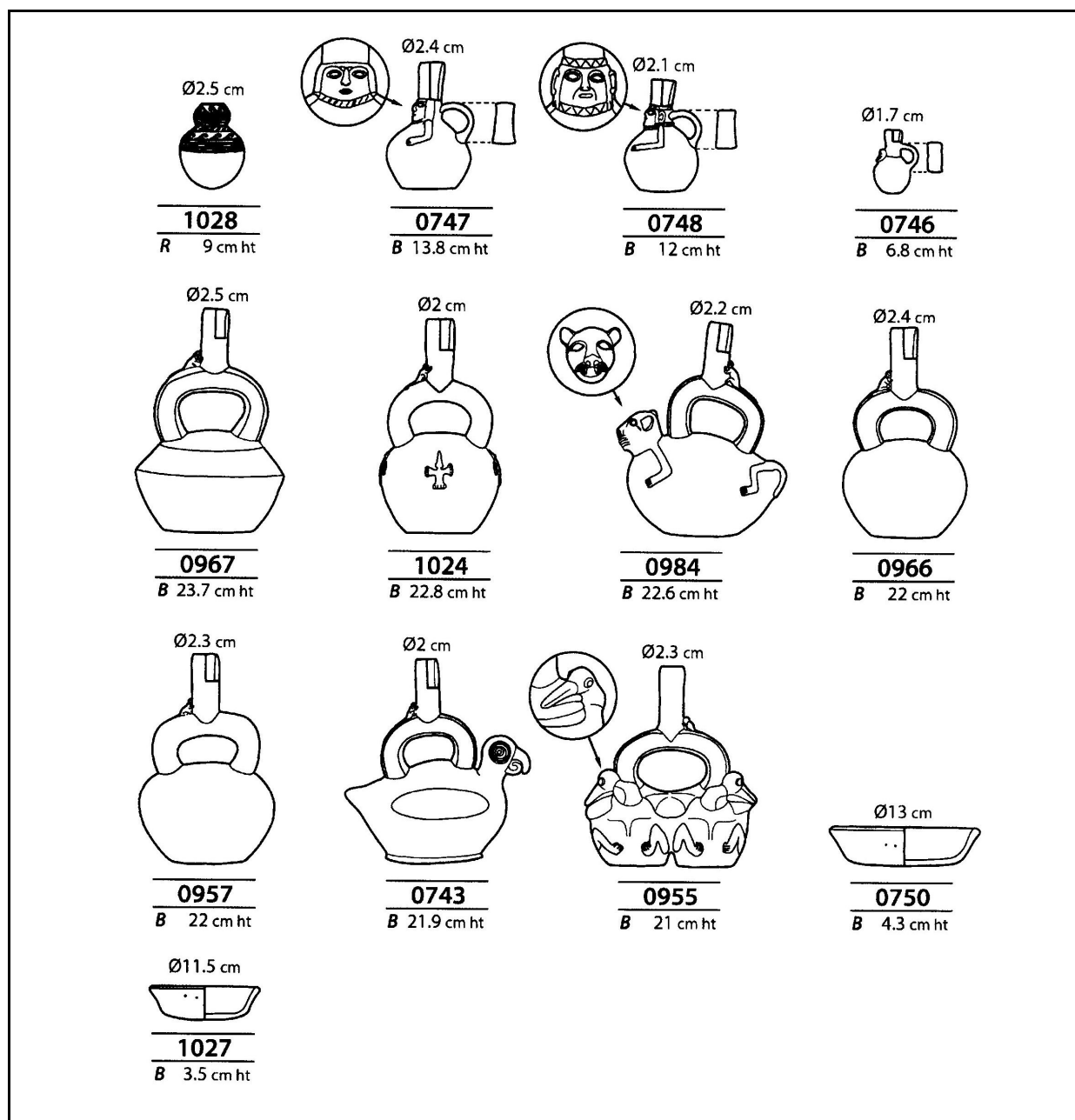


Figure A7.3. Huaca Burial Platform, Center Tomb 2, ceramics (cont.).

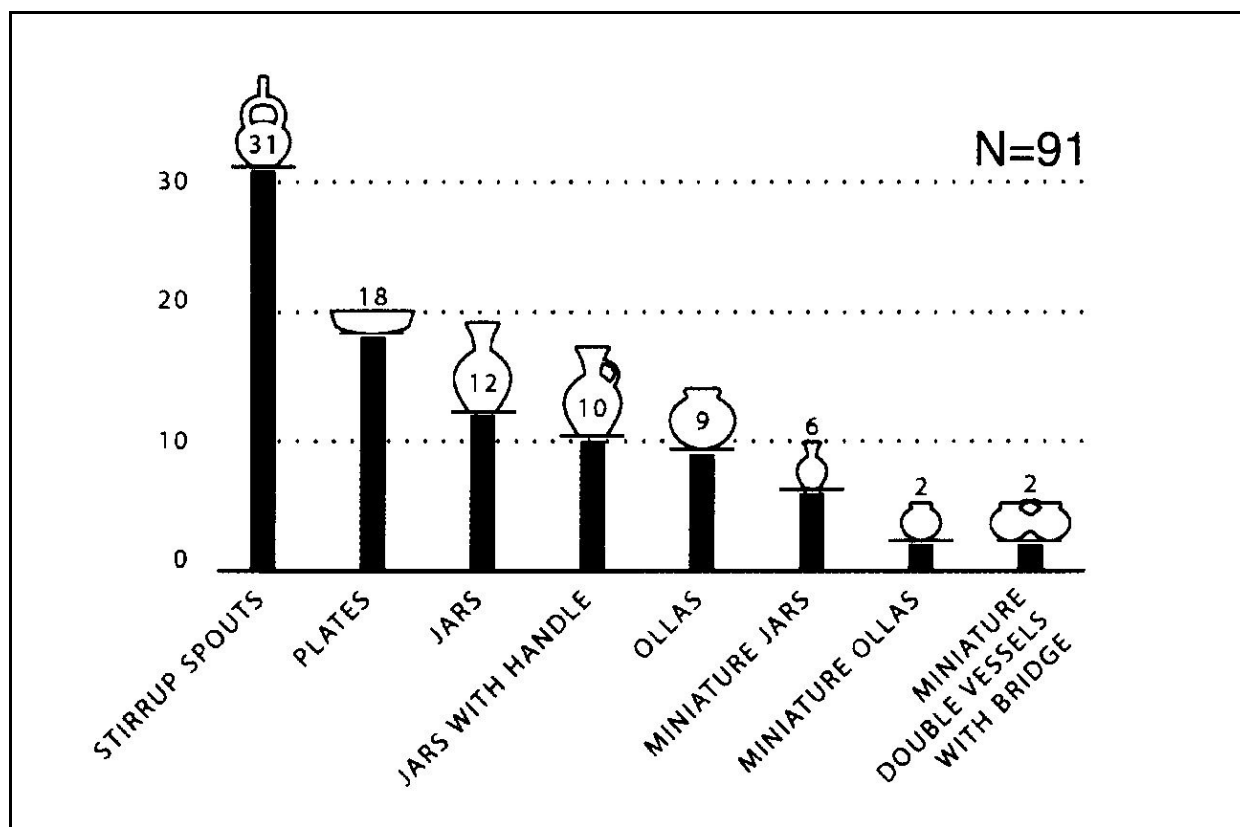


Figure A7.4. Huaca Burial Platform, Center Tomb 11 count of ceramic forms in descending order.

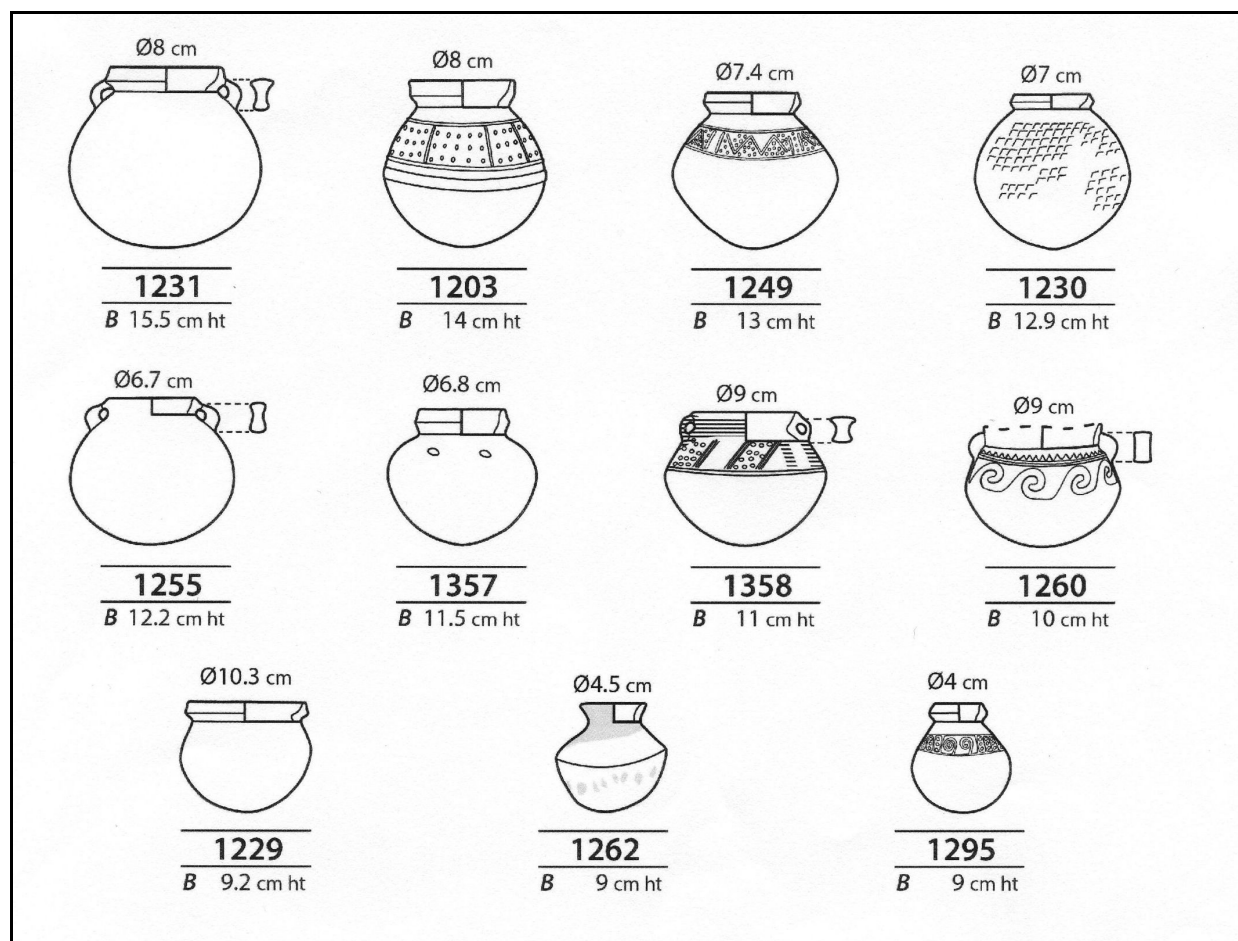


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics.

