

TYPOLOGICAL AND ICONOGRAPHIC ANALYSES OF CASAS GRANDES POTTERY  
AT THE MILWAUKEE PUBLIC MUSEUM

by

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A Thesis Submitted in  
Partial Fulfillment of the  
Requirements of the Degree of

Master of Science  
in Anthropology

at

The University of Wisconsin-Milwaukee

May 2020

## ABSTRACT

### TYPOLOGICAL AND ICONOGRAPHIC ANALYSES OF CASAS GRANDES POTTERY AT THE MILWAUKEE PUBLIC MUSEUM

by

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The University of Wisconsin-Milwaukee 2020  
Under the Supervision of Professor R. Jason Sherman

This thesis presents the results of analyses conducted on 80 ceramic vessels from the Casas Grandes region (Chihuahua, Mexico) currently housed at the Milwaukee Public Museum (MPM). This collection, most of which was donated in 1977, was accompanied with little to no provenience information, and no research has been conducted on the materials since they came to the Museum. Drawing upon published studies of Casas Grandes pottery, a detailed coding scheme was developed in order to record formal and stylistic data that could be used to classify the vessels typologically and chronologically. Fifteen different ceramic types dating to the Viejo and Medio Periods (AD 700-1475) were identified. Iconographic analysis was also conducted to determine the stylistic patterning represented in the collection, thus allowing it to be compared to similar collections at other institutions in the United States, several of which were visited as part of my research. This thesis demonstrates the significant insights that can be gained by analyzing unprovenienced museum collections. It also will allow the Casas Grandes collection to be used at the Museum or in the Milwaukee community for research, programming, and/or exhibition.

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To my family, especially my parents, for everything.

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## ACKNOWLEDGEMENTS

This research would not have been made possible without the help of many people. First, I would like to thank my advisor, Dr. Jason Sherman who was not only a great resource but a support system throughout the process. Not only did I enjoy working in the field with you but having you as an advisor has been a pleasure. Thank you to my committee members Dawn Scher Thomae and Dr. John Richards. Your advice and guidance contributed greatly to this thesis. A special thanks to Dawn who allowed access to the Milwaukee Public Museum's collection and provided support and mentorship throughout these three years.

Additionally, I would not be where I am today without my wonderful family. Your unconditional love and support have been much needed during these last three years. A special thanks to my forever travel buddy, my Mom, who was a research assistant at a couple of museums during the summer of 2018. To my friends at UW-Milwaukee who have been a constant support system for this crazy world called graduate school. You have provided shoulders to lean on many a times and constant advise on all thing's academia.

My research also took me to Chihuahua in 2019 with the Crow Canyon Archaeological Center on an unforgettable trip that enhanced my thesis in several ways. Thank you to Crow Canyon Archaeological Center for offering student funding to allow me to go. Thank you also to the two scholars guiding the trip: Dr. Steve Lekson and Dr. Mike Mathiowetz. Both were invaluable sources of information throughout the trip and beyond.

Lastly, thank you to the four institutions that allowed me to visit and do research on their Casas Grandes ceramics: Eric Kaldahl at the Amerind Foundation, Julia Clifton at the Museum of Indian Arts and Culture , George Maloof at the El Paso Museum of Archaeology, and Tony

Thibodeau and Melissa Lawton at the Museum of Northern Arizona. And thank you to Thatcher Rogers at the University of New Mexico who was my go-to person with all questions related to Casas Grandes.