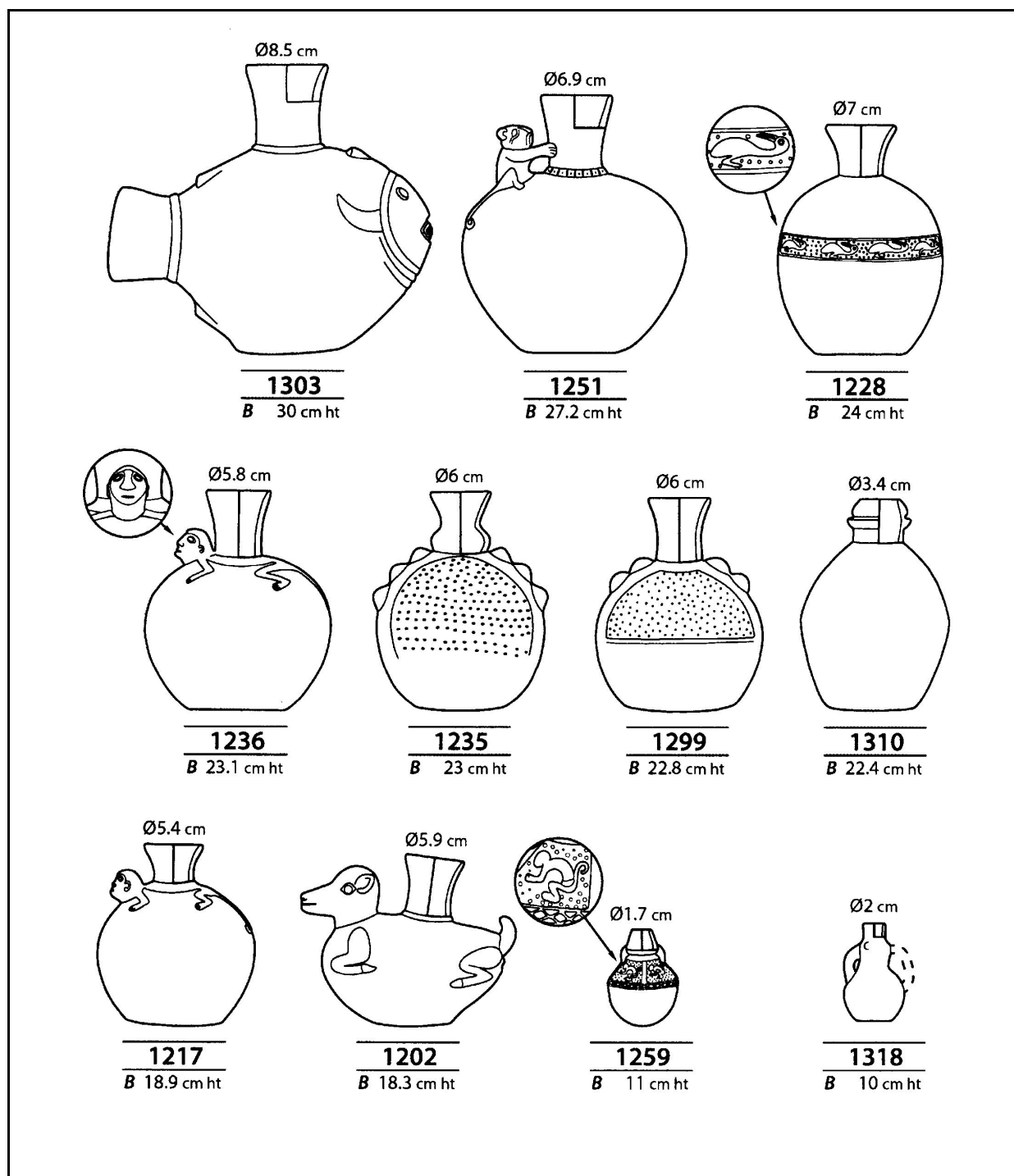


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

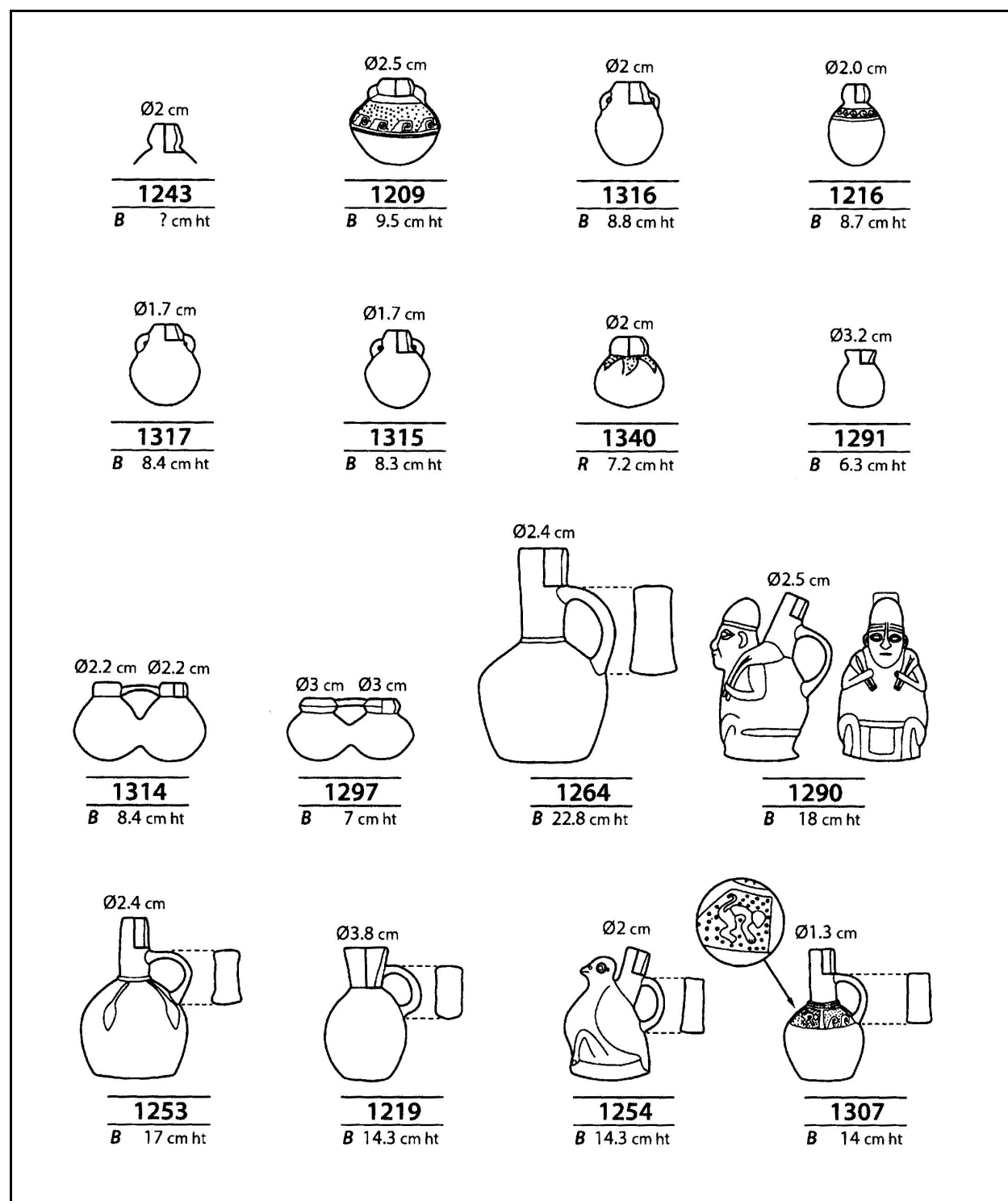


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

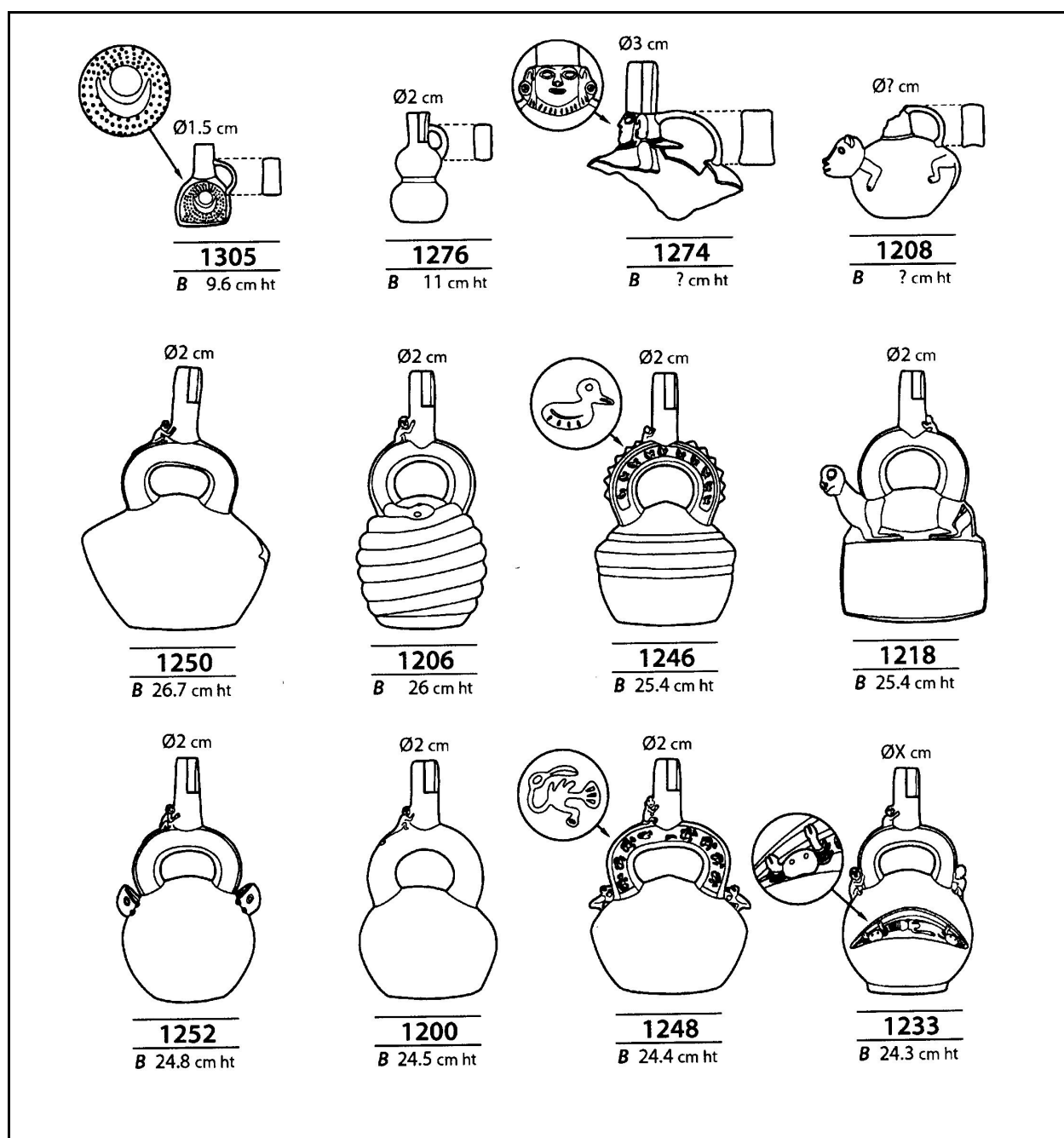


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

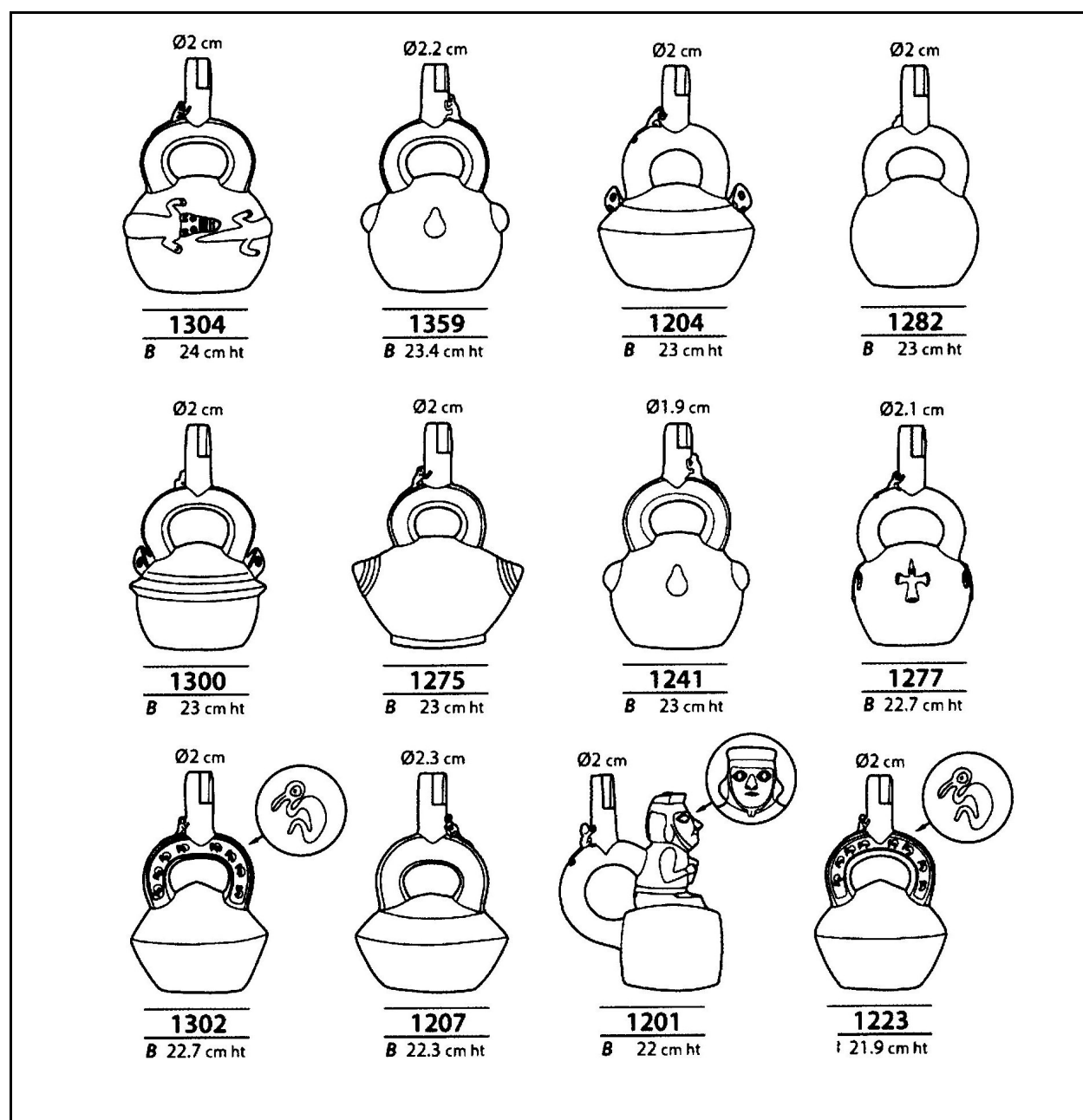


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

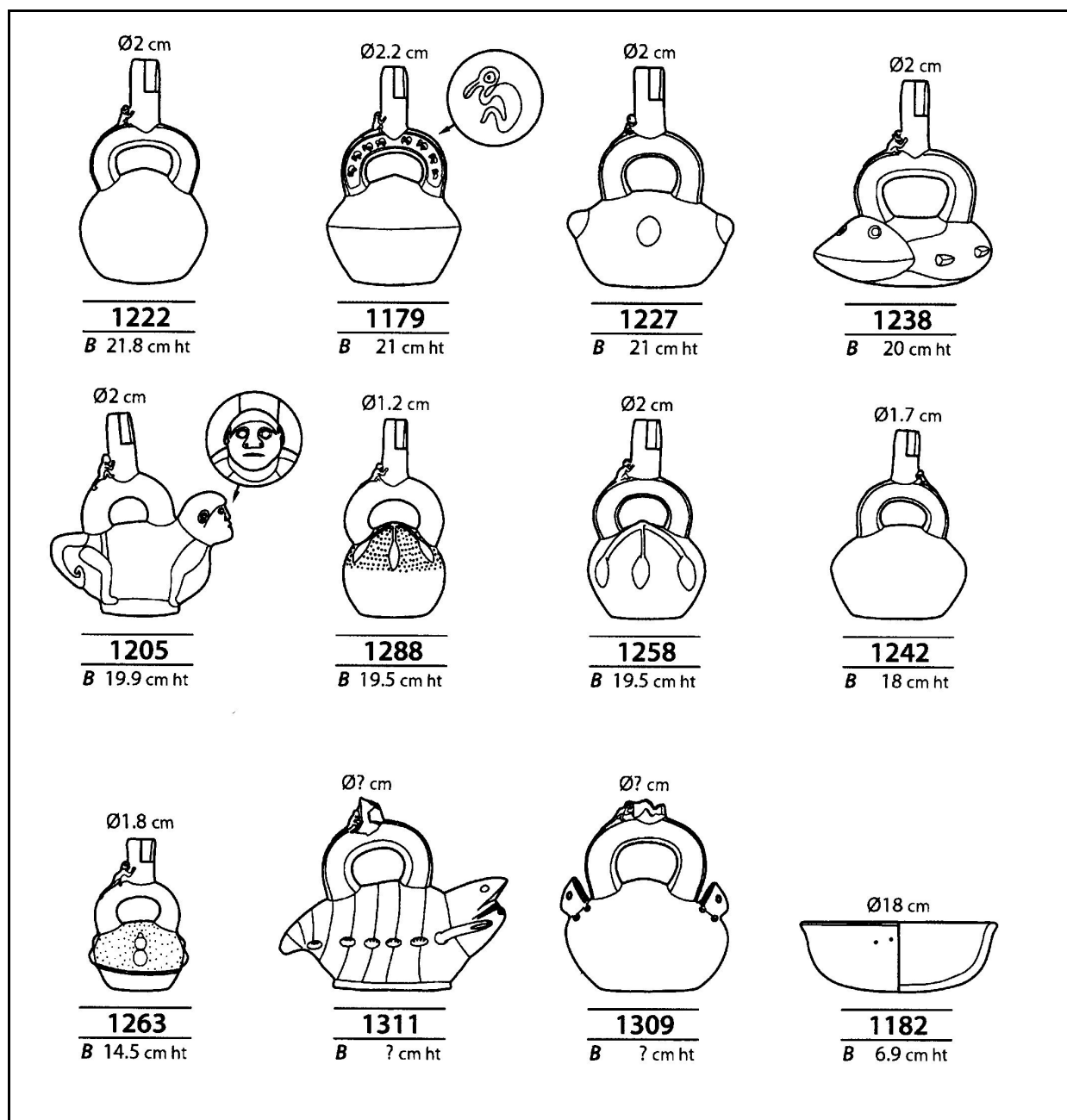


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

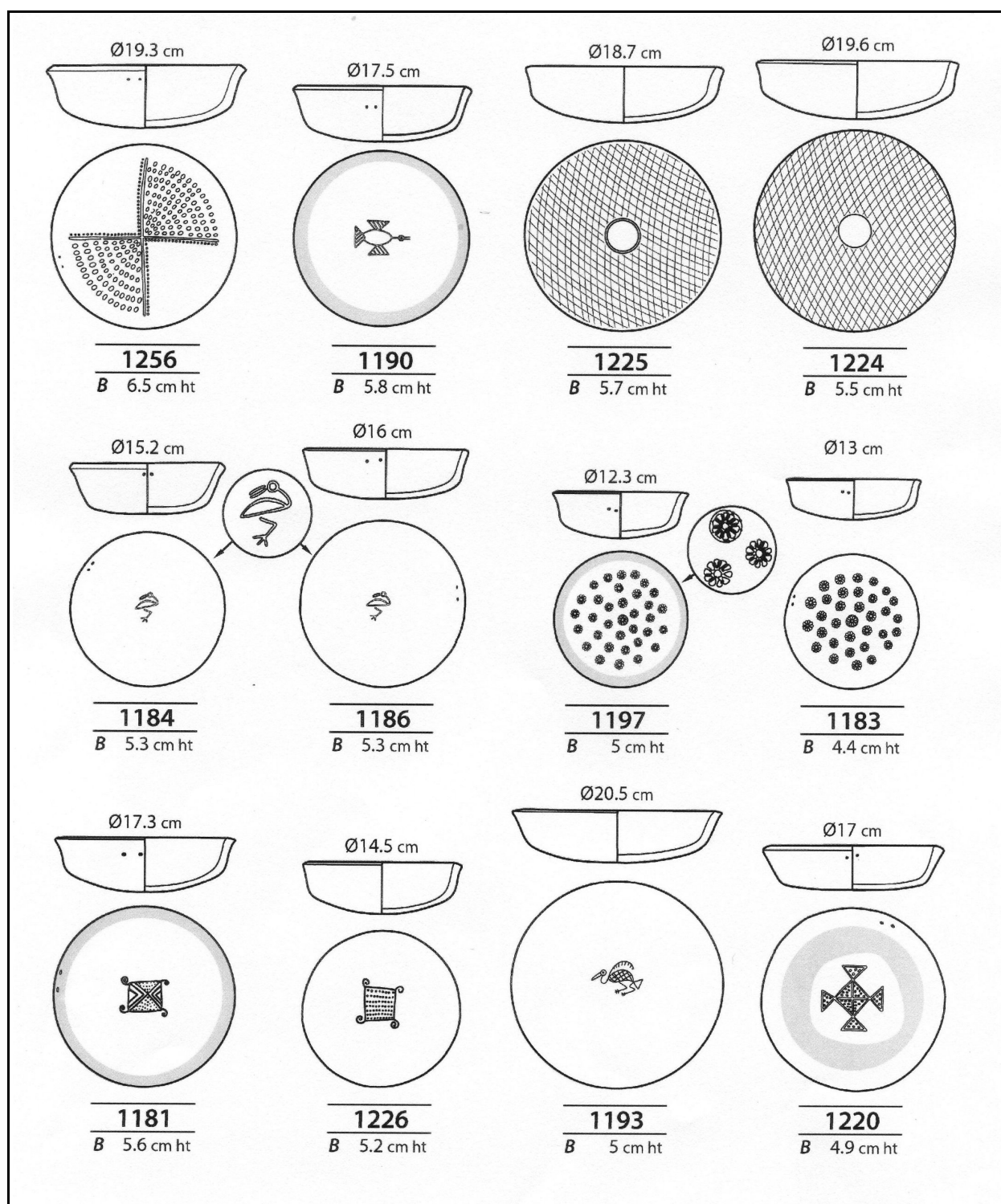


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

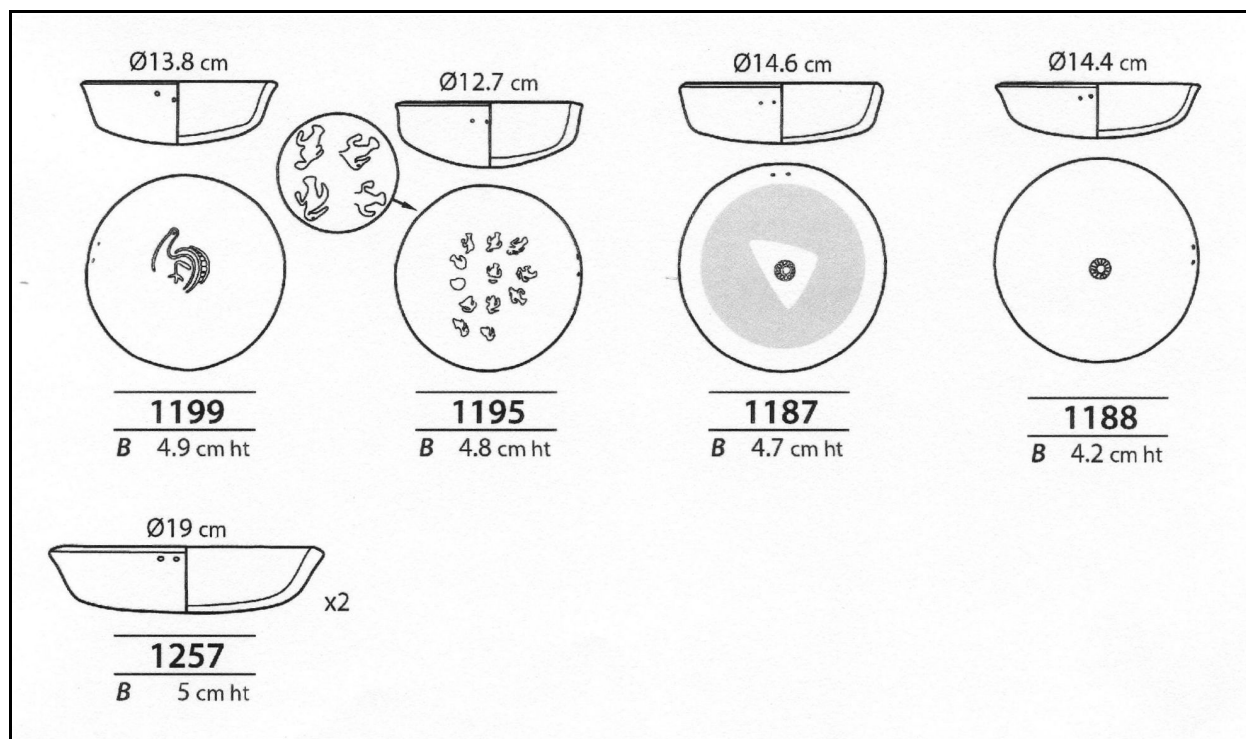


Figure A7.5. Huaca Burial Platform, Center Tomb 11, ceramics (cont.).

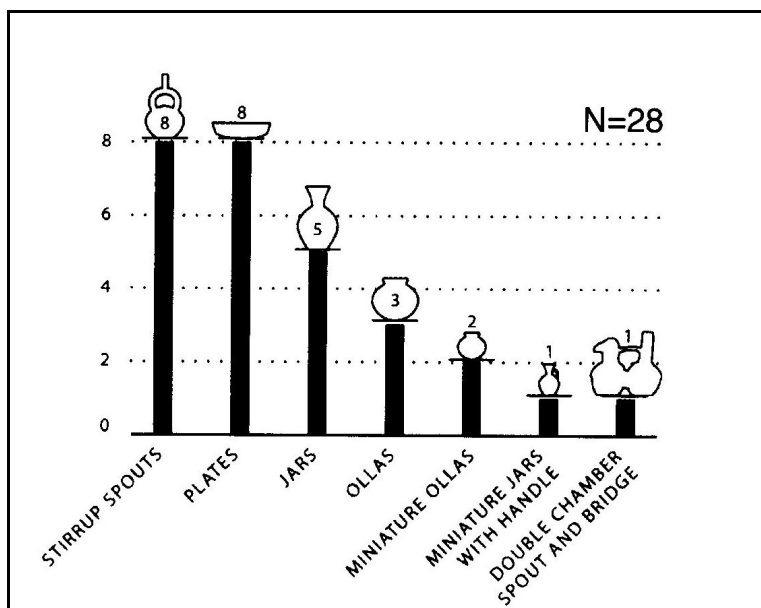


Figure A7.6. Huaca Burial Platform, North Tomb 1: count of ceramic forms in descending order.

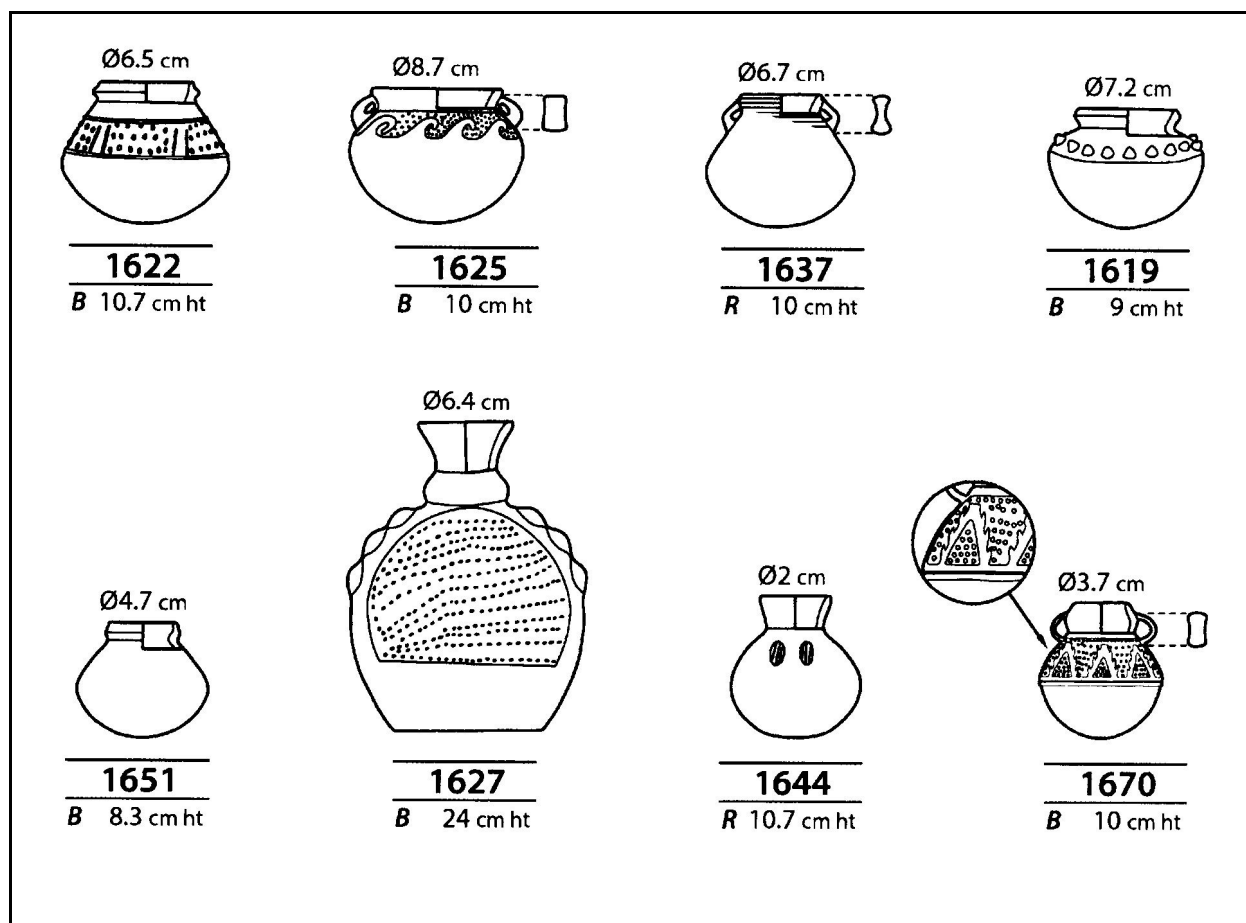


Figure A7.7. Huaca Burial Platform, North Tomb 1, ceramics.

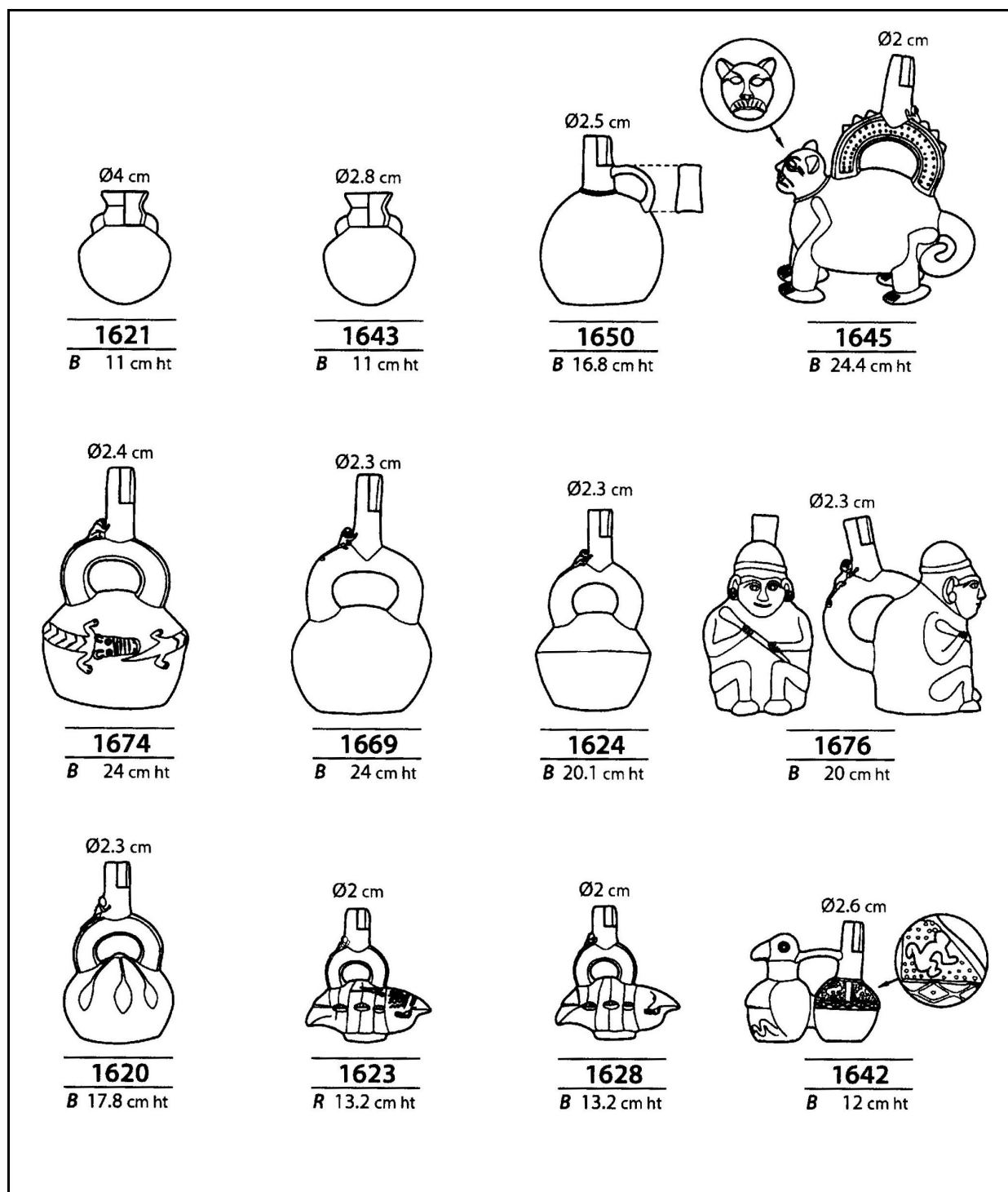


Figure A7.7. Huaca Burial Platform, North Tomb 1, ceramics (cont.).

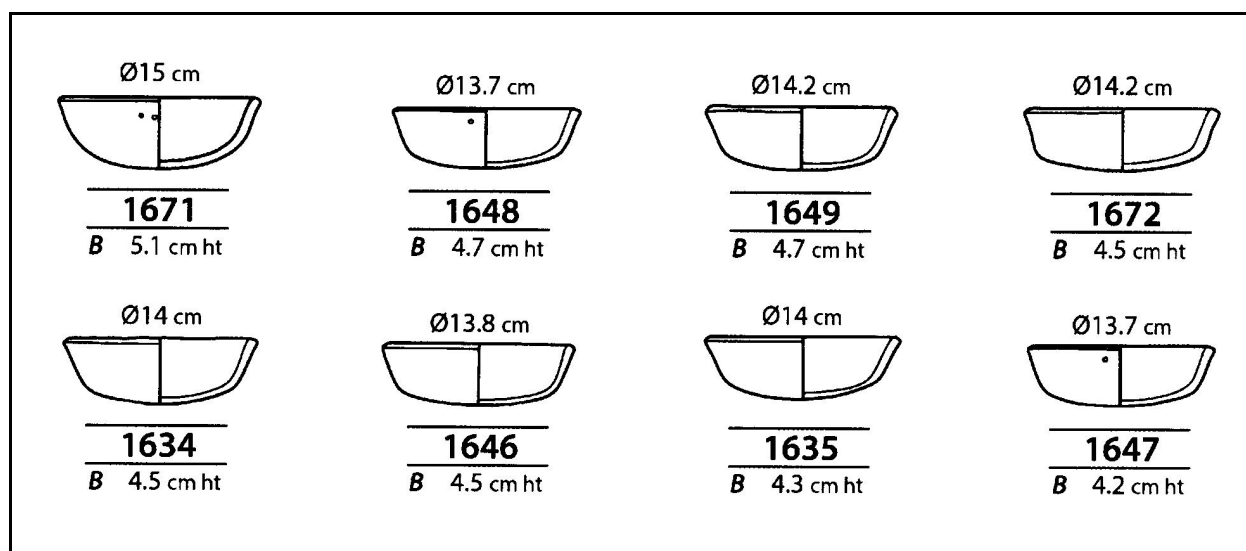


Figure A7.7. Huaca Burial Platform, North Tomb 1, ceramics (cont.).

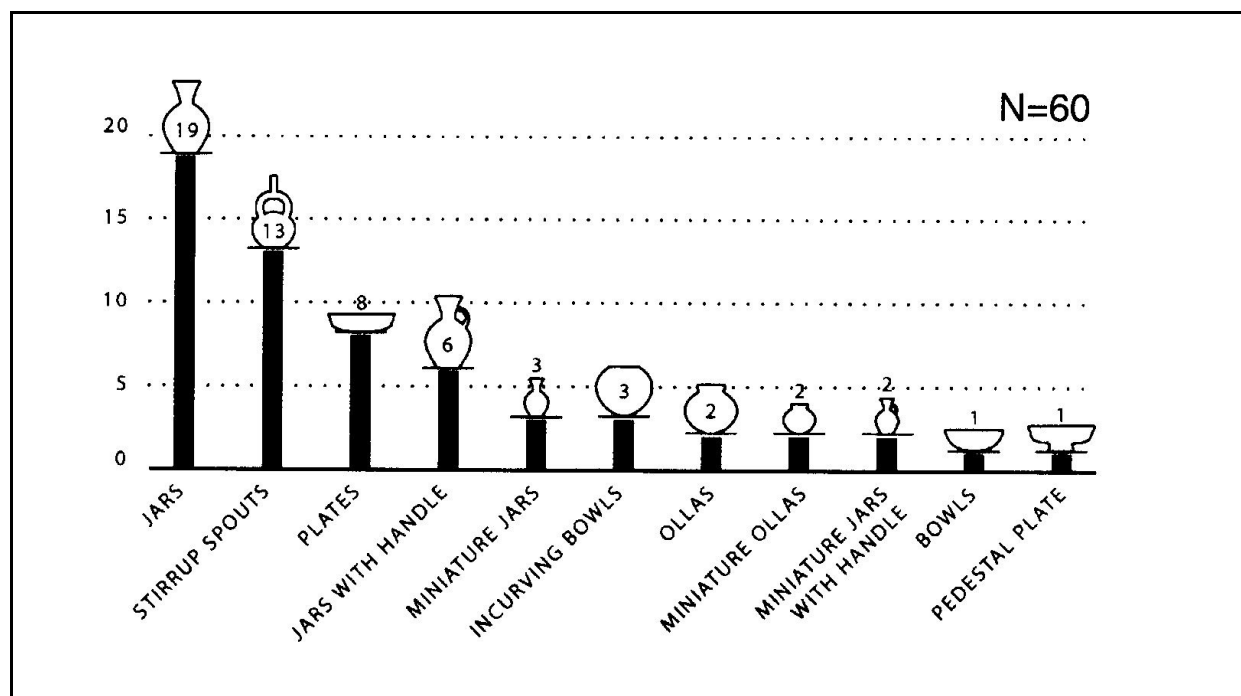


Figure A7.8. Huaca Burial Platform, East Tomb: total count of ceramic forms in Offering and tombs in descending order.

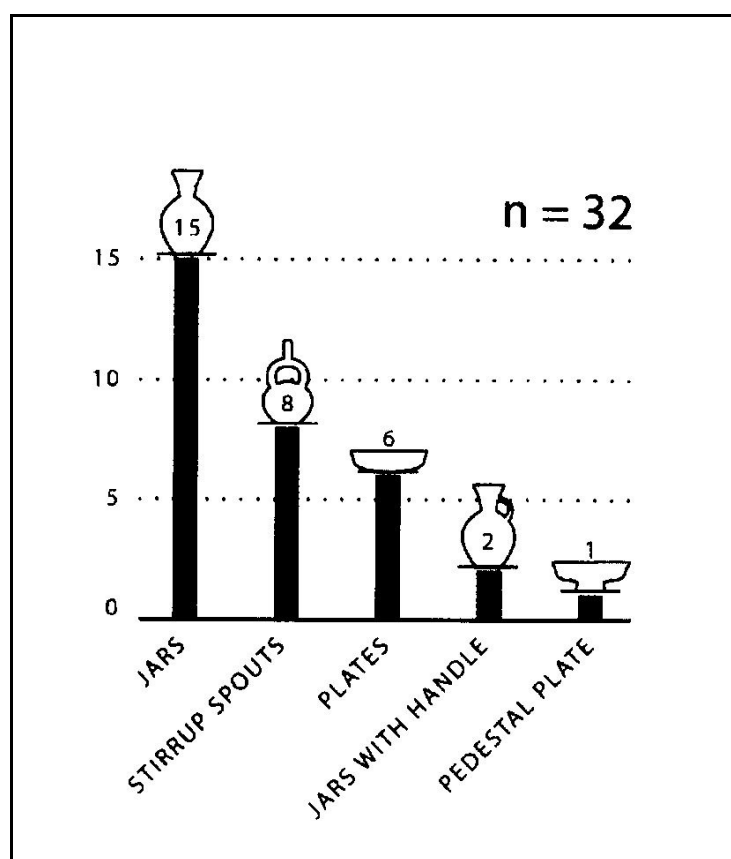


Figure A7.9. Huaca Burial Platform, East Tomb: total count of ceramic forms in East Tomb Offering in descending order.

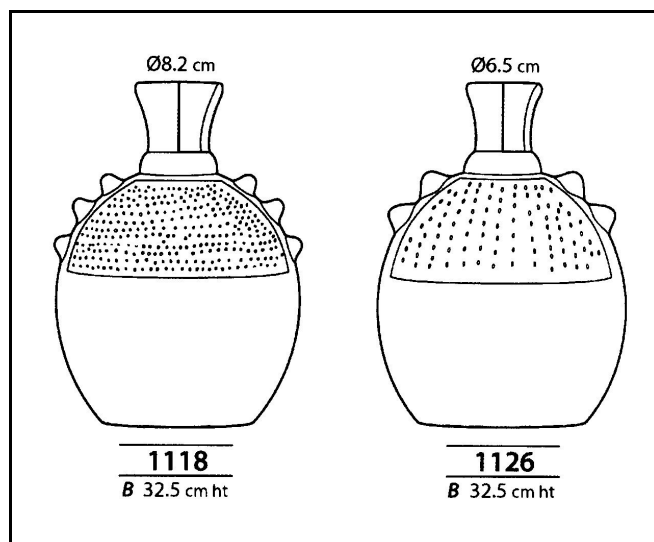


Figure A7.10. Huaca Burial Platform, East Tomb Offering, ceramics.

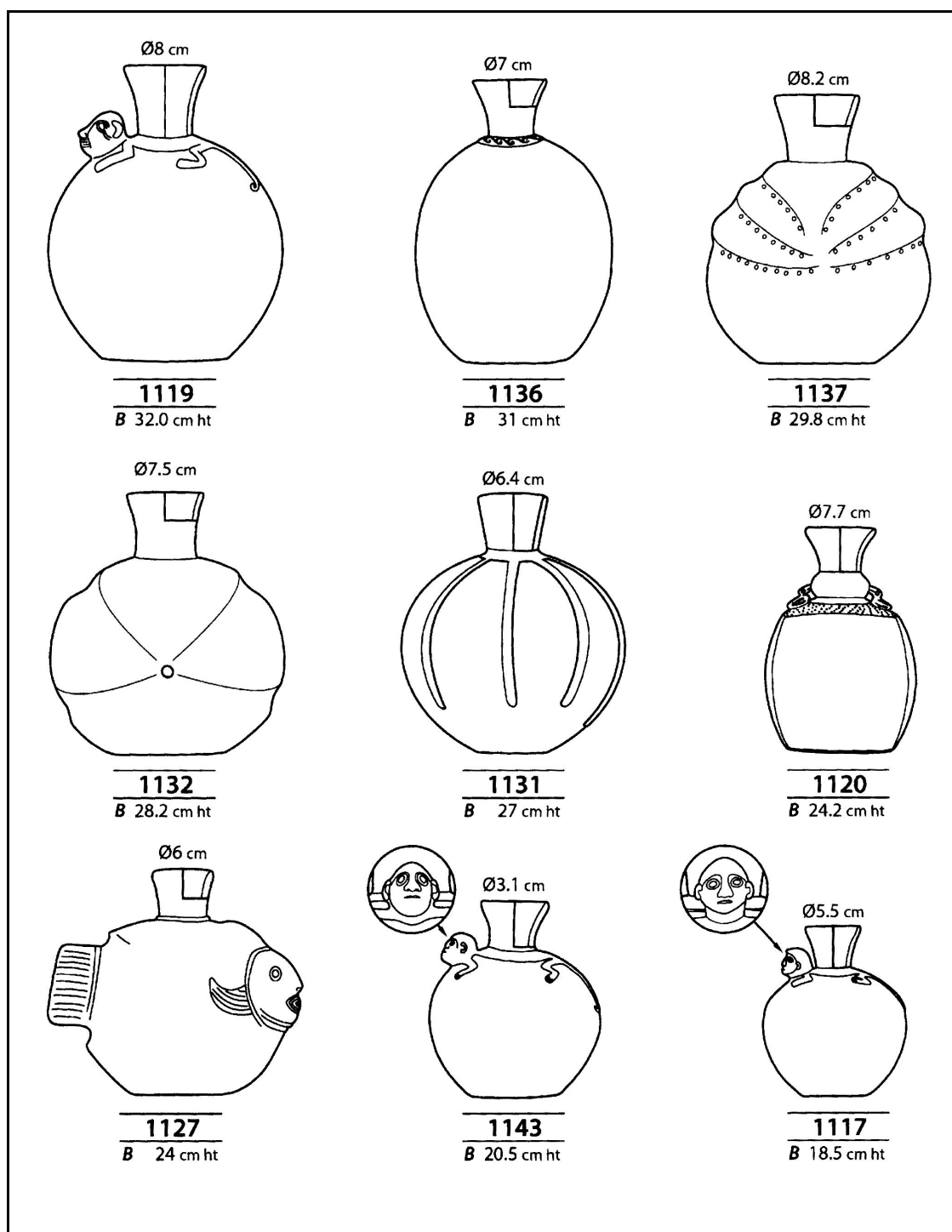


Figure A7.10. Huaca Burial Platform, East Tomb Offering, ceramics (cont.).

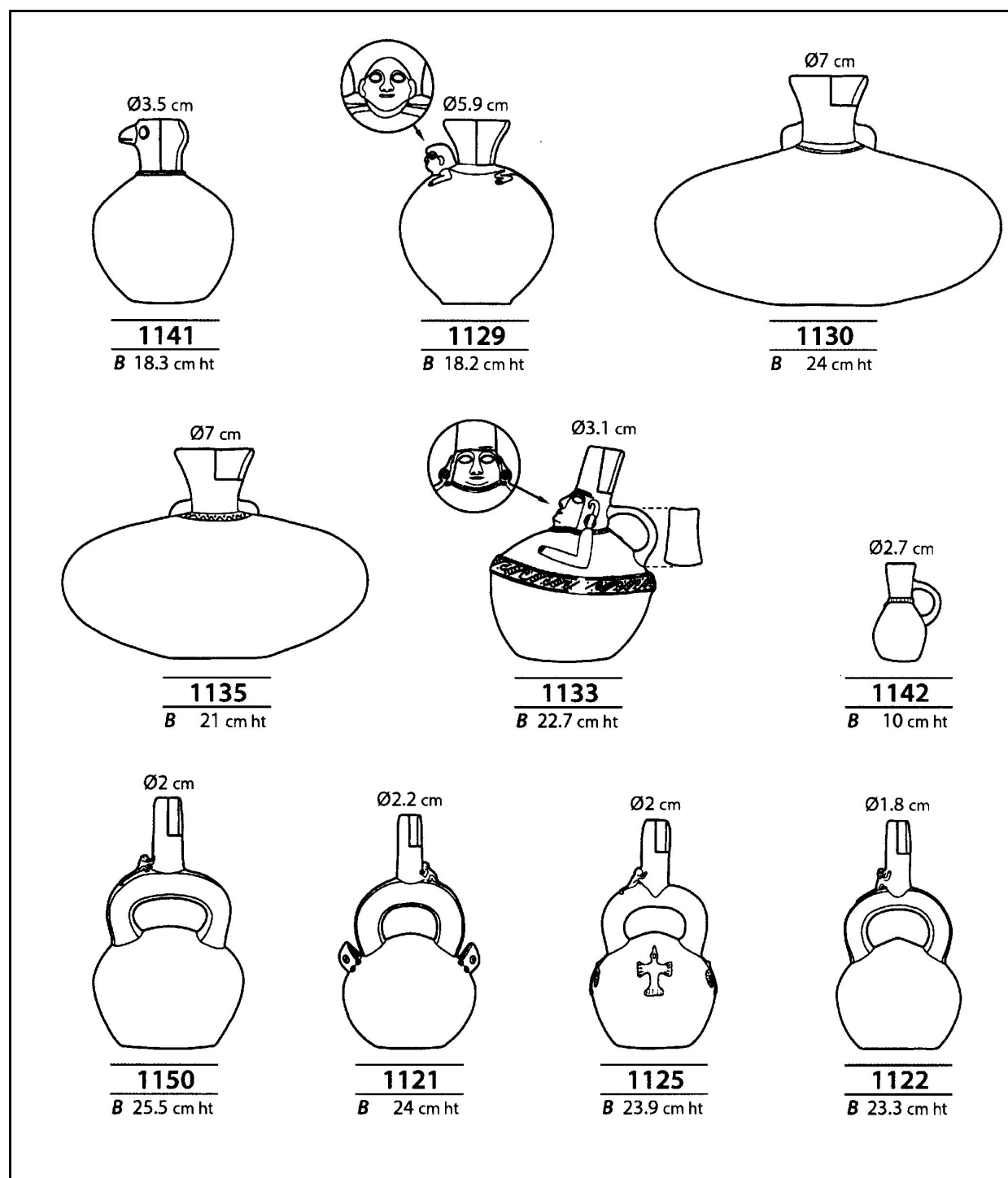


Figure A7.10. Huaca Burial Platform, East Tomb Offering, ceramics (cont.).

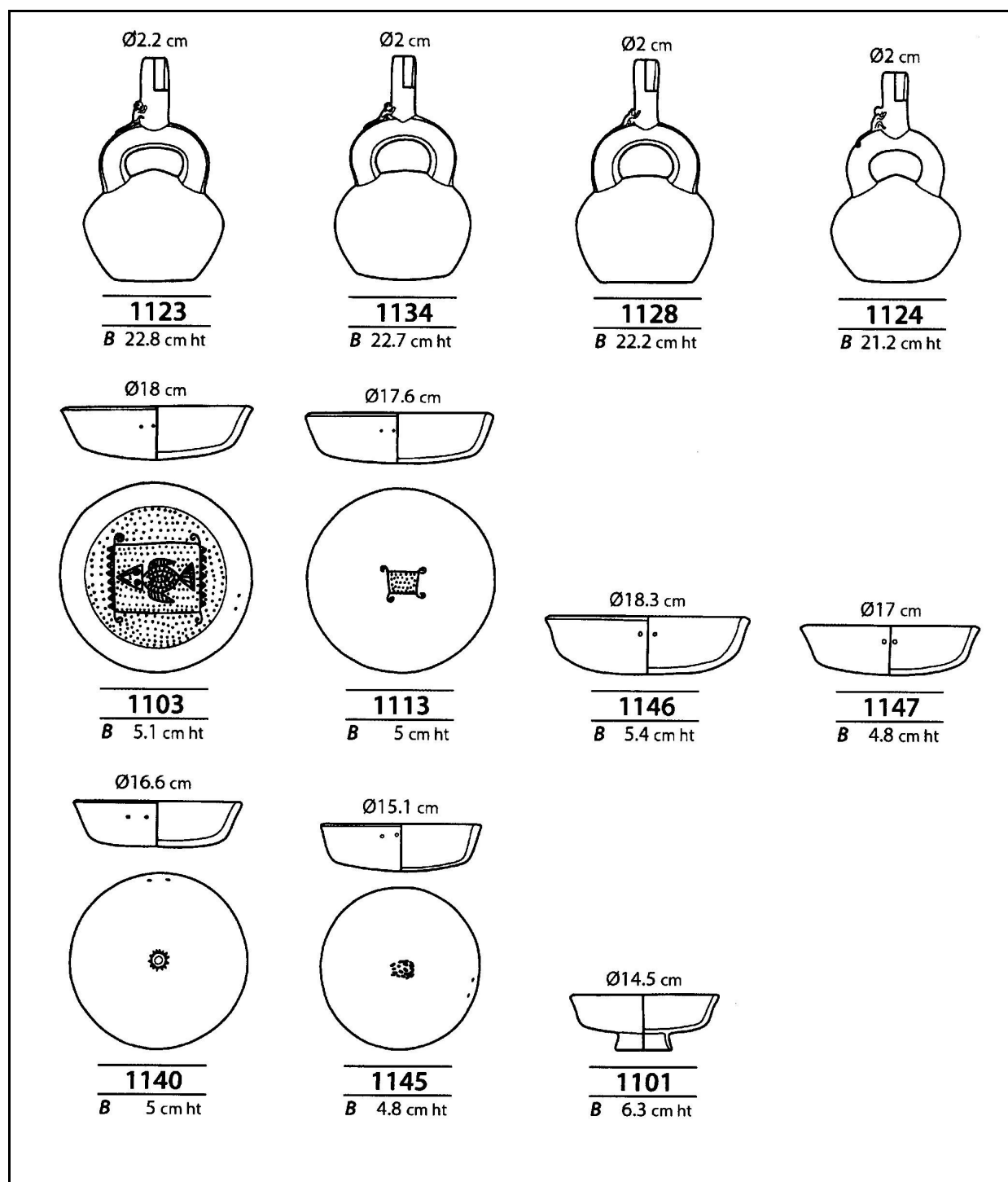


Figure A7.10. Huaca Burial Platform, East Tomb Offering, ceramics (cont.).

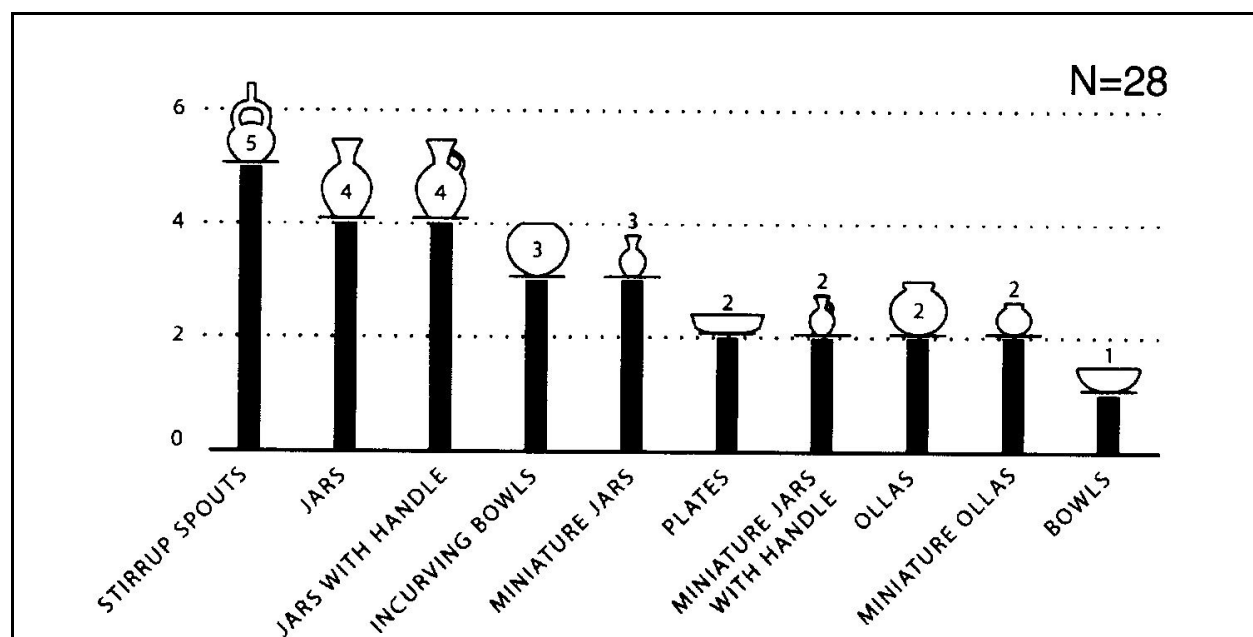


Figure A7.11 Huaca Burial Platform, East Tombs 1, 4, 5, 6, 7 and 9:
count of ceramic forms in descending order.

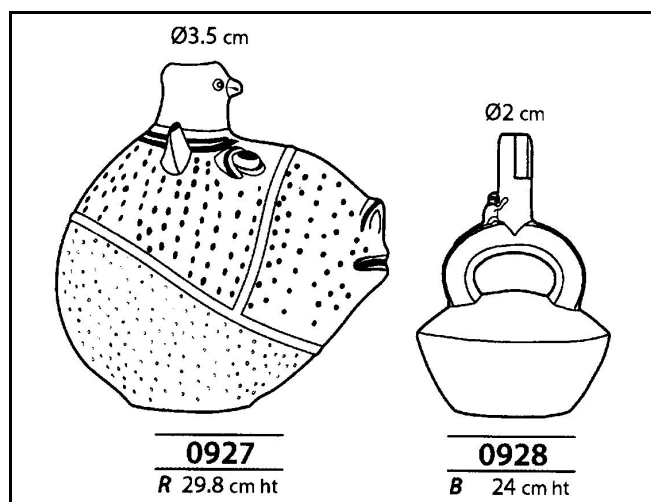


Figure A7.12. Huaca Burial Platform, East Tomb 1, ceramics.

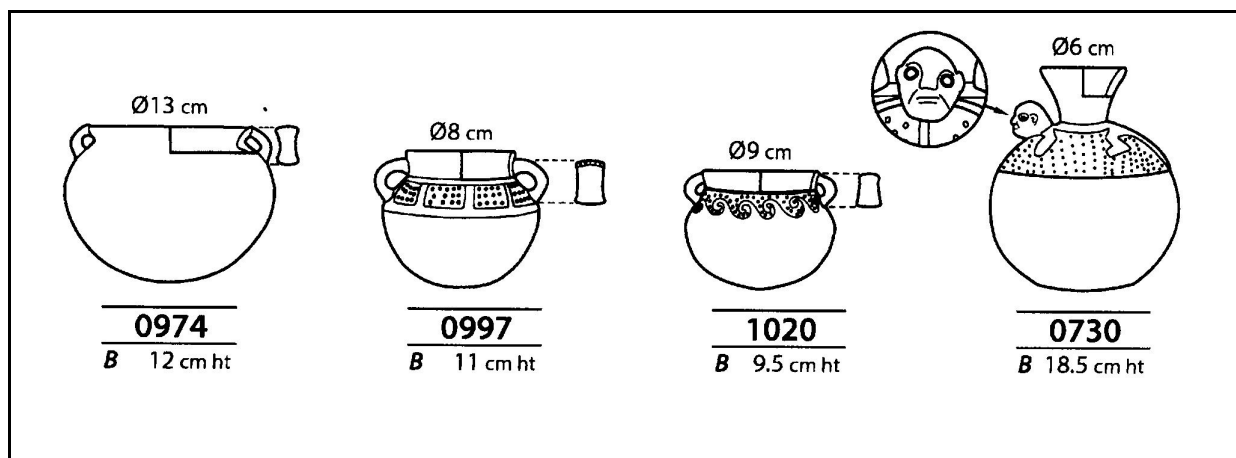


Figure A7.13. Huaca Burial Platform, East Tomb 4, ceramics.

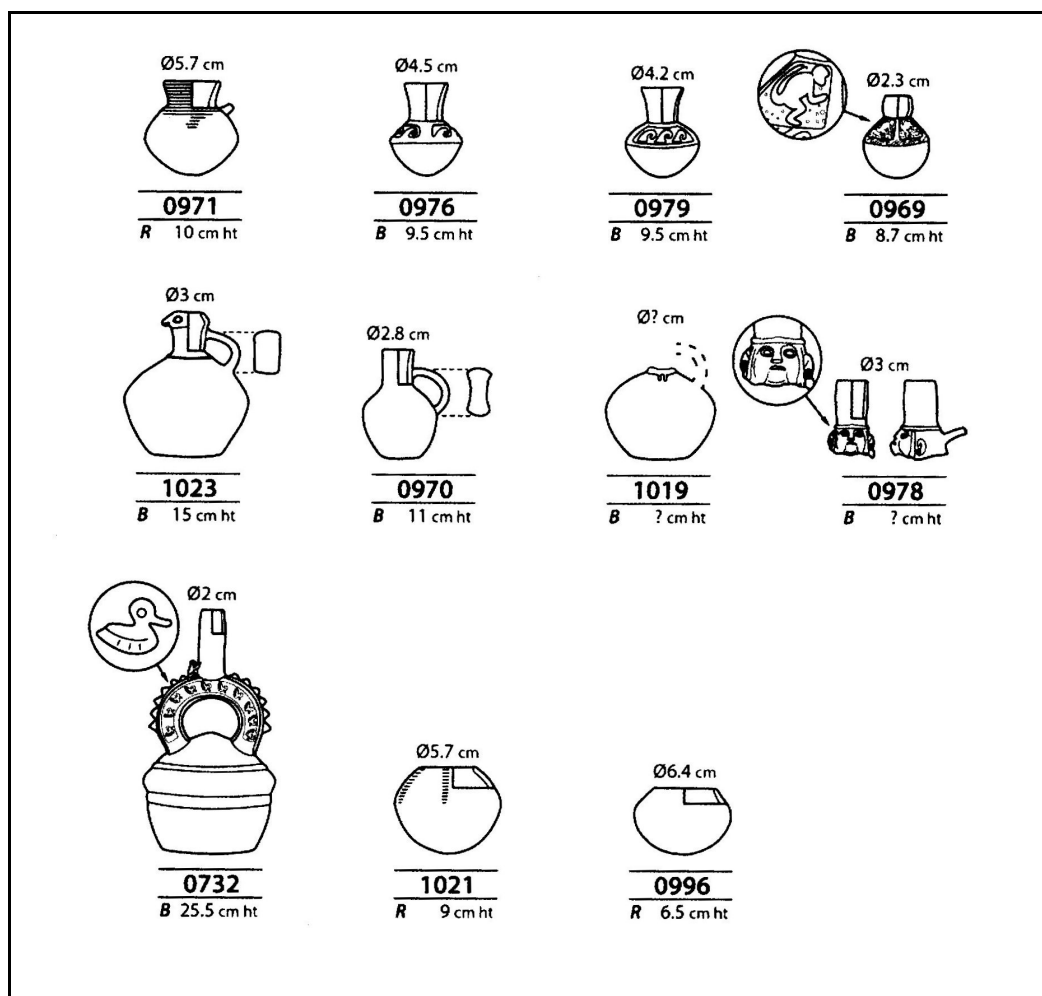


Figure A7.13. Huaca Burial Platform, East Tomb 4, ceramics (cont.).

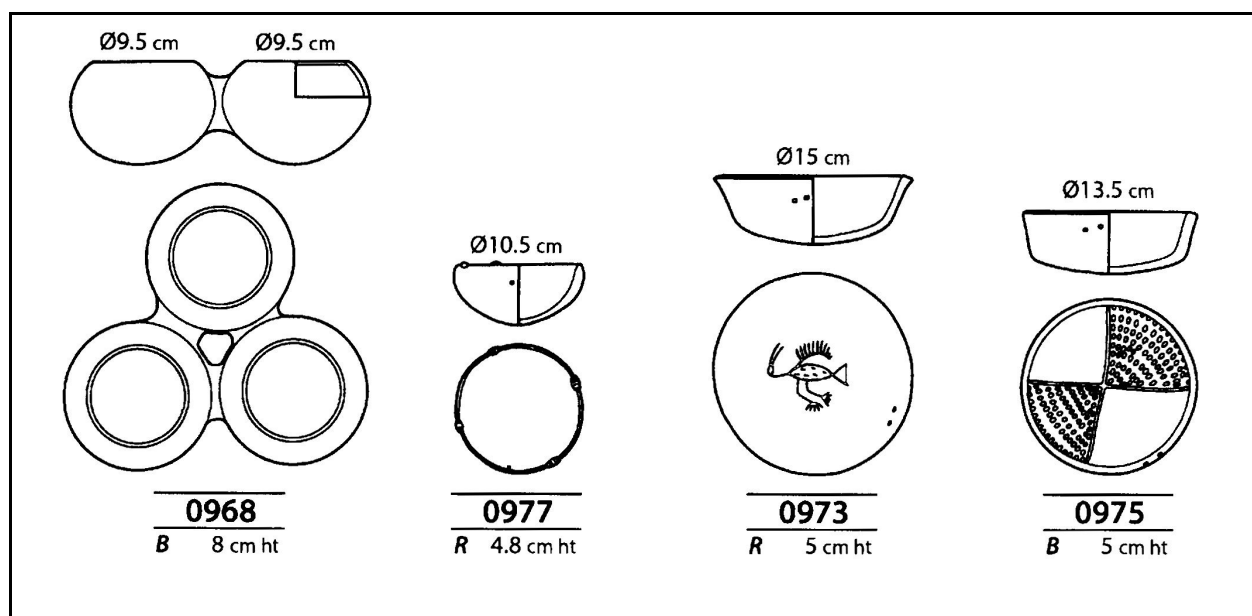


Figure A7.13. Huaca Burial Platform, East Tomb 4, ceramics (cont.).

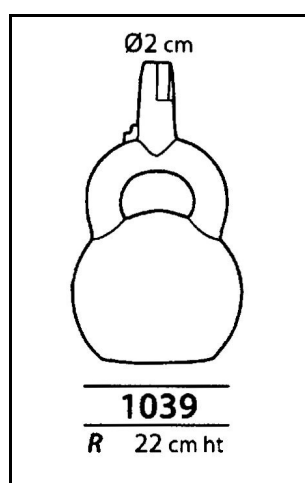


Figure A7.14. Huaca Burial Platform, East Tomb 5, ceramic.

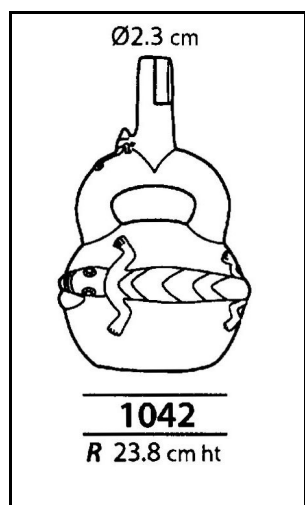


Figure A7.15. Huaca Burial Platform, East Tomb 6, ceramic.

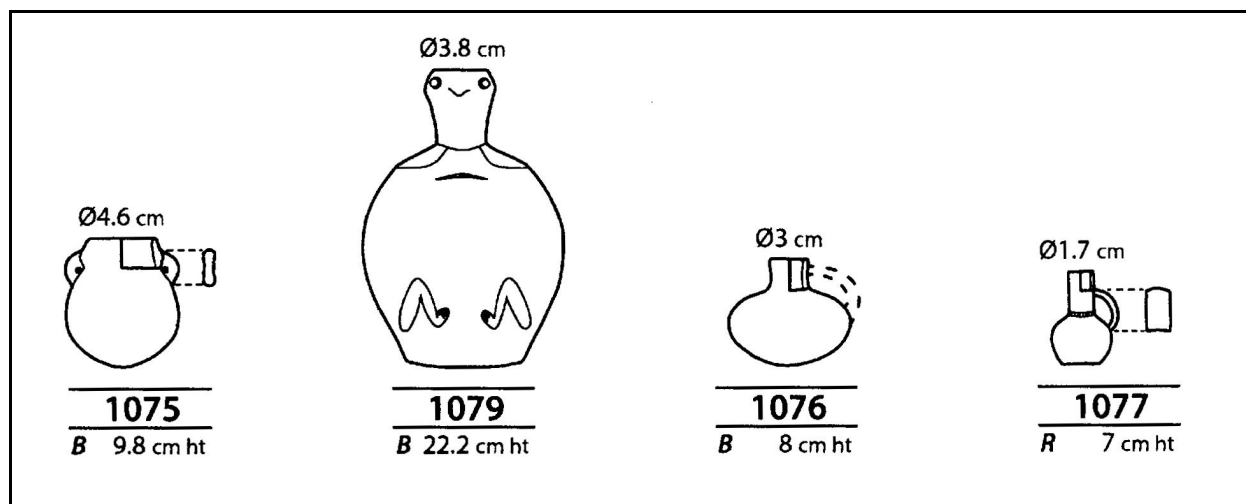


Figure A7.16. Huaca Burial Platform, East Tomb 7, ceramics.

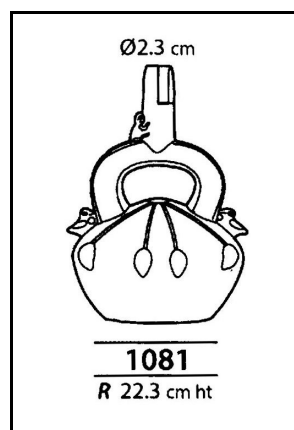


Figure A7.17. Huaca Burial Platform, East Tomb 9, ceramic.

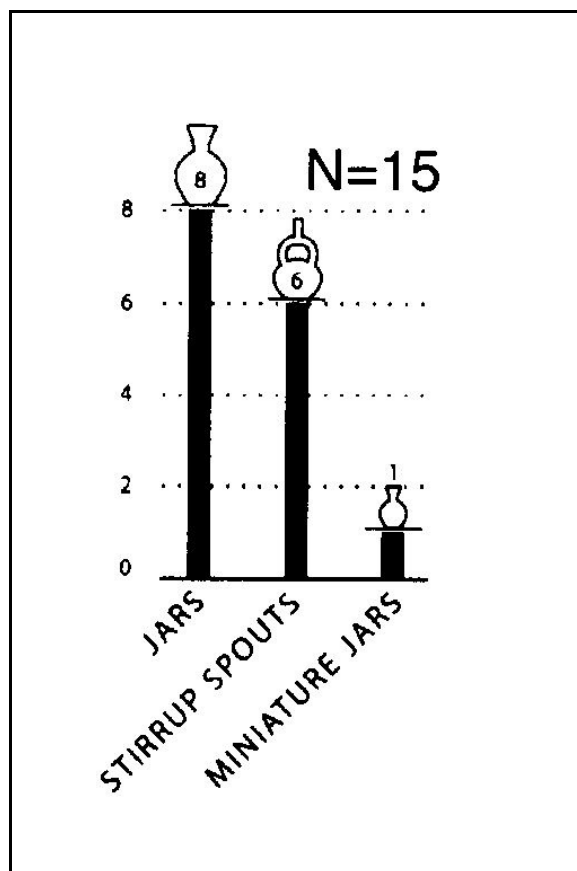


Figure A7.18 Huaca Burial Platform, Looted Chamber 1: count of ceramic forms in descending order.

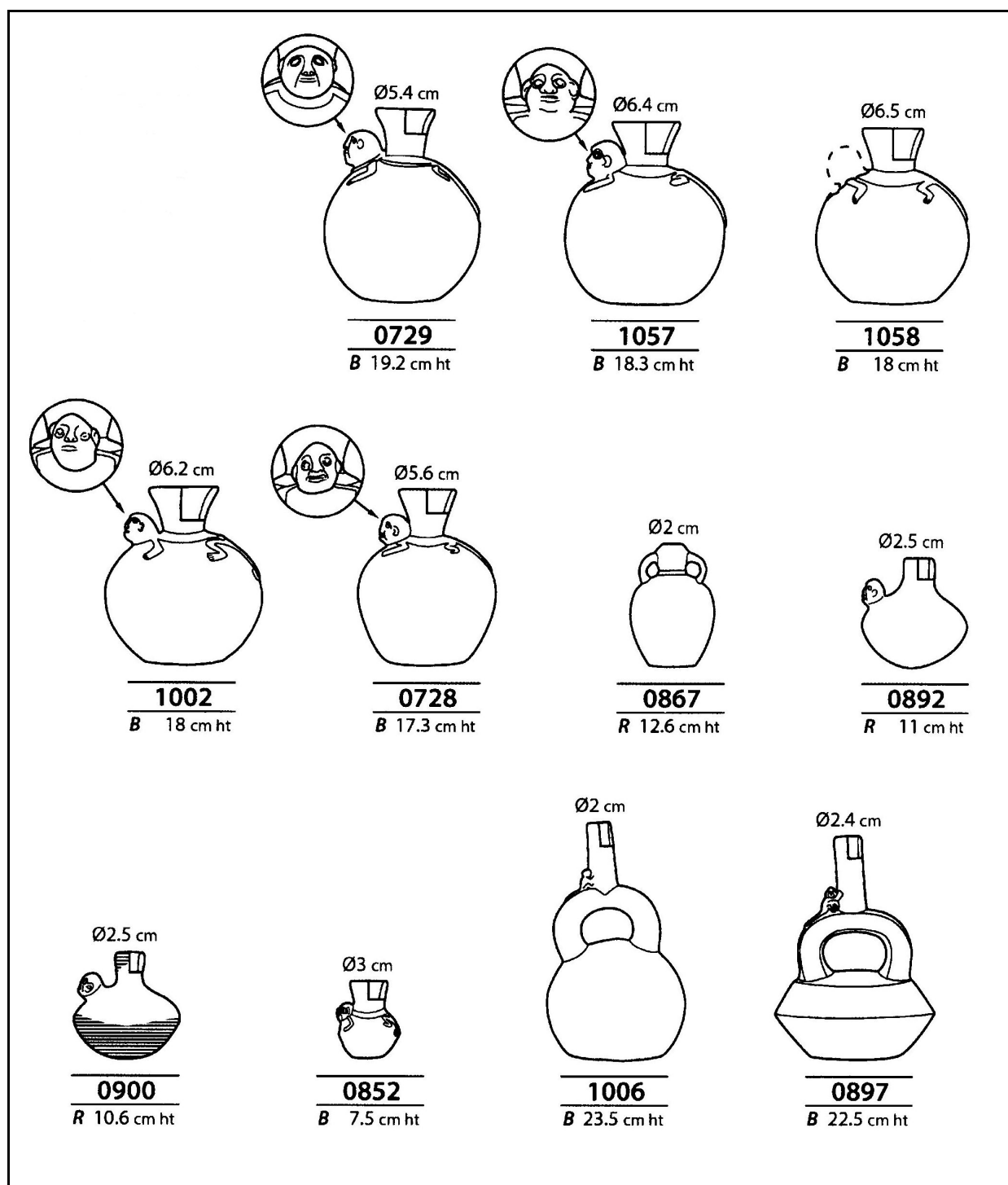


Figure A7.19. Huaca Burial Platform, Looted Chamber 1, ceramics.

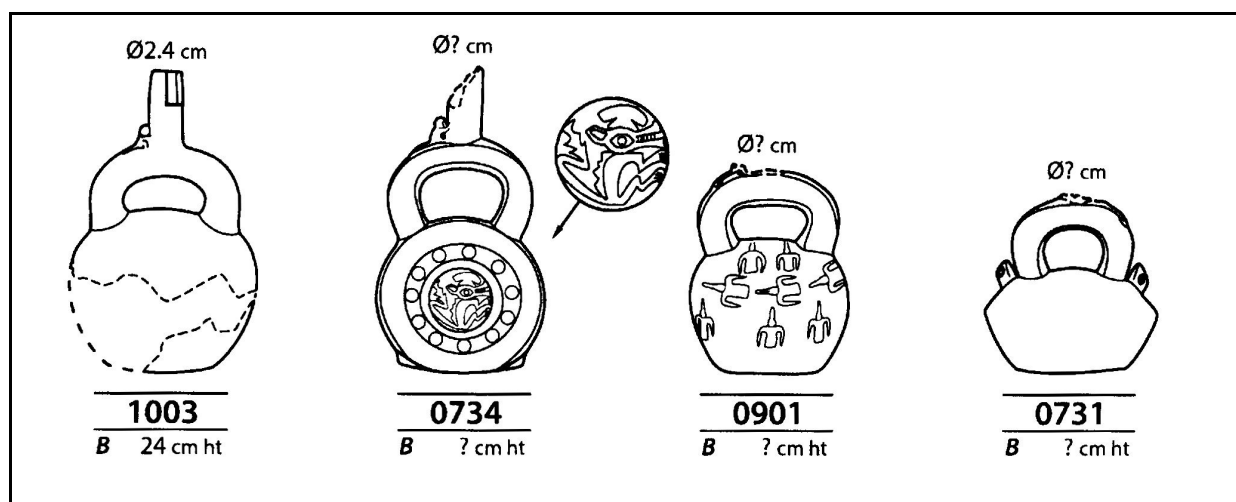


Figure A7.19. Huaca Burial Platform, Looted Chamber 1, ceramics (cont.).

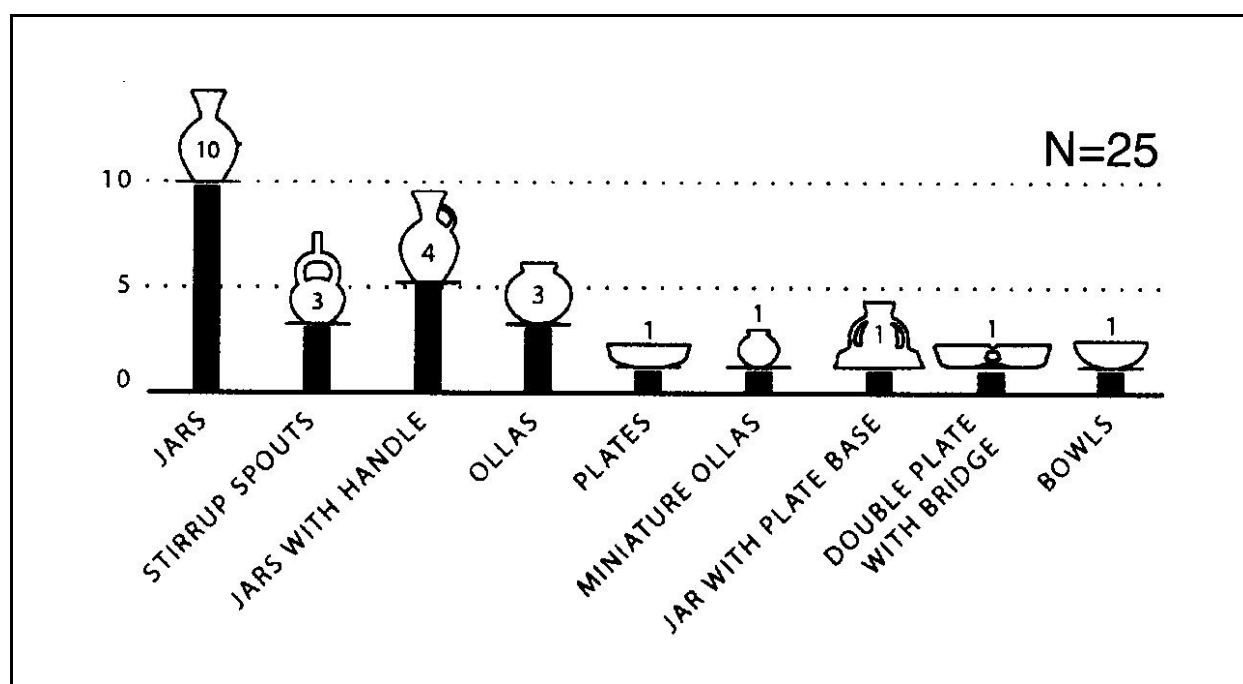


Figure A7.20 Huaca Burial Platform, Secondary burials: total count of ceramic forms in descending order.

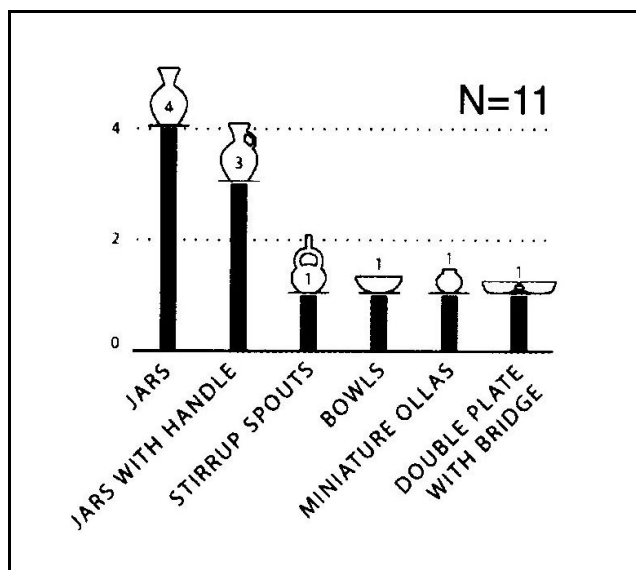


Figure A7.21 Huaca Burial Platform, Secondary burial S21: count of ceramic forms in descending order.

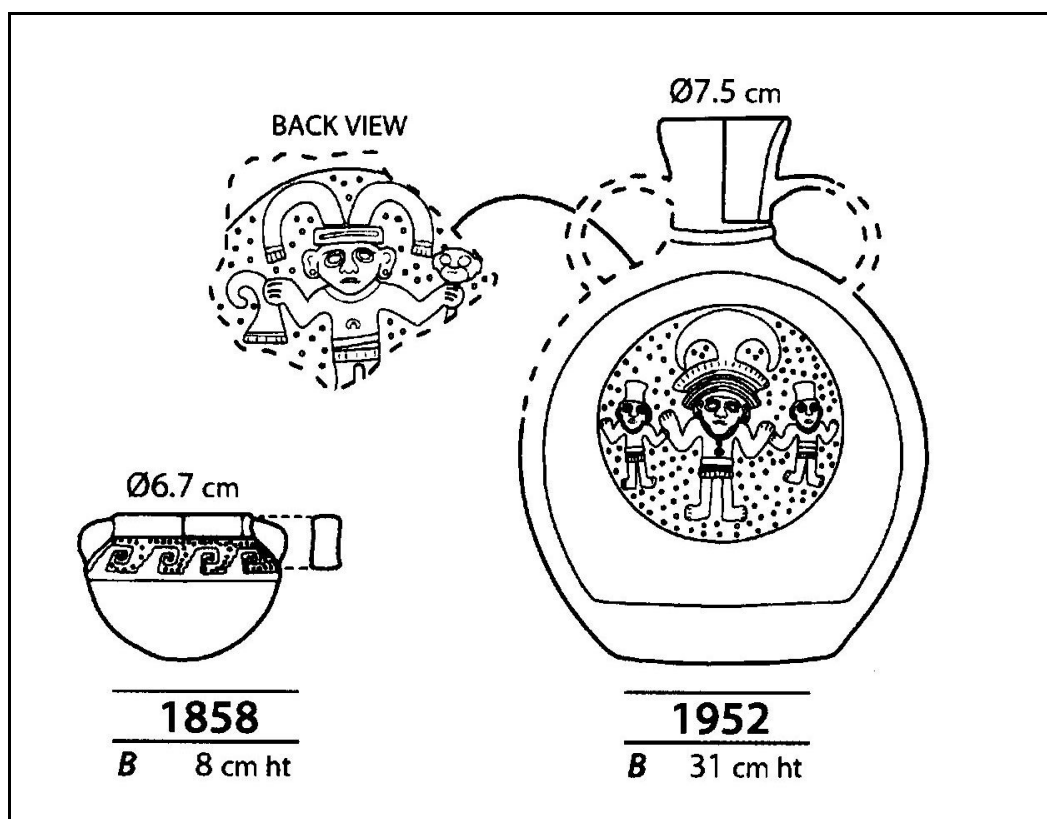


Figure A7.22. Huaca Burial Platform, Secondary burial S21, ceramics.

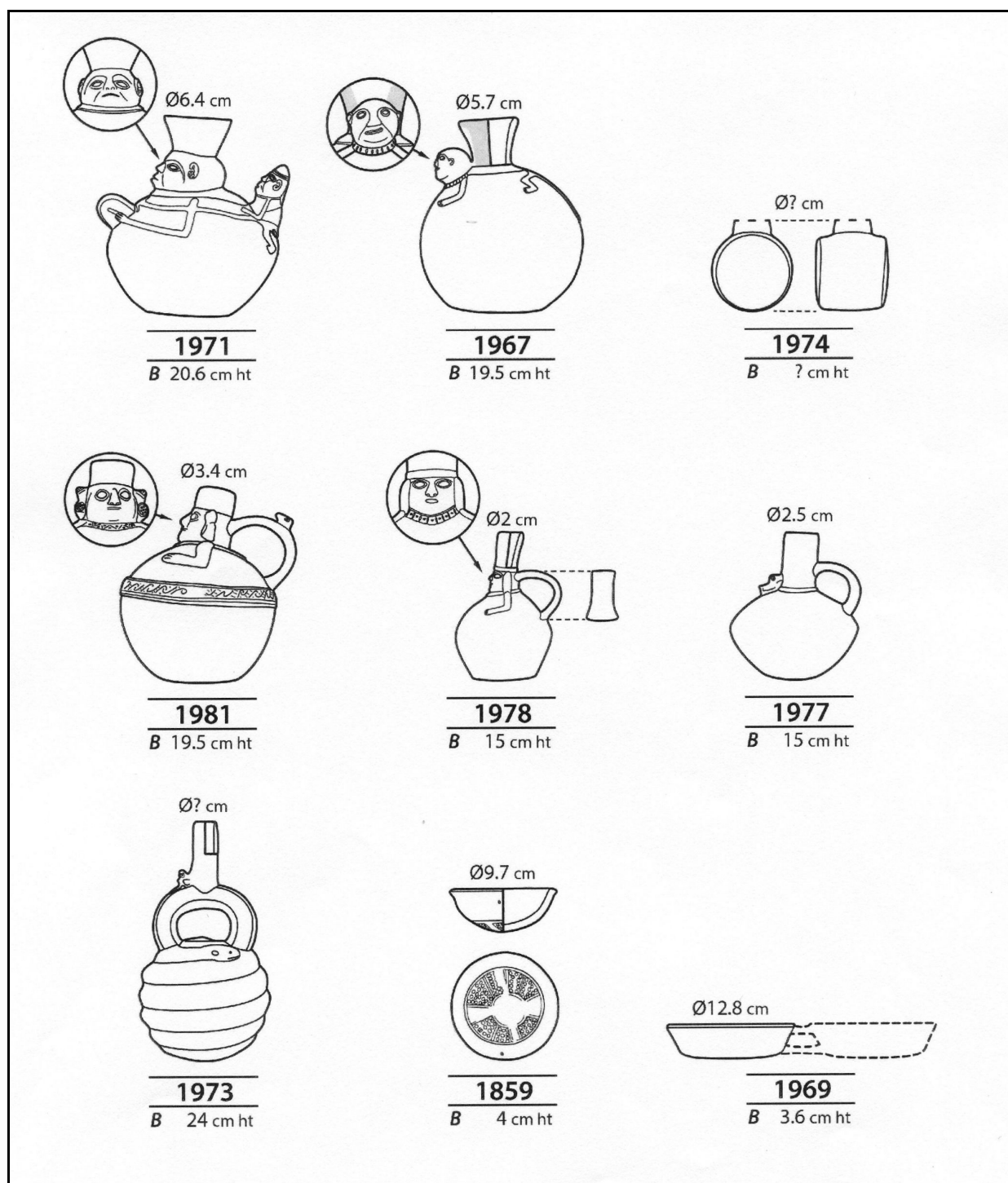


Figure A7.22. Huaca Burial Platform, Secondary burial S21, ceramics (cont.).

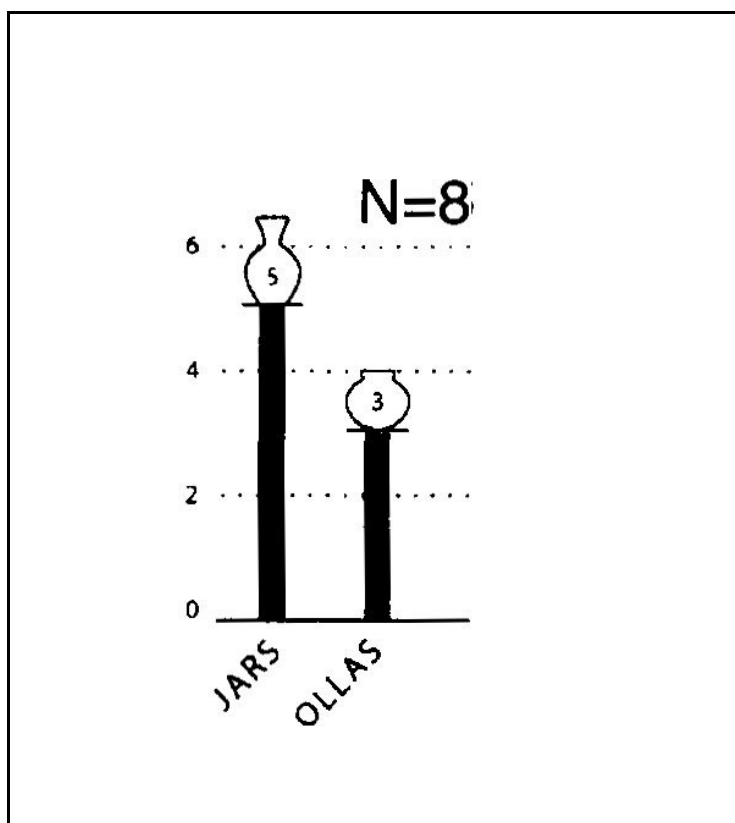


Figure A7.23 Huaca Burial Platform, Secondary burial S31: count of ceramic forms in descending order.

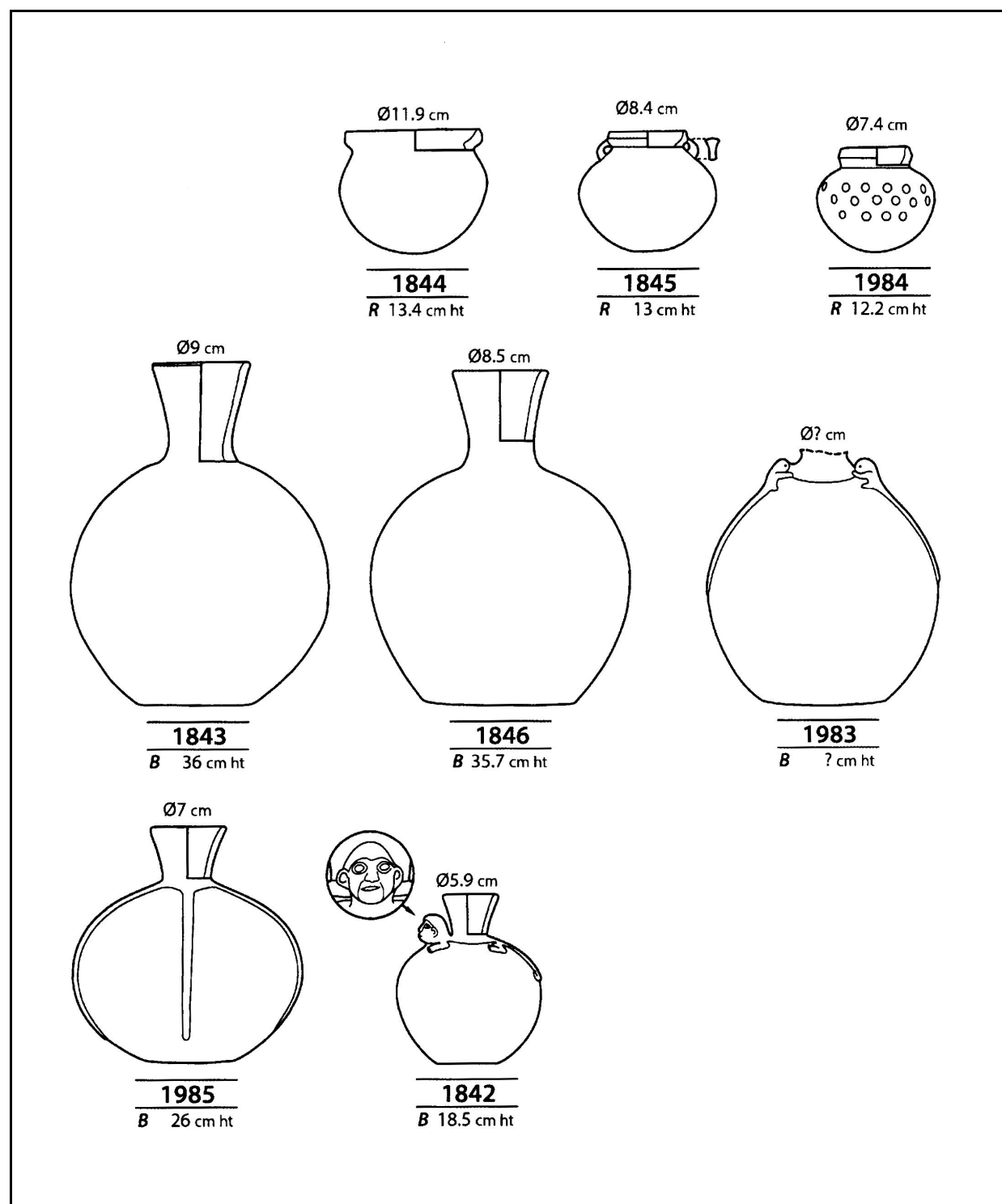


Figure A7.24. Huaca Burial Platform, Secondary burial S31, ceramics.

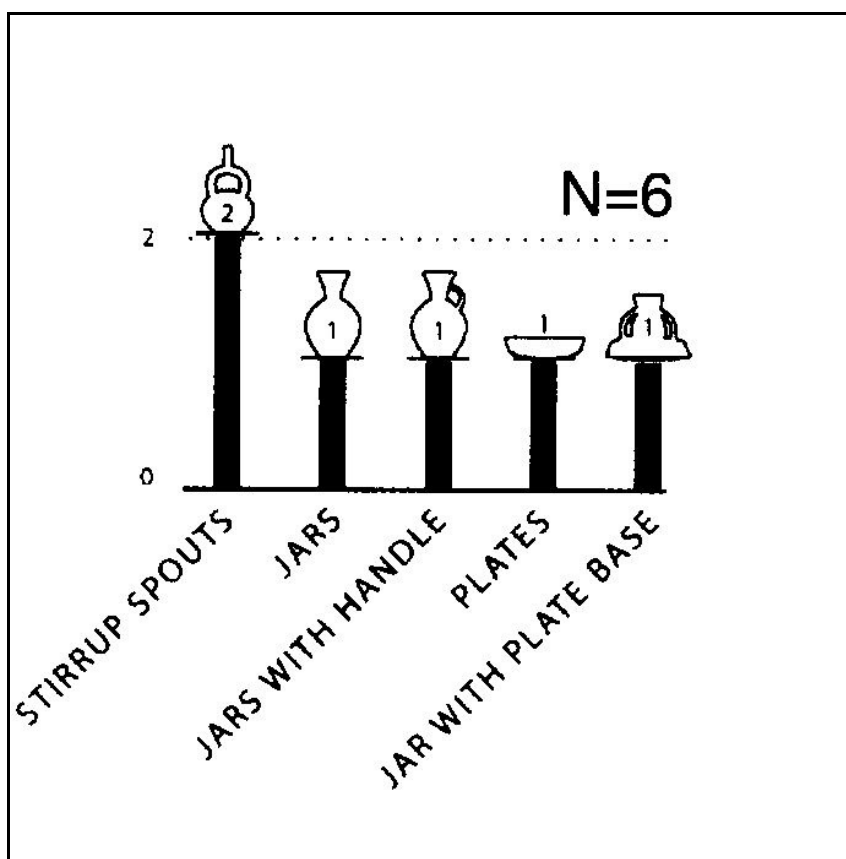


Figure A7.25 Huaca Burial Platform, Secondary burial S26B: count of ceramic forms in descending order.

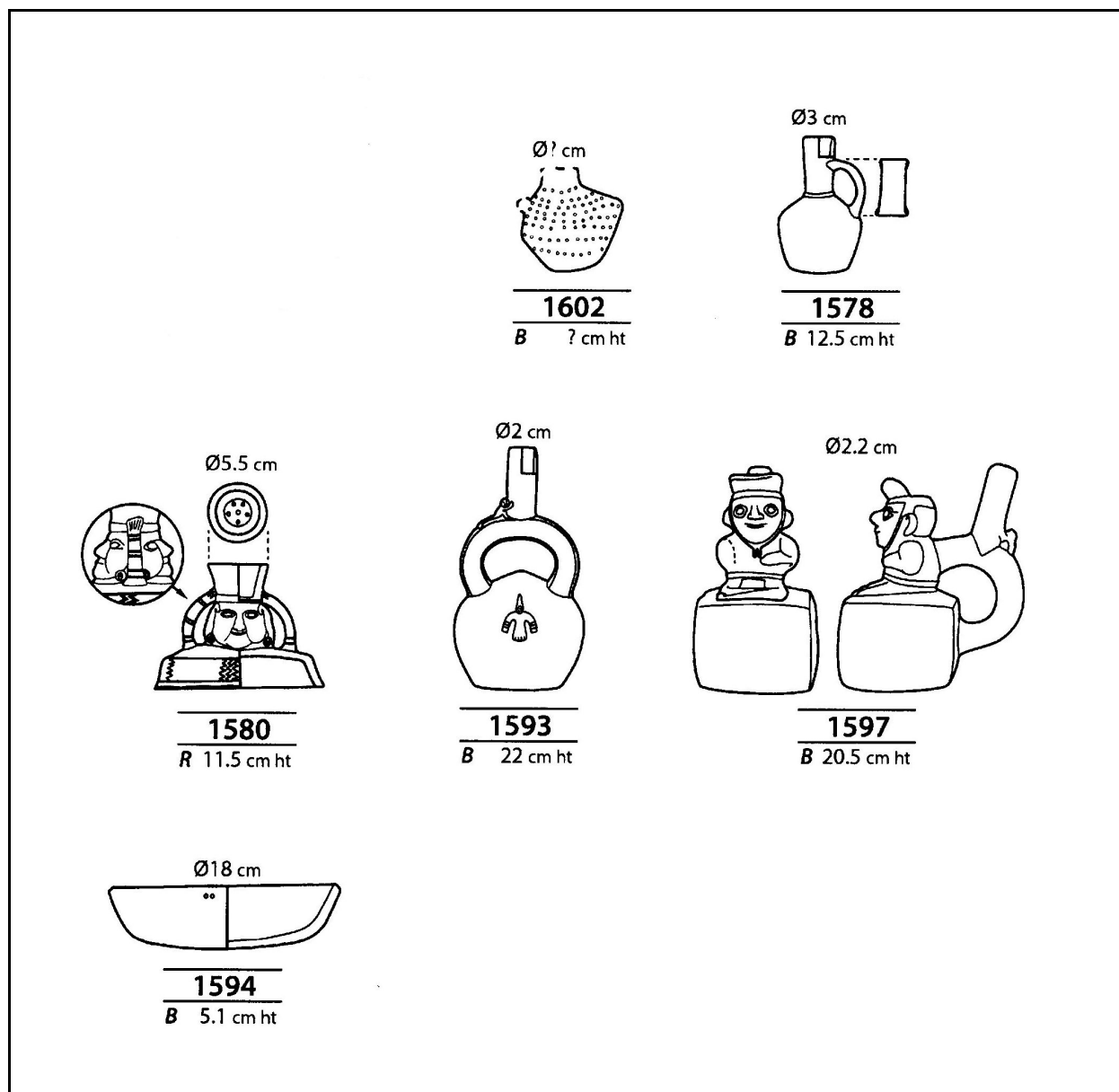


Figure A7.26. Huaca Burial Platform, Secondary burial S26B, ceramics.

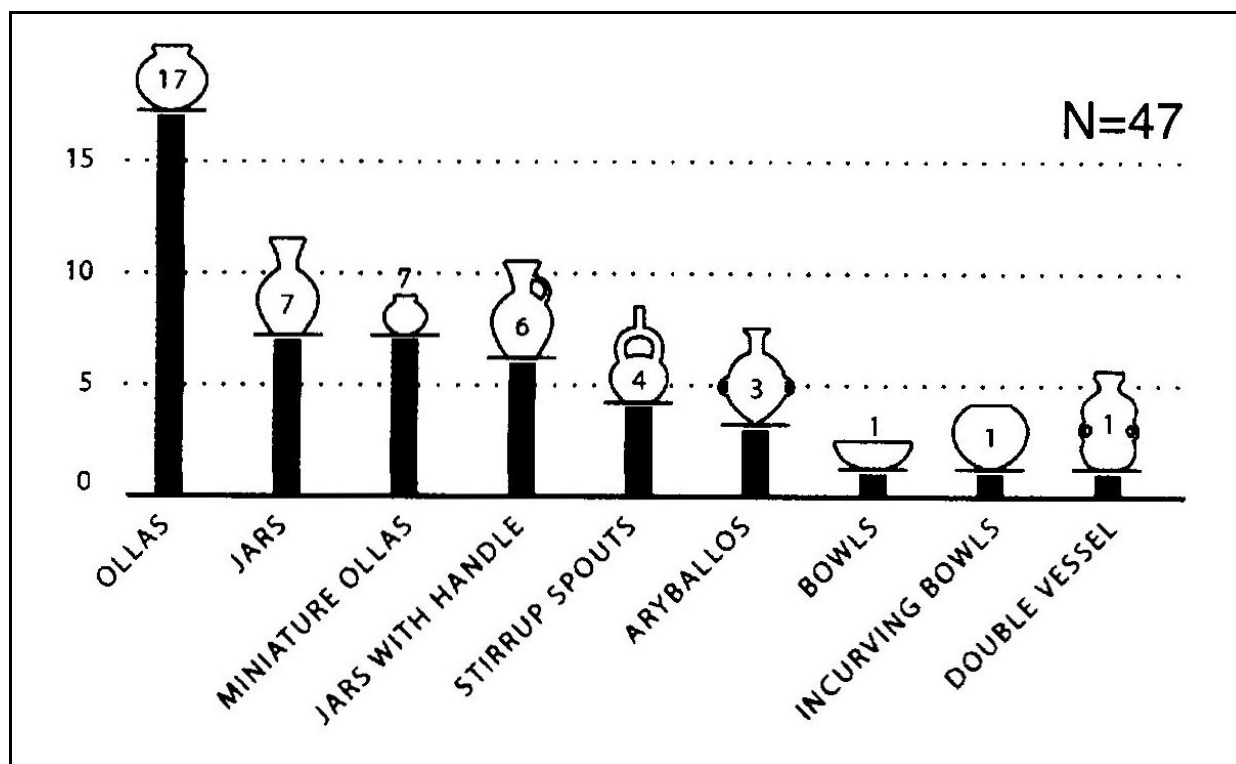


Figure A7.30. Cemetery J: count of ceramic forms in descending order.

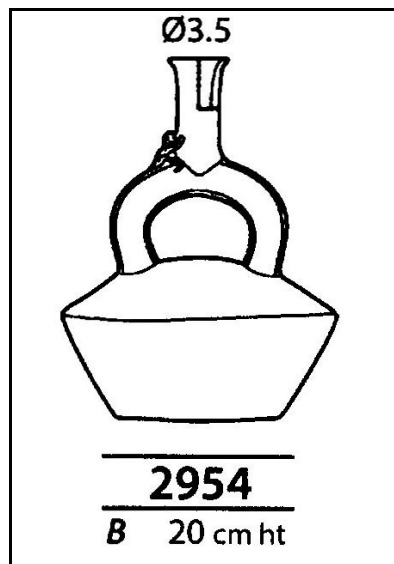


Figure A7.31. Cemetery J, ceramic, J25 Tomb 1.

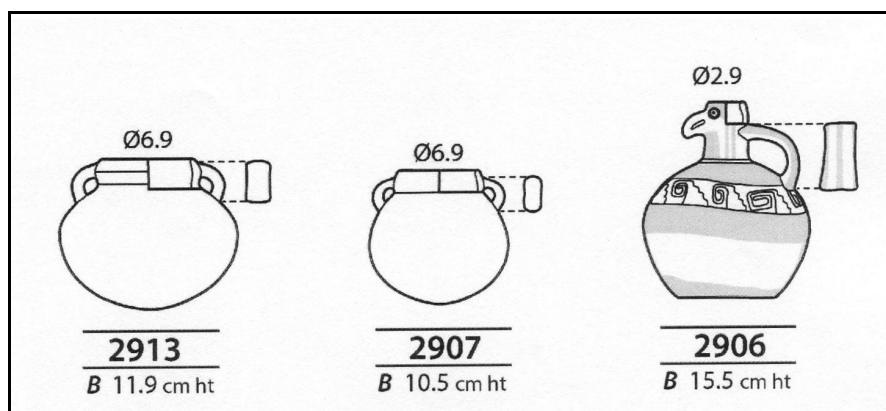


Figure A7.32. Cemetery J, J25 Tomb 4, ceramics.

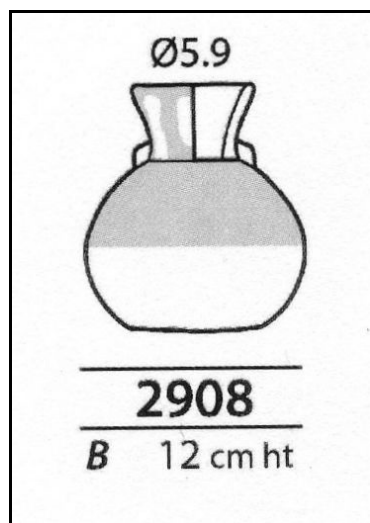


Figure A7.33. Cemetery J, J25 Tomb 4, ceramics.

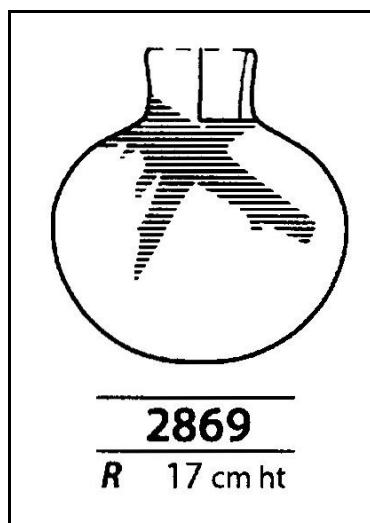


Figure A7.34. Cemetery J, J25 Tomb 5, ceramics.

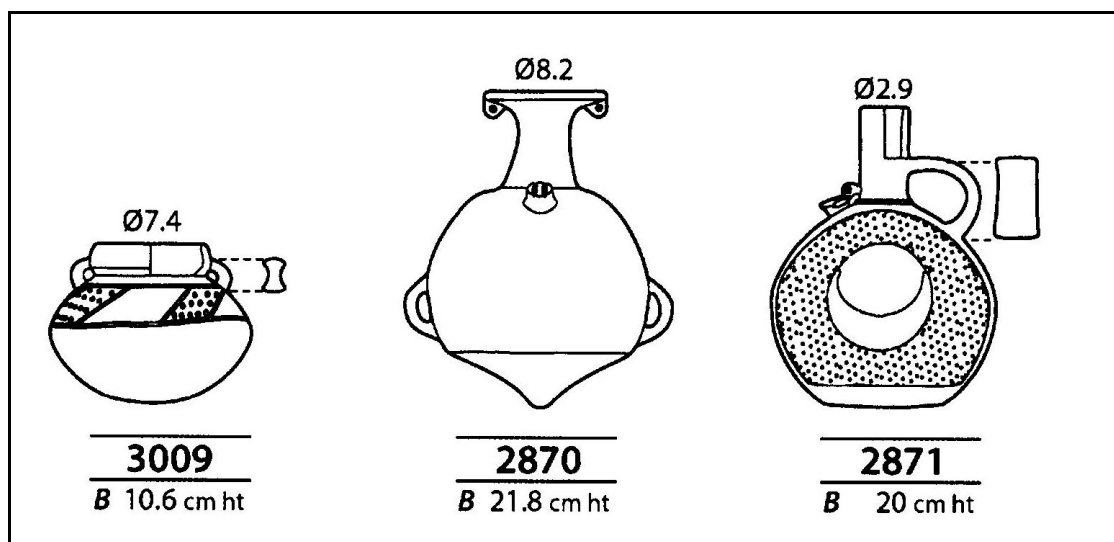


Figure A7.35. Cemetery J, J25 Tomb 6, ceramics.

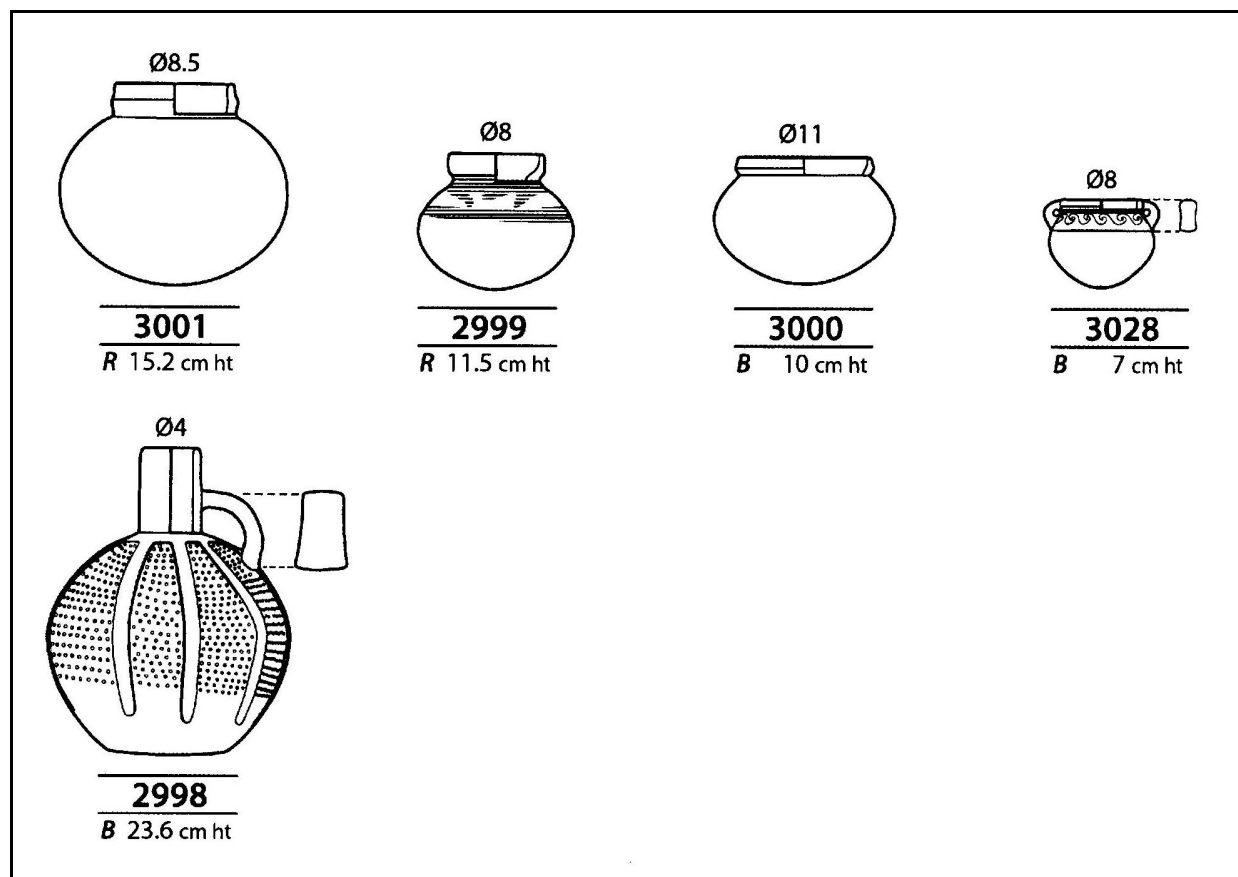


Figure A7.36. Cemetery J, J25 Tomb 7, ceramics.

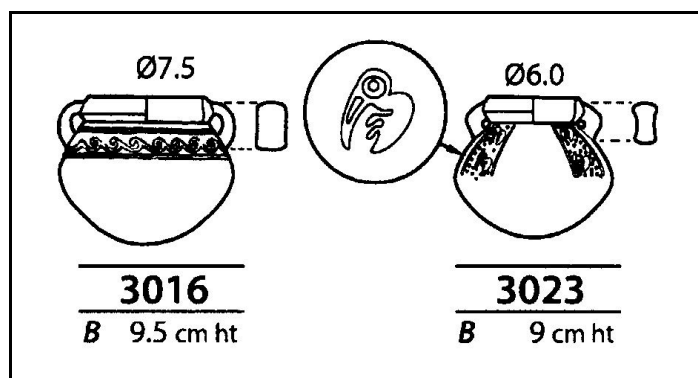


Figure A7.37. Cemetery J, J25 Tomb 8, ceramics.

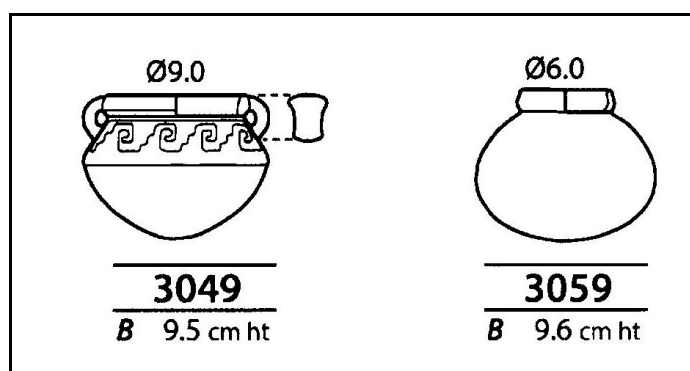


Figure A7.38. Cemetery J, J25 Tomb 9, ceramics.

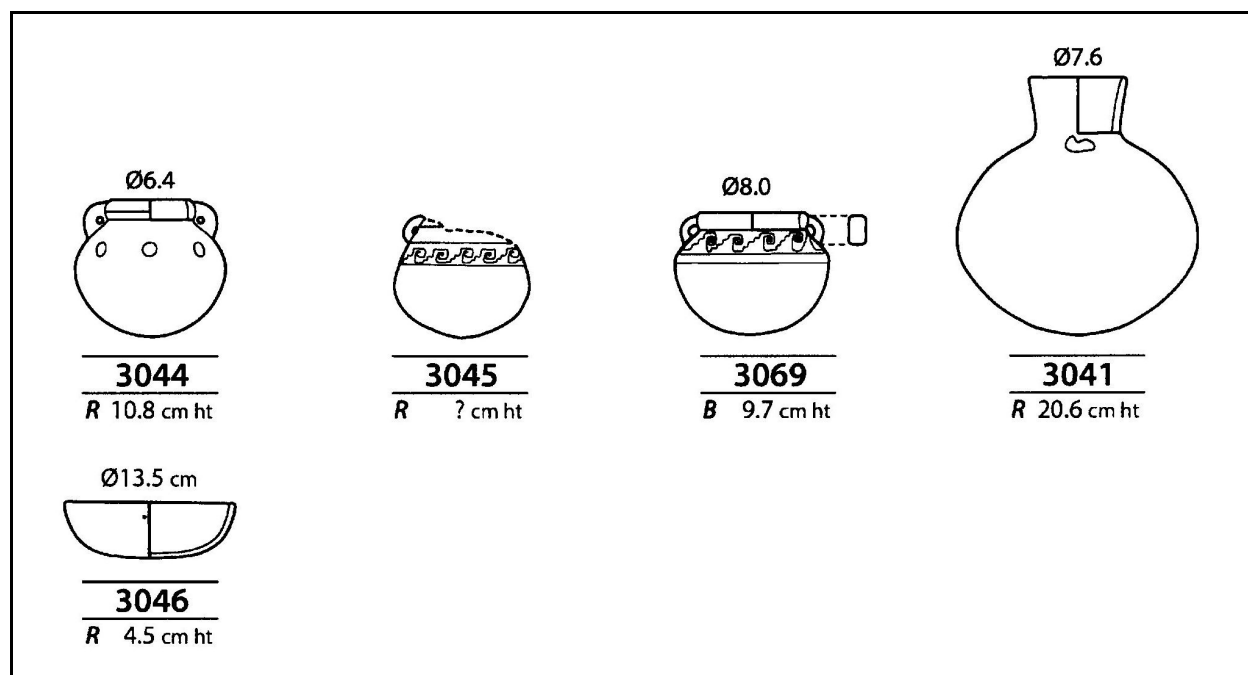


Figure A7.39. Cemetery J, J25 Tomb S2, ceramics.

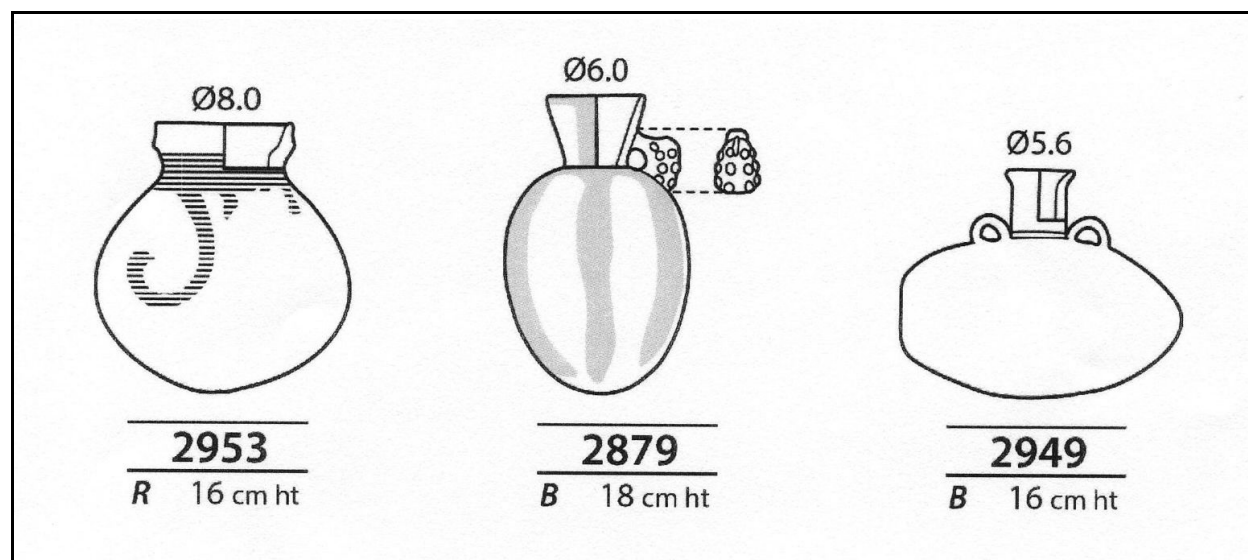


Figure A7.40. Cemetery J, J26 Tomb 1, ceramics.

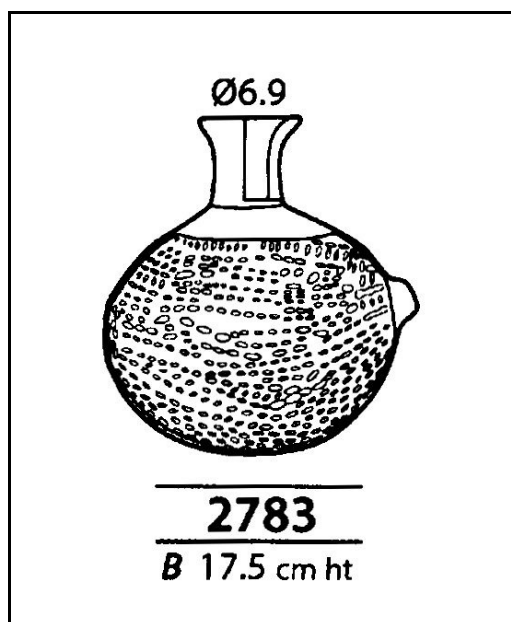


Figure A7.41. Cemetery J, J26 Tomb 2, ceramics.

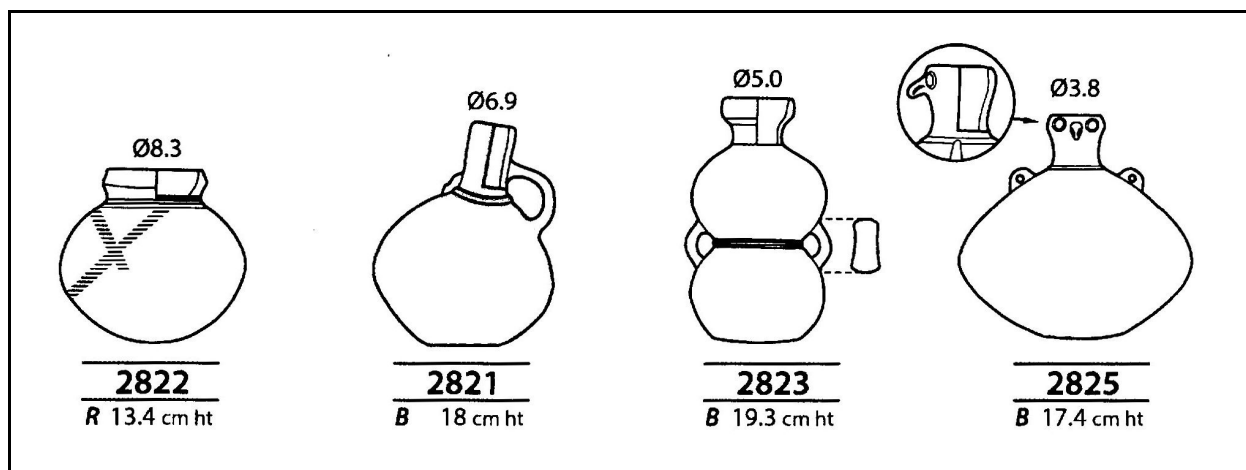


Figure A7.42. Cemetery J, J26 Tomb 3, ceramics.

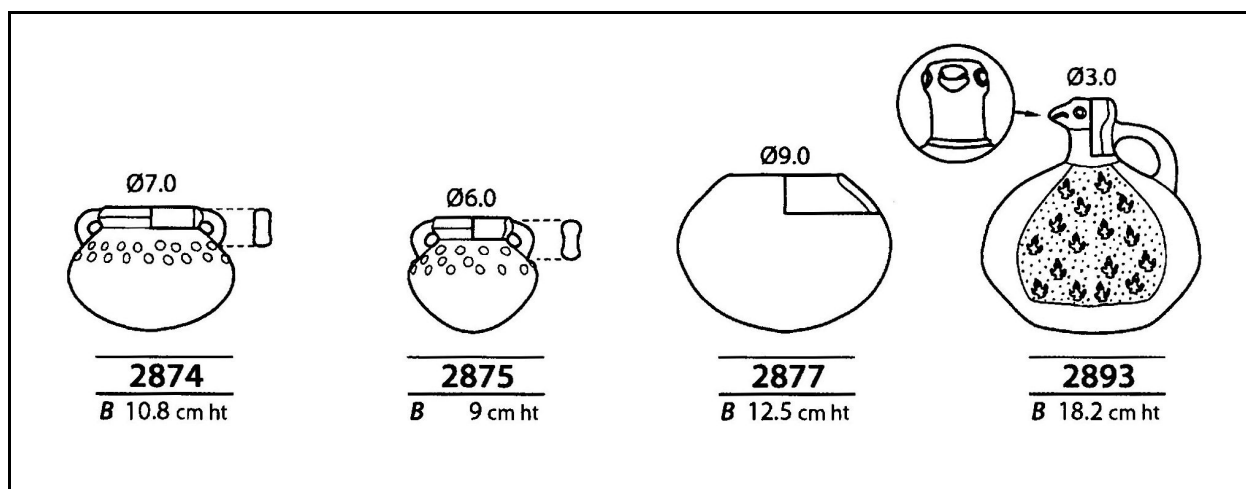


Figure A7.43. Cemetery J, J26 S1, ceramics.

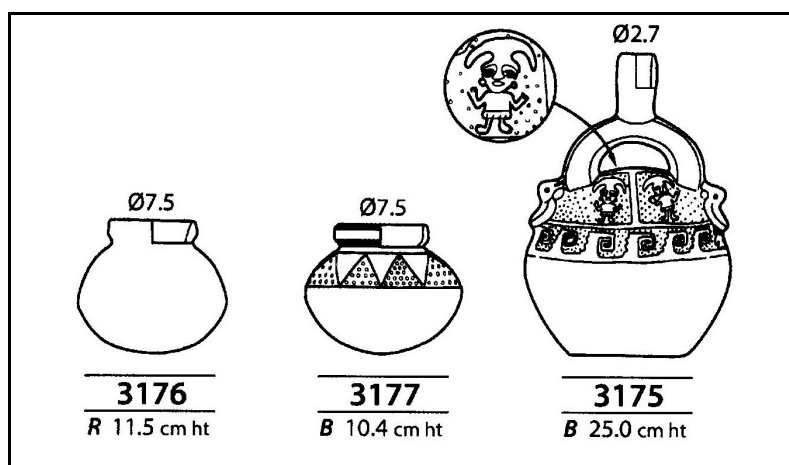


Figure A7.44. Cemetery J, J14 Tomb 1, ceramics.

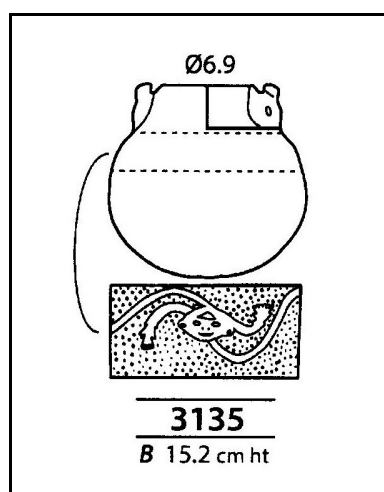


Figure A7.45. Cemetery J14, Tomb 2, ceramic.

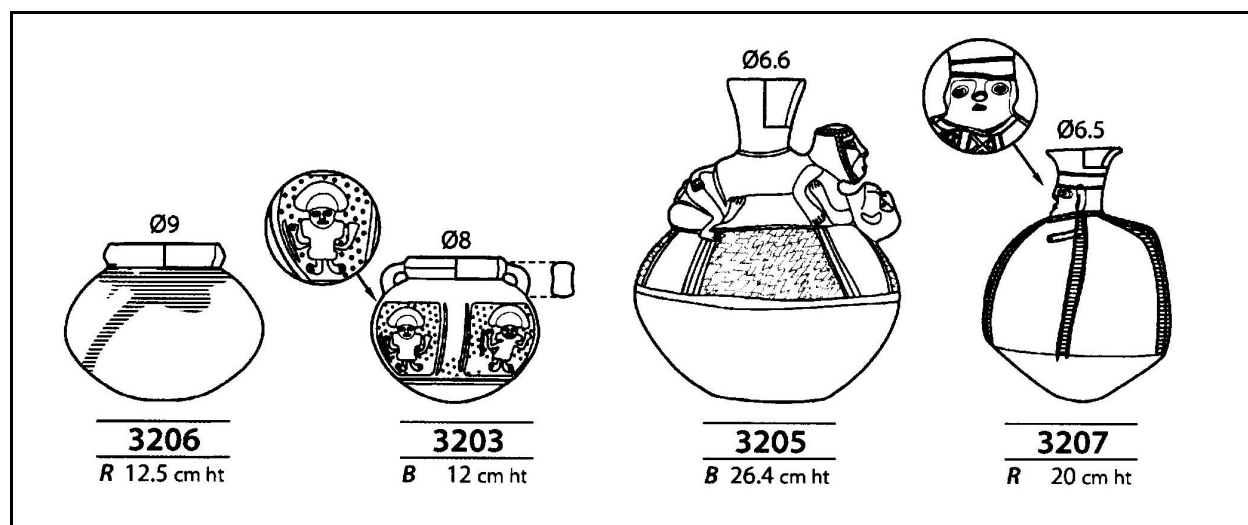


Figure A7.46. Cemetery J, J14 Tomb 3, ceramics.

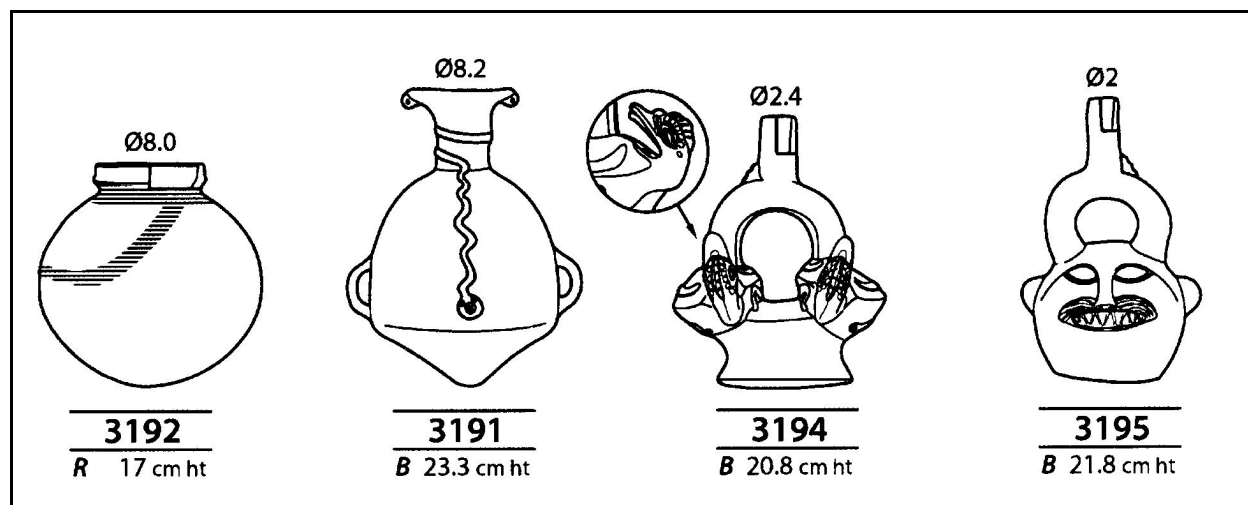


Figure A7.47. Cemetery J, J14 Tomb S1, ceramics.

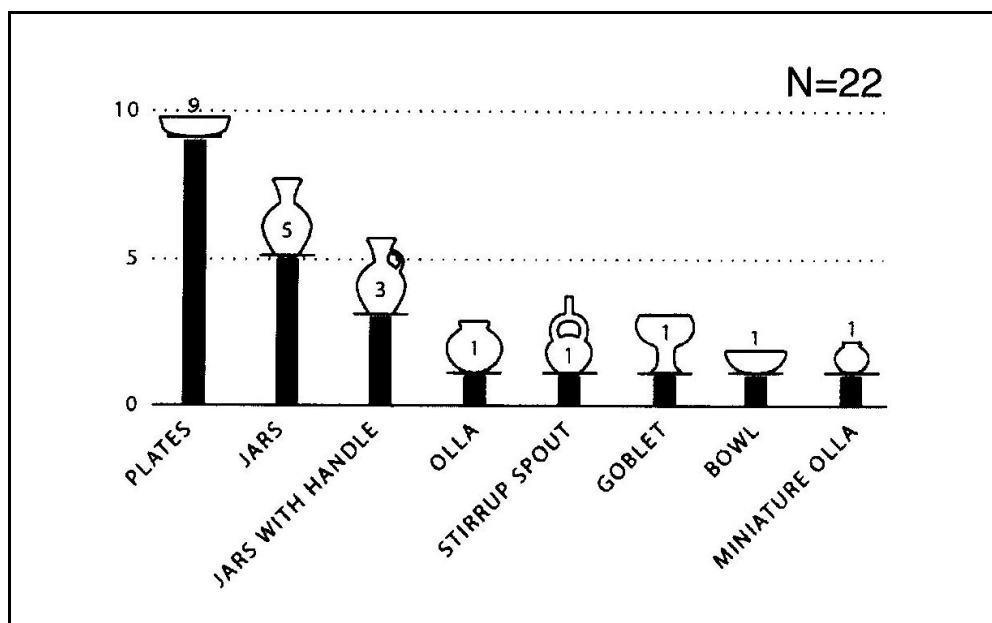


Figure A7.27. Tomb JO S1: count of ceramic forms in descending order.

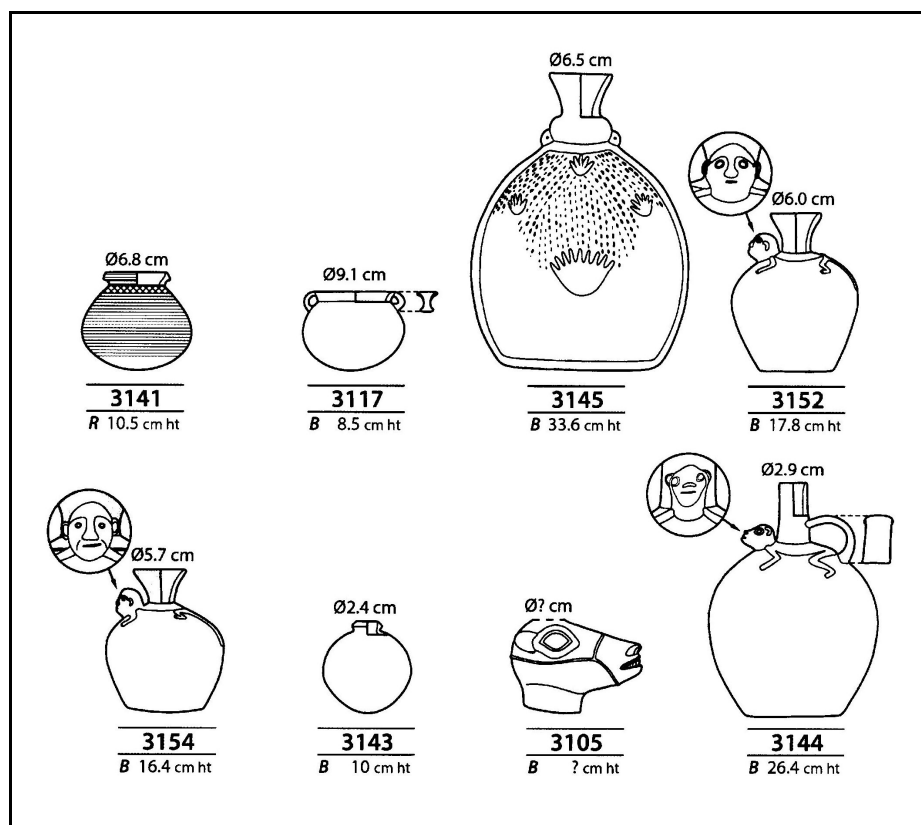


Figure A7.28. Tomb JO S1 ceramics.

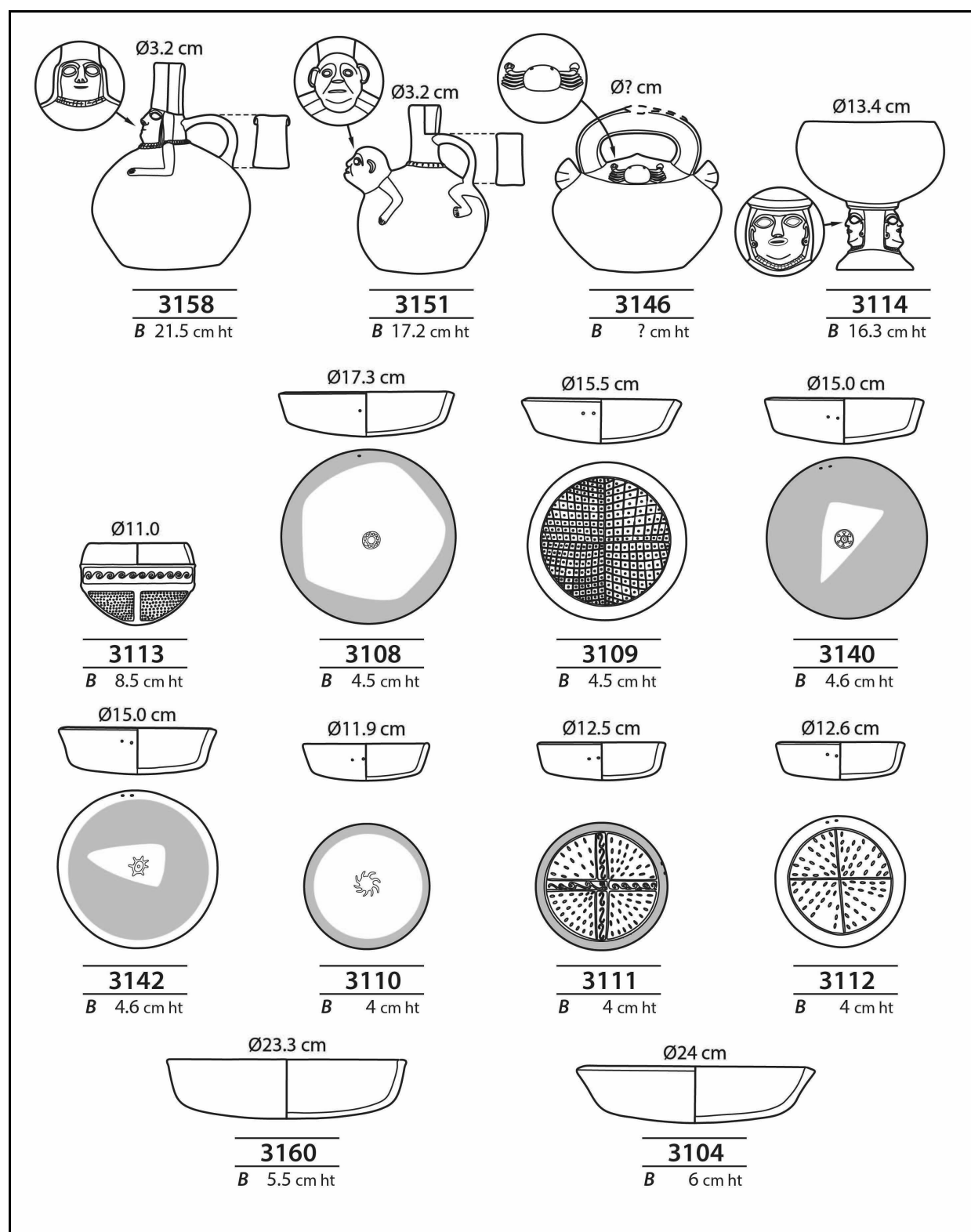


Figure A7.29. Tomb JO S1 ceramics (cont.).

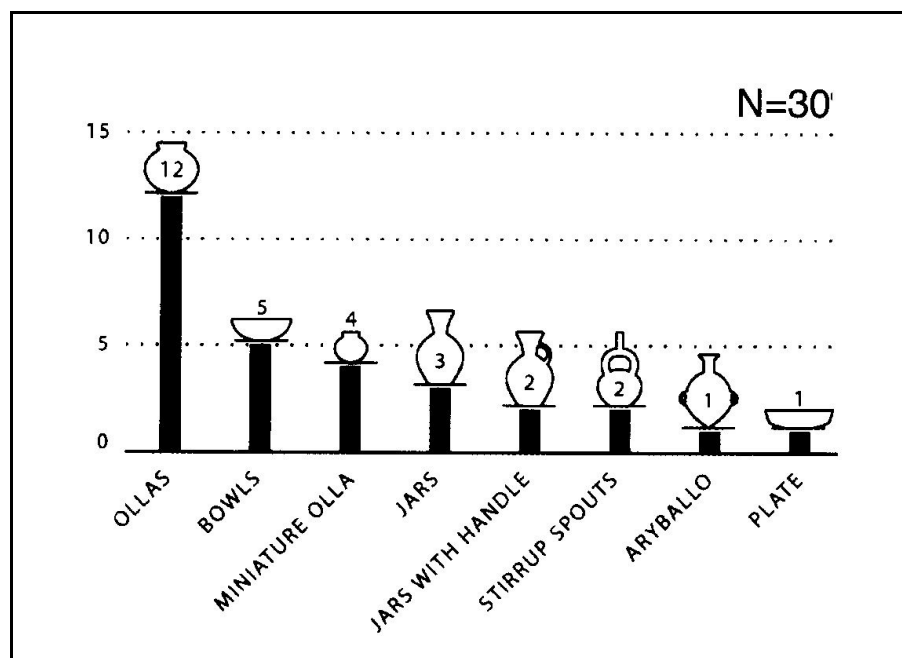


Figure A7.48. Cemetery I: count of ceramic forms in descending order.

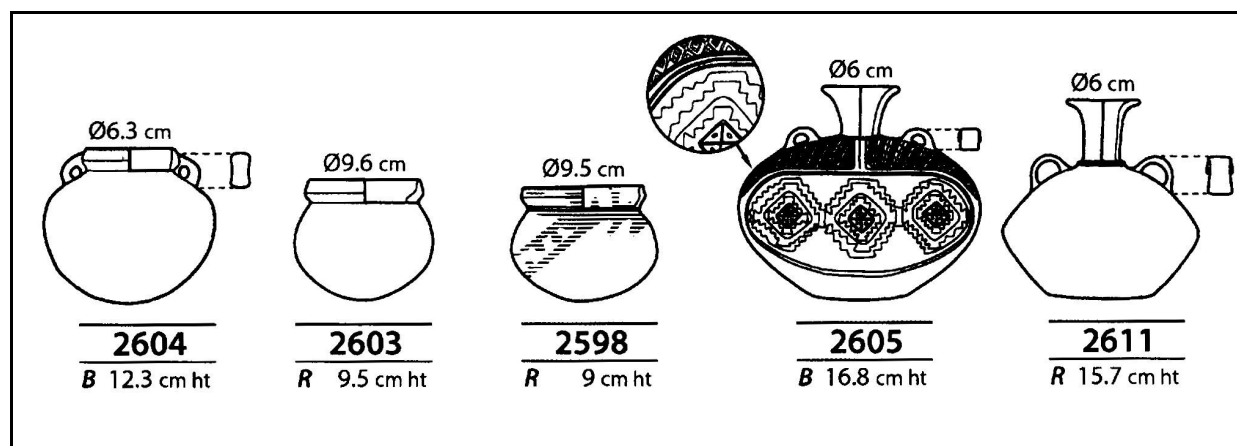


Figure A7.49. Cemetery I, Tomb 13 T1, ceramics.

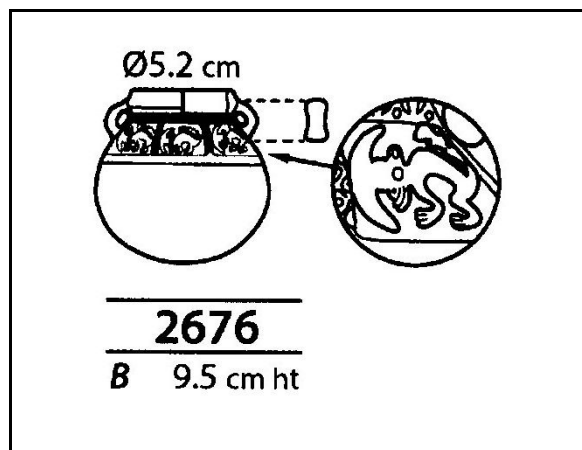


Figure A7.50. Cemetery I, Tomb I16 S3, ceramic.

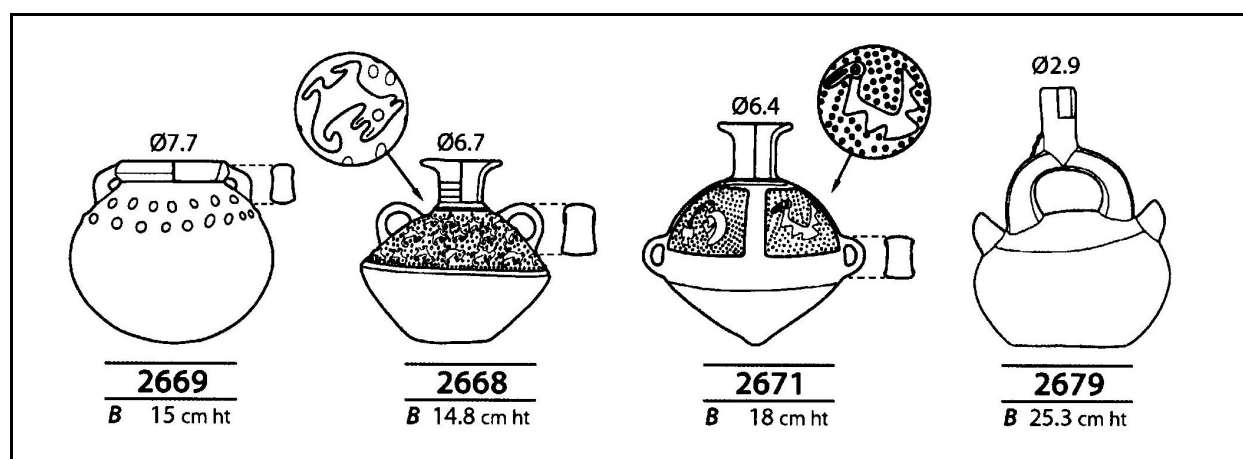


Figure A7.51. Cemetery I, Tomb I16 S4, ceramics.

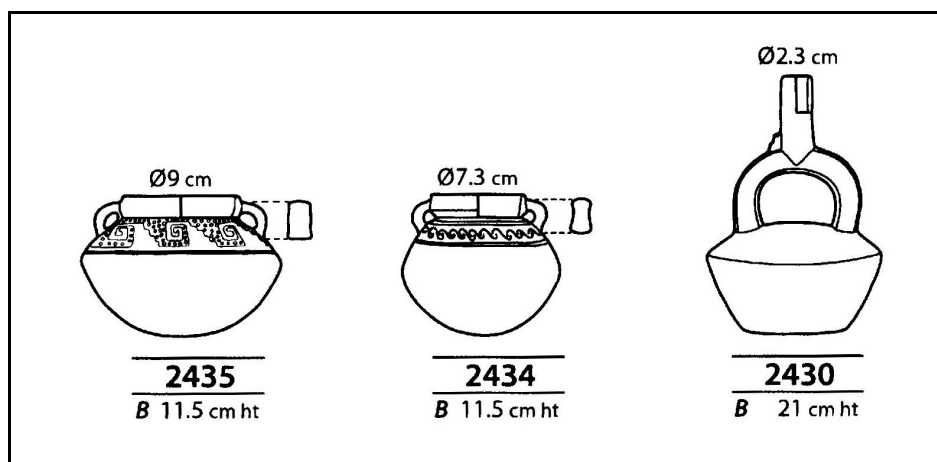


Figure A7.52. Cemetery I, Tomb I5 S1, ceramics.

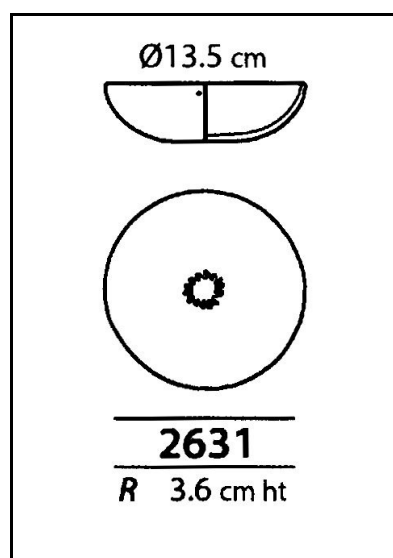
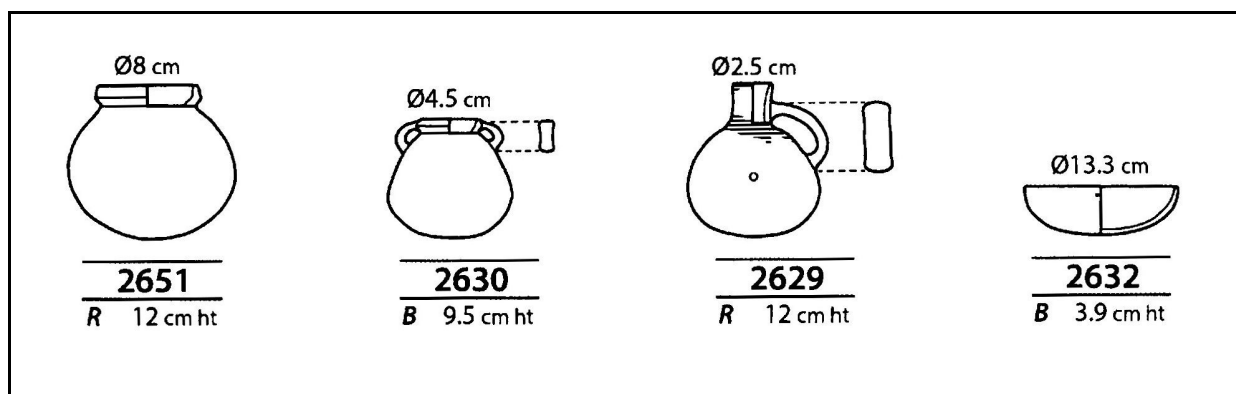


Figure A7.53. (Top and left) Cemetery I, Tomb I10 T1, ceramics.

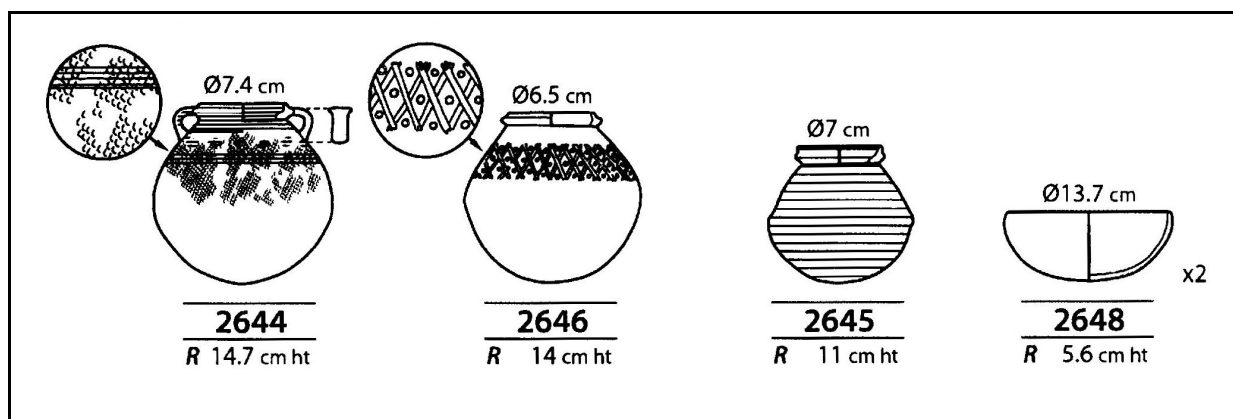


Figure A7.54. Cemetery I, Tomb I10 T2, ceramics.

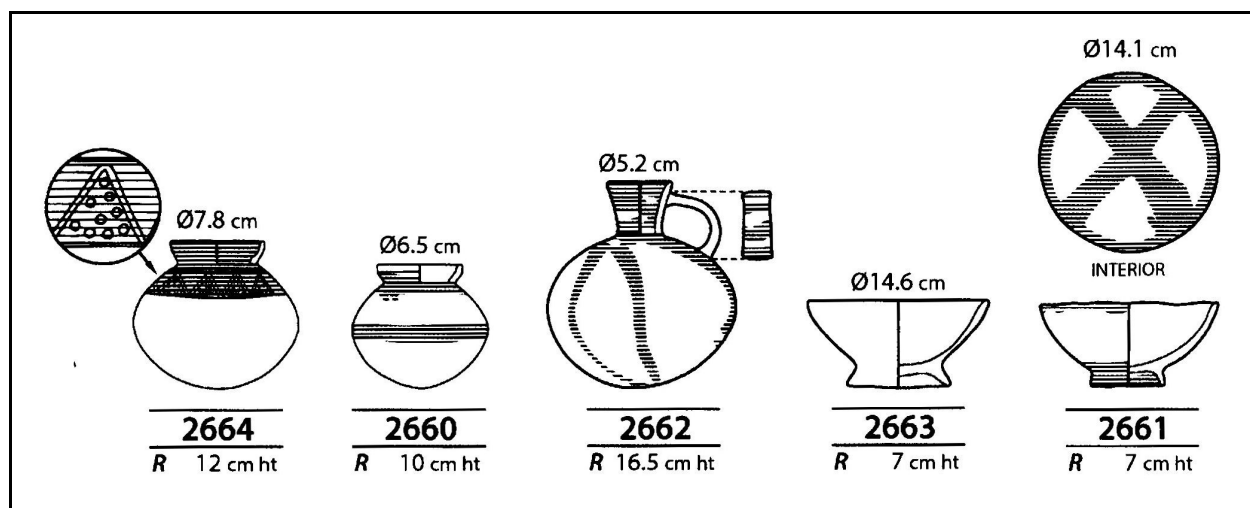


Figure A7.55. Cemetery I, Tomb I10 T3, ceramics.

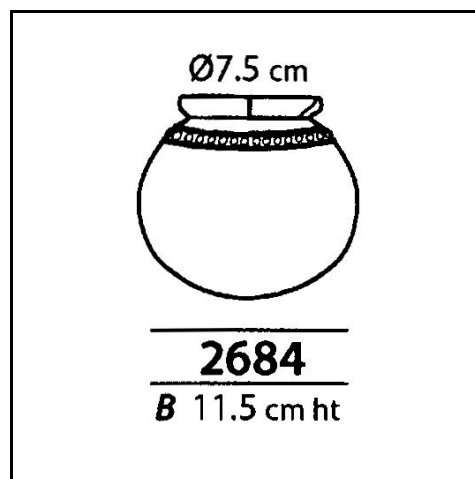


Figure A7.56. Cemetery I, Tomb I10 S1, ceramic.

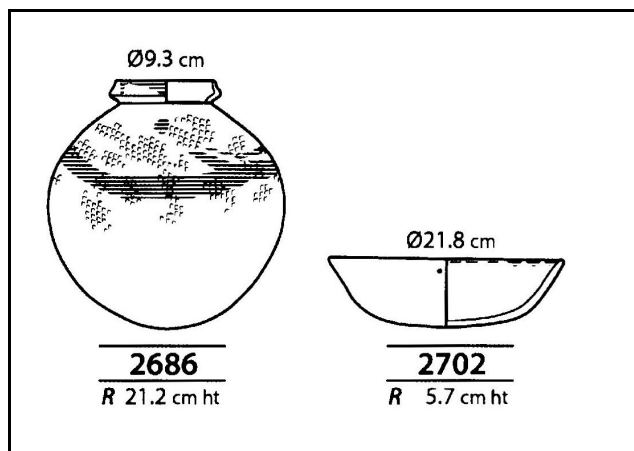


Figure A7.57. Cemetery I Tomb I22 Offering, ceramics.

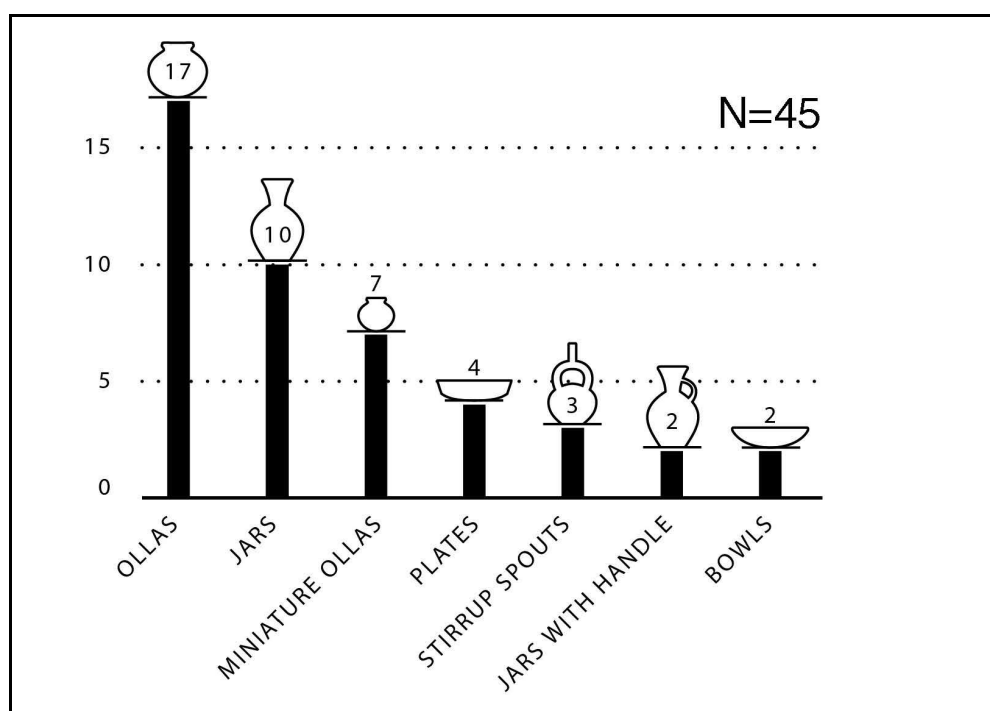


Figure A7.58. Mound G: count of ceramic forms in descending order.

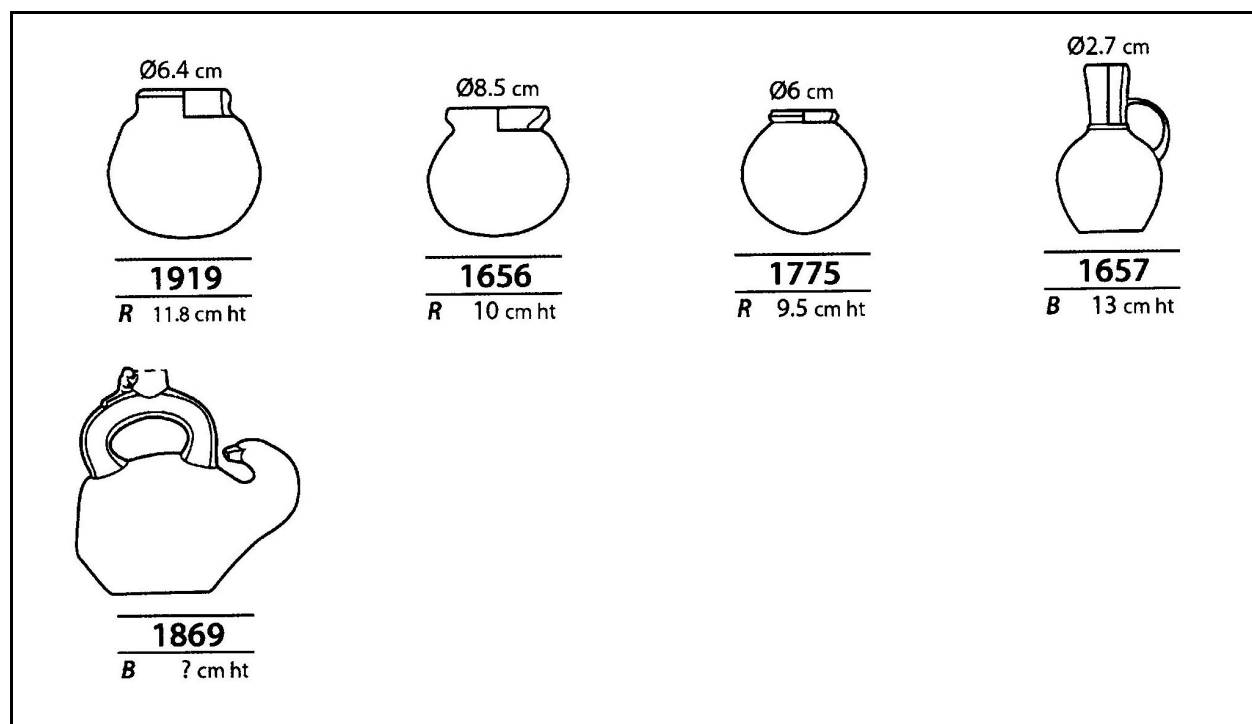


Figure A7.59. Mound G, Tomb G T3A, ceramics.

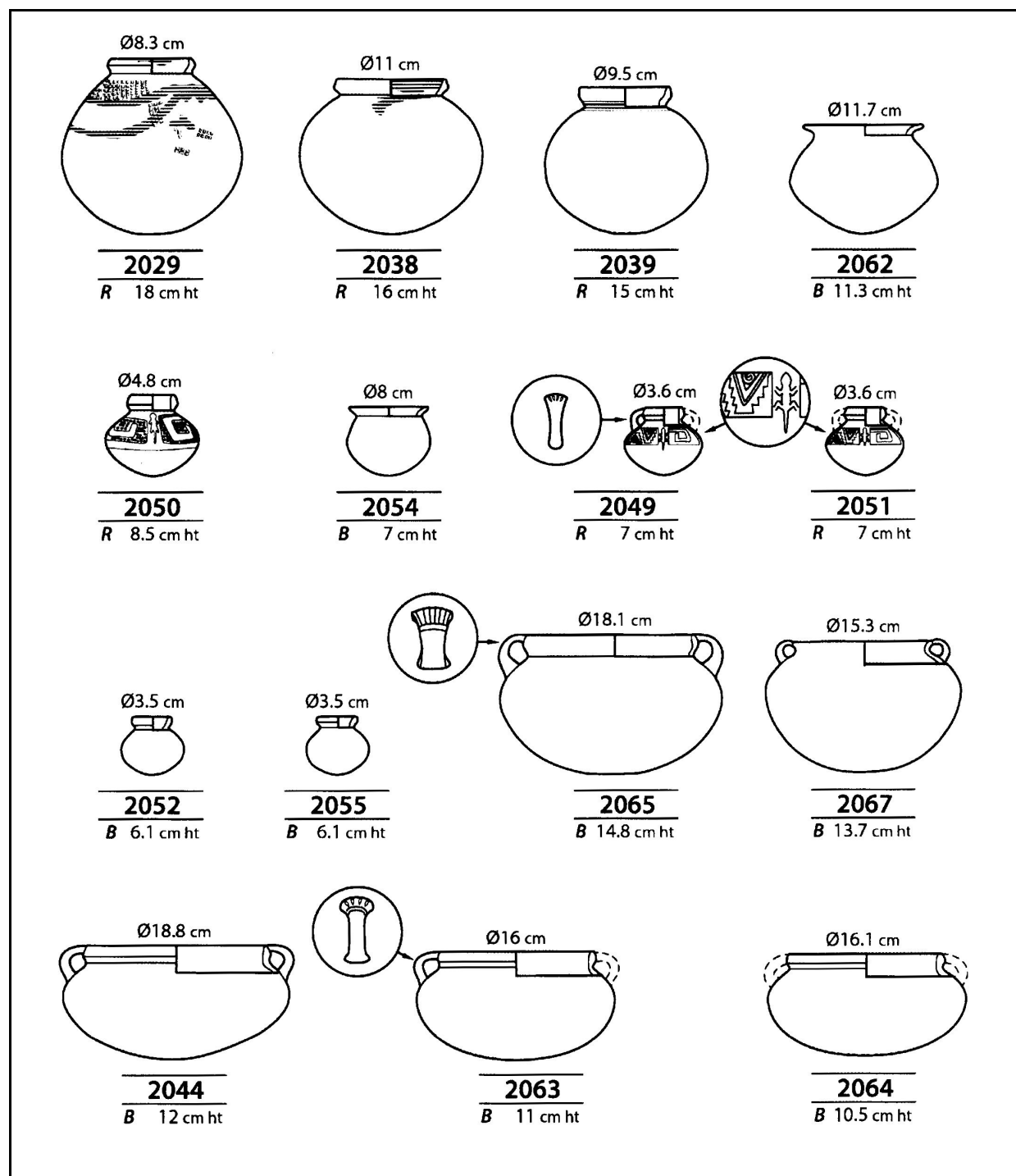


Figure A7.60. Mound G, Tomb 11, ceramics.

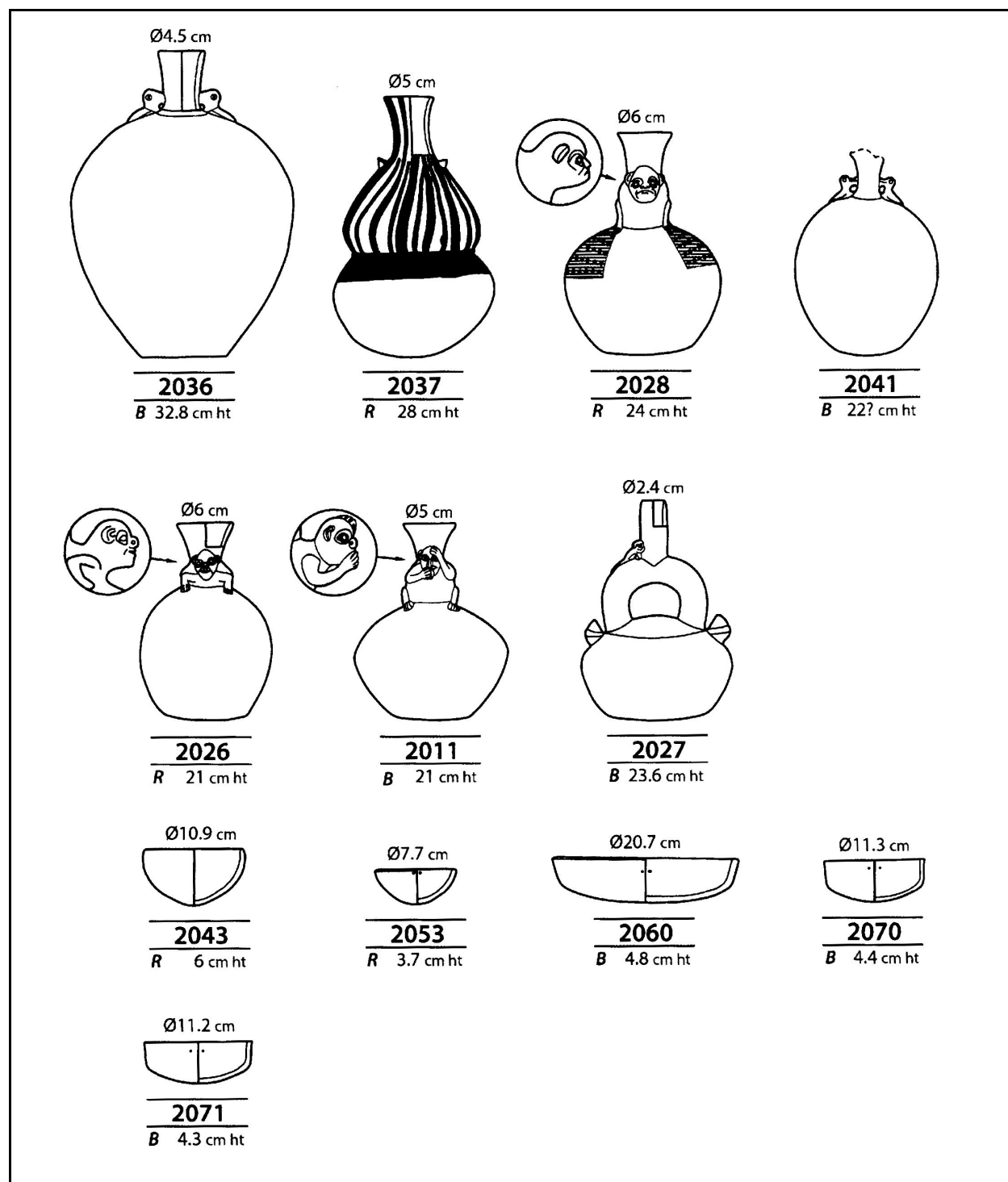


Figure A7.61. Mound G, Tomb 11, ceramics (cont.).

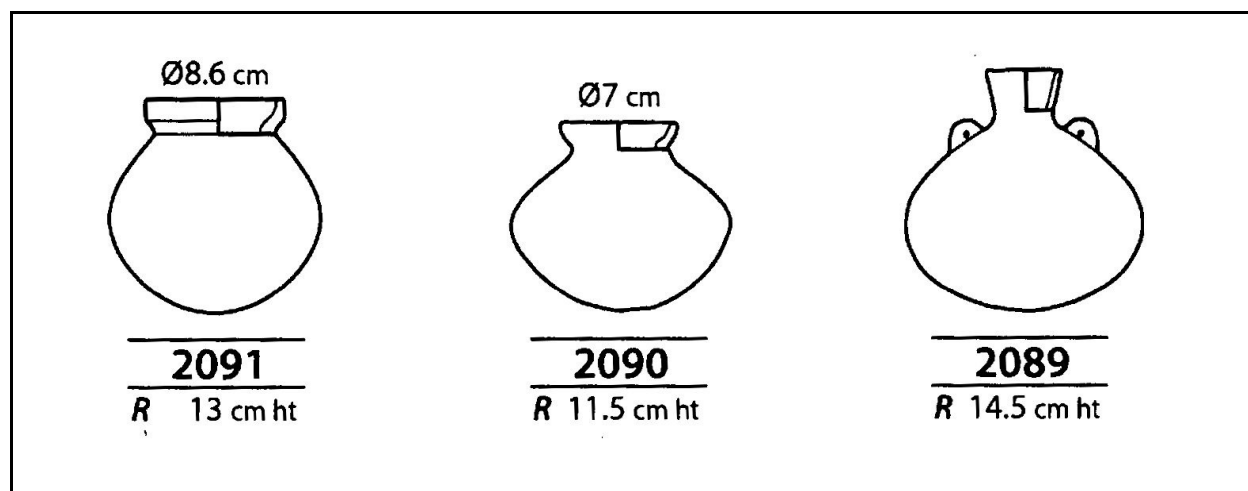


Figure A7.62. Mound G, Tomb G T12, ceramics.

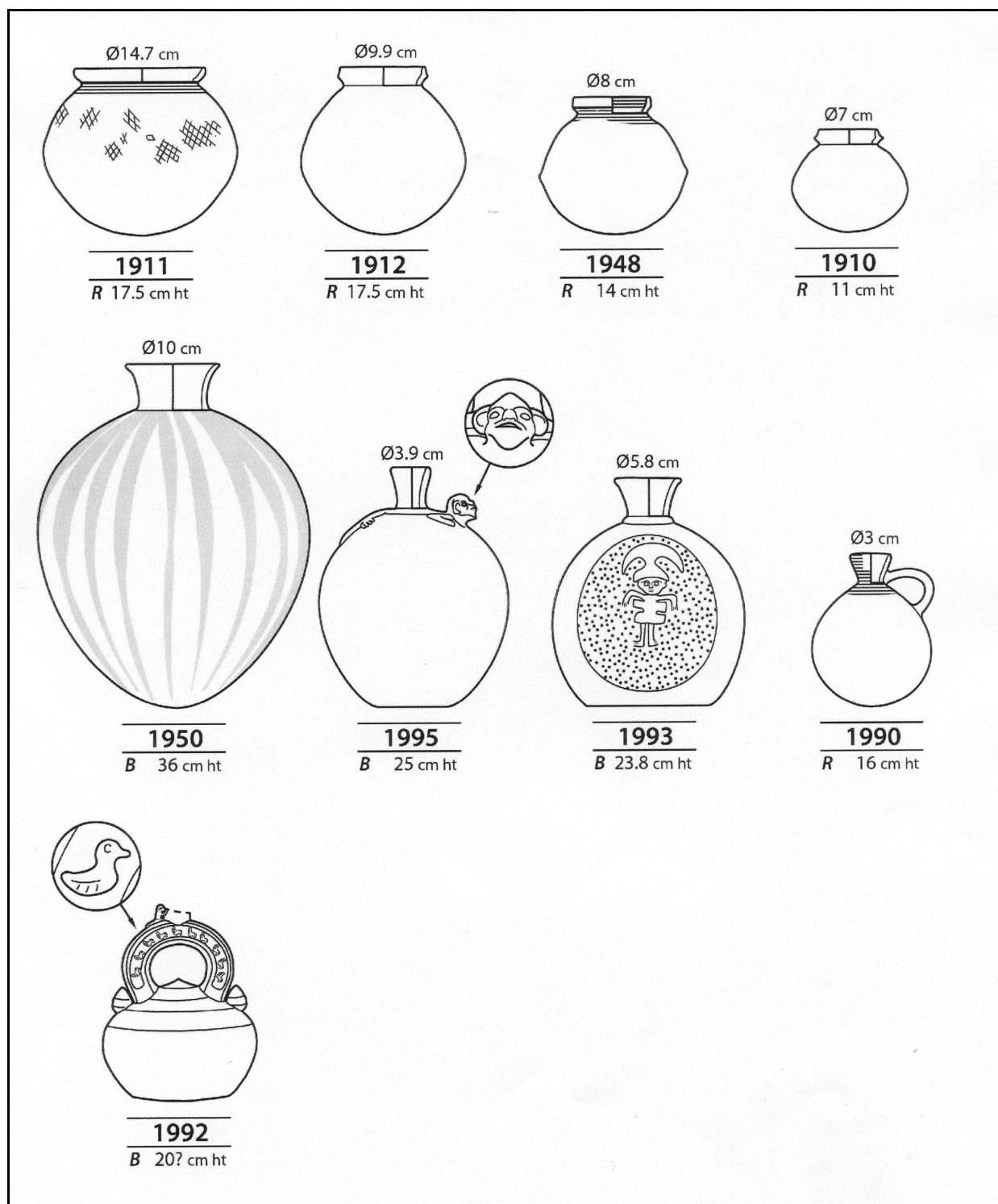


Figure A7.63. Mound G, Tomb G T4, ceramics.

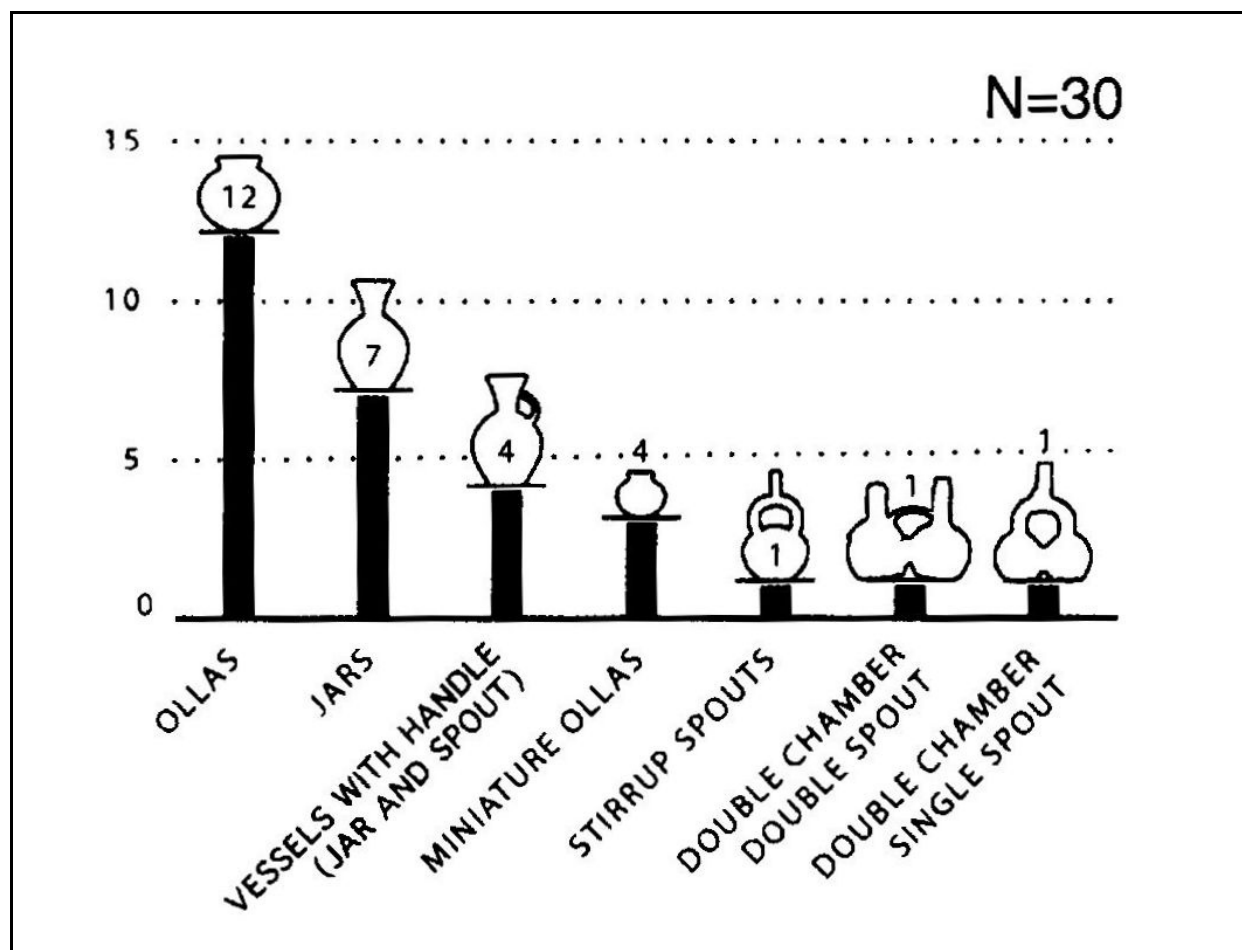


Figure A7.64. Compound VI Cemetery: count of ceramic forms in descending order.

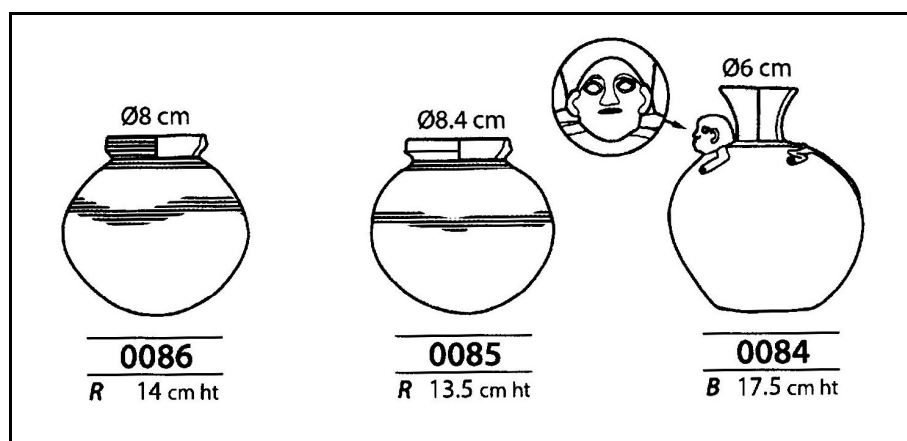


Figure A7.65. Compound VI Cemetery, Tomb I T2, ceramics.

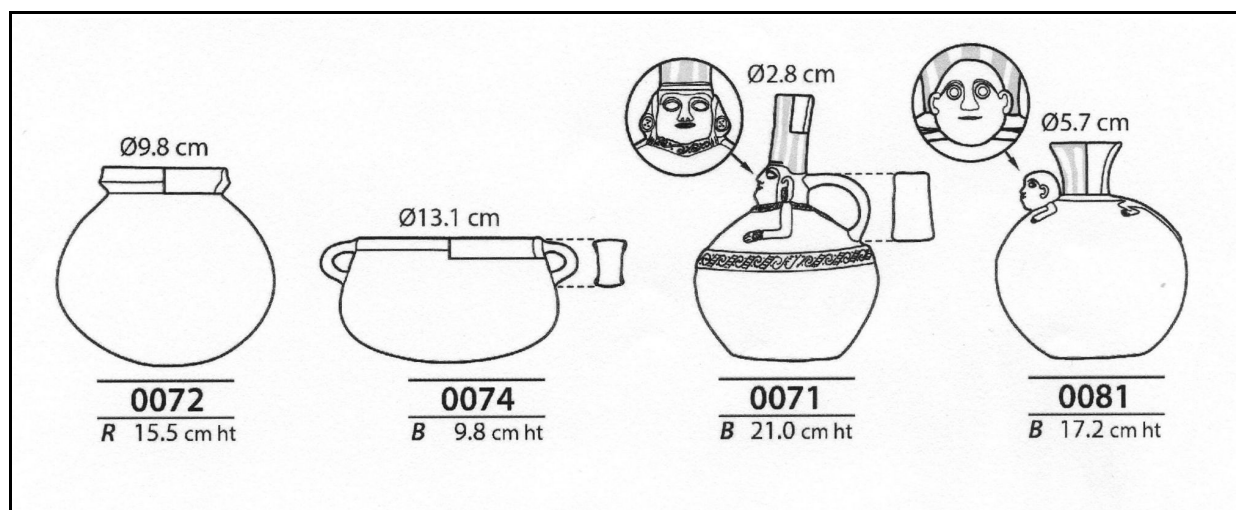


Figure A7.66. Compound VI Cemetery, Tomb I T3, ceramics.

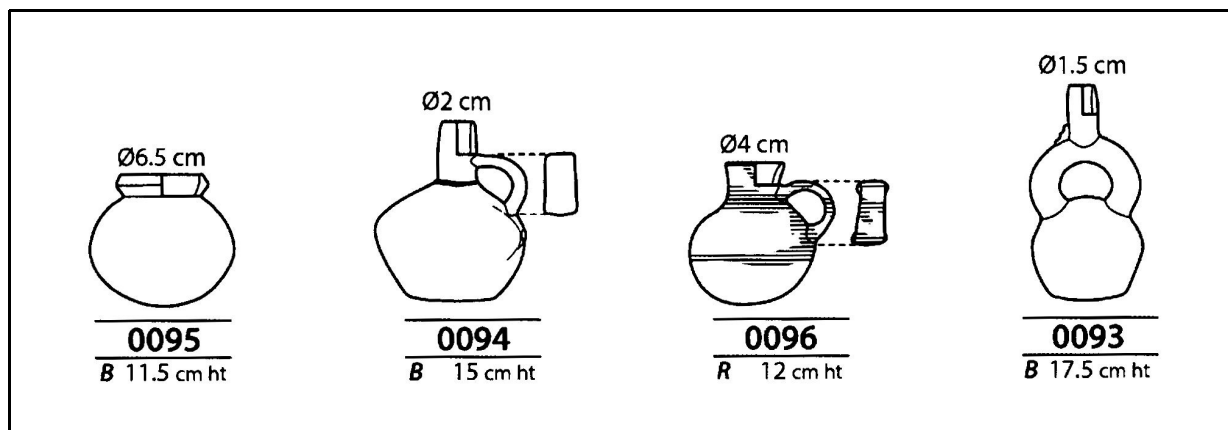


Figure A7.67. Compound VI Cemetery, Tomb I T4, ceramics.

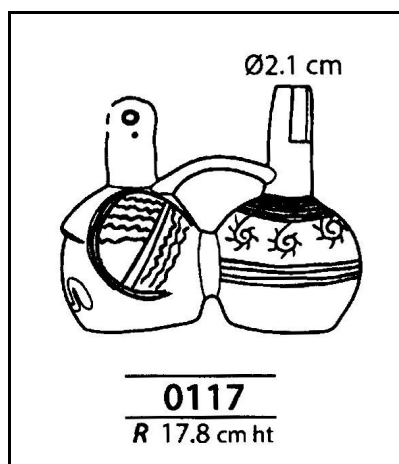


Figure A7.68. Compound VI Cemetery, Tomb II T1, ceramic.

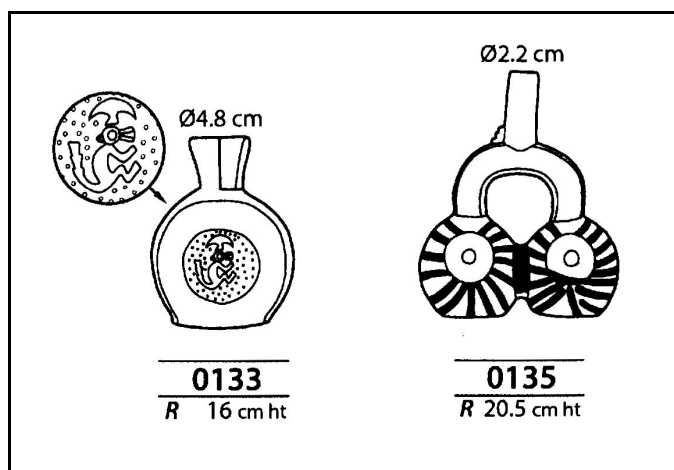
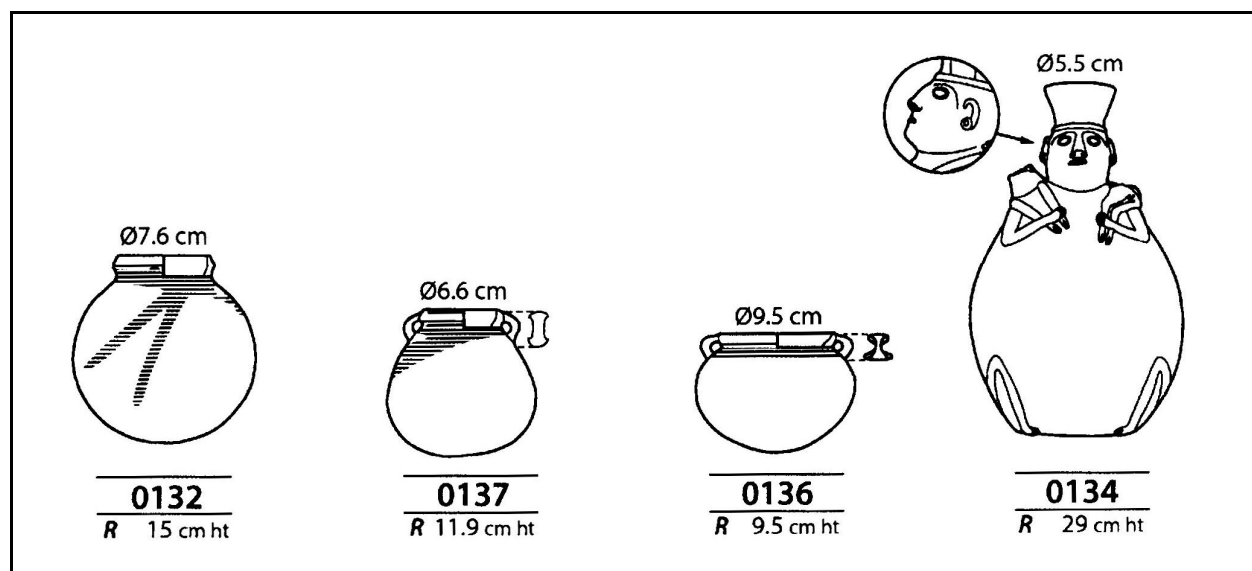


Figure A7.69. (Top and left) Compound VI Cemetery, Tomb II T1, ceramics.

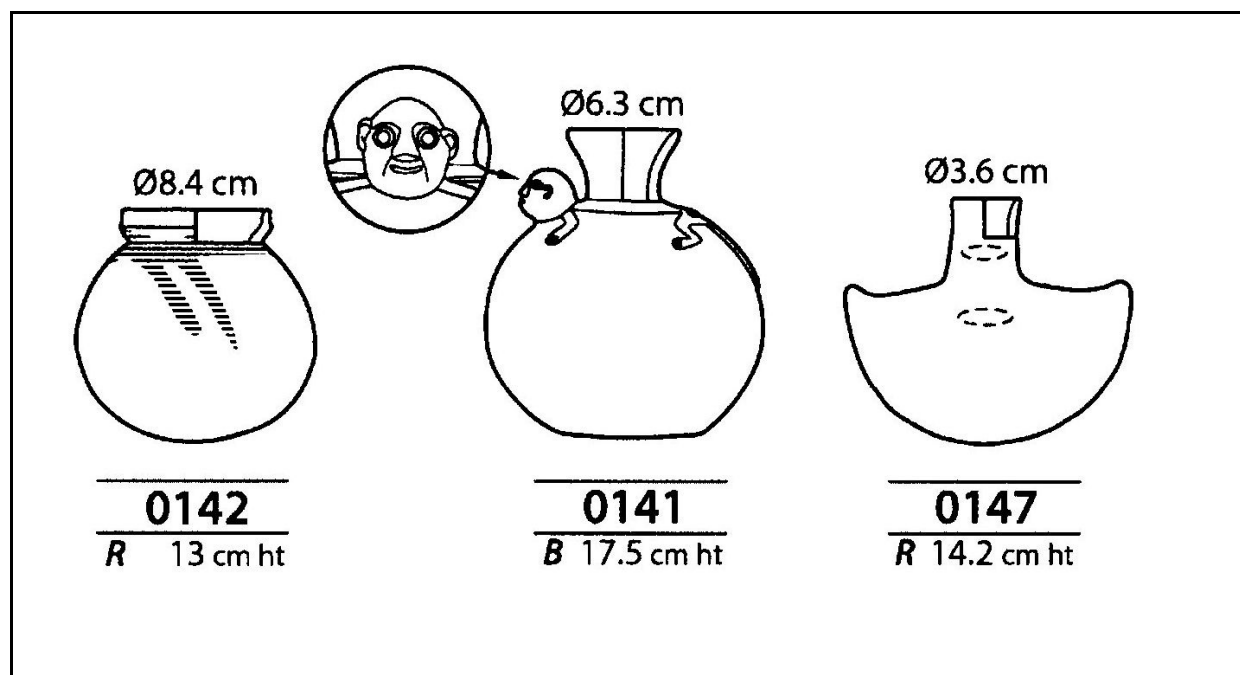


Figure A7.70. Compound VI Cemetery, Tomb II T3, ceramics.

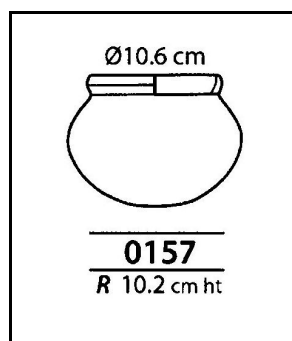


Figure A7.71. Compound VI Cemetery, Tomb II T4, ceramics.

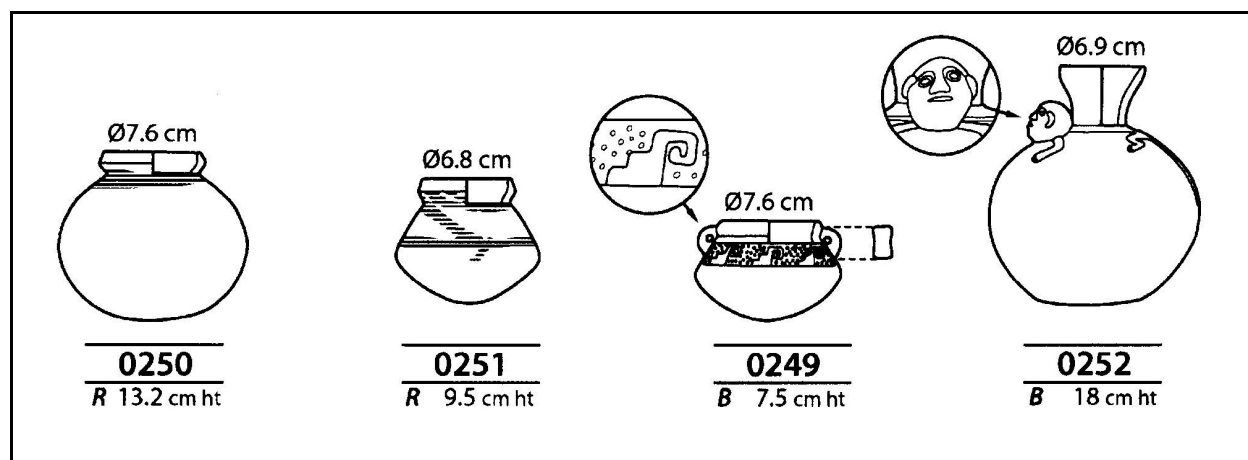


Figure A7.72. Compound VI Cemetery, Tomb III T1, ceramics.

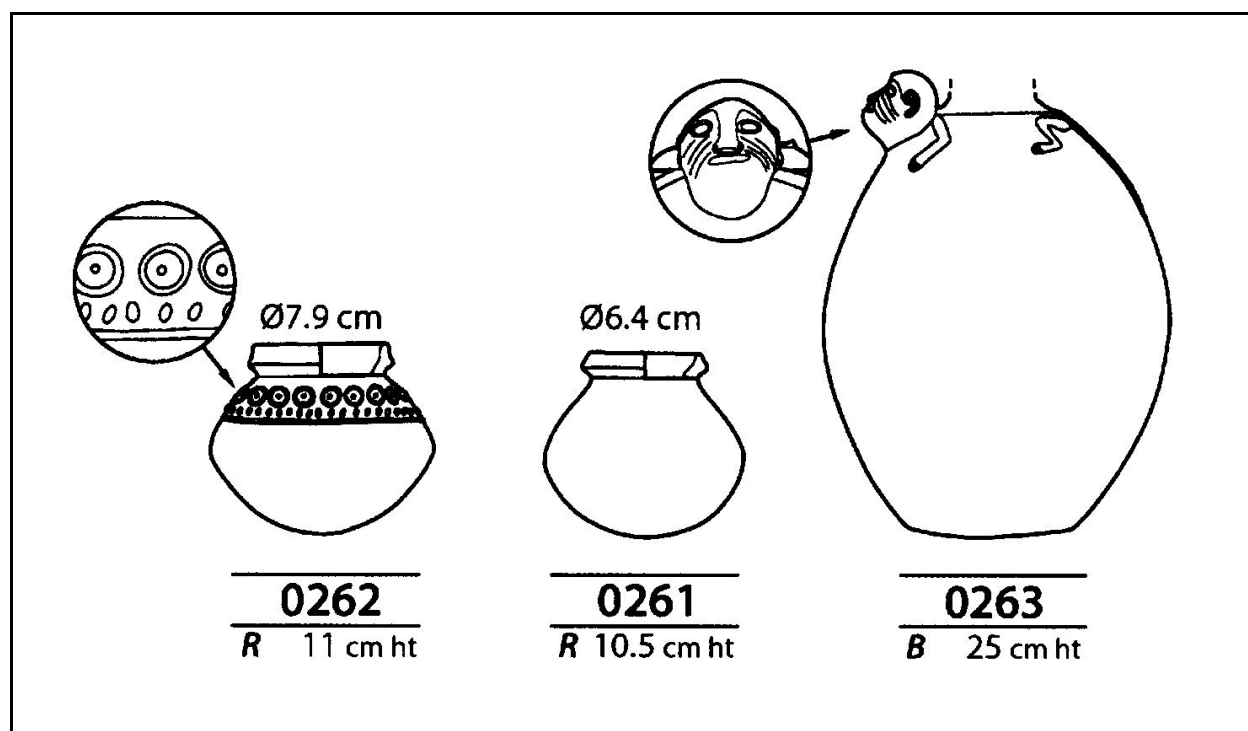


Figure A7.73. Compound VI Cemetery, Tomb III T2, ceramics.

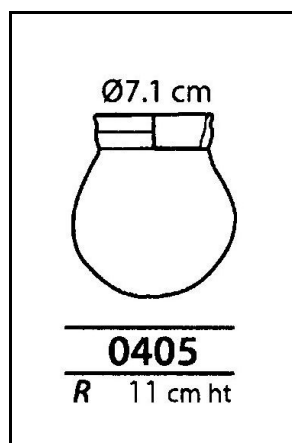


Figure A7.74. Compound VI Cemetery, Tomb III T1, ceramic.

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