## **Chapter 1. Introduction**

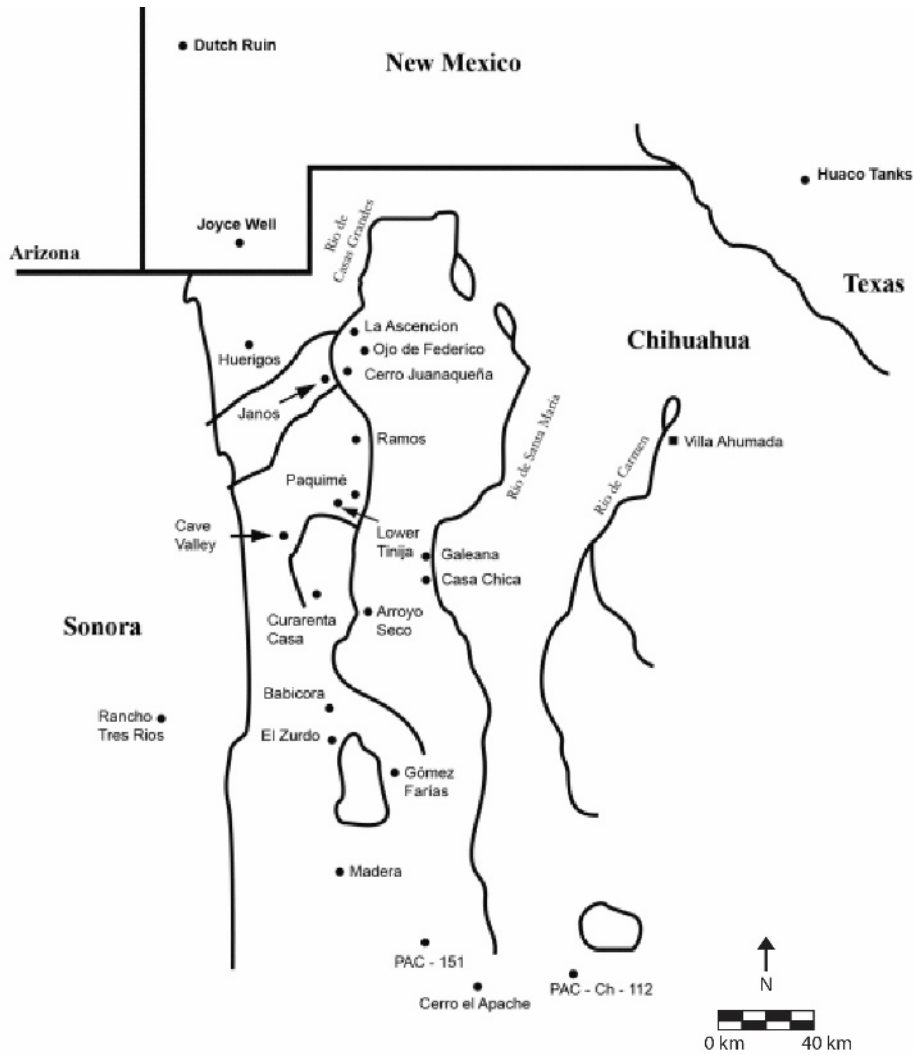
Old collections are frequently undervalued as a basic research resource. Because they lack the documentation and collection controls that are standard today, the research value of old collections is often dismissed. But research potential depends on the integrity of a collection, which is the product of any systematic feature of observation and collection, no matter how primitive.... Because the systematic features of a collection may not be obvious, it is only possible to determine potential from a detailed examination of each case (Brown 1981:65).

This thesis presents the results of analyses conducted on 80 ceramic vessels from the Casas Grandes region (Chihuahua, Mexico) currently housed at the Milwaukee Public Museum (MPM). Drawing upon published studies of Casas Grandes pottery, a detailed coding scheme was developed in order to record formal and stylistic data that could be used to classify the vessels typologically and chronologically. Iconographic analysis was also conducted to determine the stylistic patterning represented in this particular collection, thus allowing it to be compared to similar collections at other institutions in the United States, several of which were visited as part of my research. This thesis also demonstrates the significant insights that can be gained by analyzing unprovenienced museum collections.

### **Brief Introduction to the Casas Grandes Region**

The Casas Grandes region is located primarily within the modern Mexican state of Chihuahua, but also extends into Arizona, New Mexico, and Texas (Figure 1.1). The boundaries of this archaeological culture area have not been defined exactly, and debate continues over the nature and extent of Casas Grandes cultural influence; however, the culture is generally regarded as part of the Southwestern cultural family (Kidder 1916:267). Although the Casas Grandes region was traditionally lumped with the larger Mogollon cultural tradition to the north, many researchers now recognize a distinctive Chihuahuan archaeological tradition of which Casas

Grandes is part (e.g., Cordell and McBrinn 2012:36, 38, 82; Whalen and Minnis 2017:397). Due to their location, people in the Casas Grandes region had extensive trade relationships with groups in the American Southwest to the north, as well as Mesoamerican societies to the south during pre-Hispanic times. The archaeological and historical chronology for the Casas Grandes region spans from about A.D. 700 to 1686. The decorative polychrome pottery for which the region is most famous—and which is the focus of this thesis—dates to the Viejo Period (A.D. 700-1200) and Medio Period (A.D. 1200-1475) (Searcy and Kelley 2016).



**Figure 1.1: Map of the Casas Grandes Region (adapted from VanPool 2003b:2).**

The primary site in the region is called Paquimé; it is also sometimes referred to as Casas Grandes, particularly in the United States, but for clarity I will use the name Paquimé within this thesis. An UNESCO World Heritage Site, Paquimé was the focus of the Joint Casas Grandes Expedition (JCGE) conducted by Charles Di Peso and colleagues from 1958 to 1961—the largest archaeological excavation ever undertaken in Chihuahua. This project was the result of a partnership between Mexico’s Instituto Nacional de Antropología e Historia (INAH) and the Amerind Foundation (Arizona). The Casas Grandes culture also includes a variety of other site

types, such as cliff dwellings located in the Sierra Madre. Many of these sites are located in the Madera municipality outside the city of Madera.

The largest collection of archaeologically recovered Casas Grandes material culture is curated at the Museo de las Culturas del Norte, an INAH museum located at the site of Paquimé (Figure 1.2). Because most sites in the region remain unexcavated, many Casas Grandes artifacts have been donated to other museums by collectors and do not have associated provenience information. However, one should not overlook such collections and the potential contributions they can make to our understanding of Casas Grandes culture. As Hendrickson (2000:3) argues:

Ultimately, the stopping point for many archaeologists seeking to utilize curated collections is that, without context, the potential for cultural interpretation is restricted or marooned within the realm of art historical description. To disregard this data set completely, however, is to turn away potentially invaluable evidence that might expand our current understanding of prehistoric developments. Instead of ignoring these data, it is the archaeologist's responsibility to seek new methods to properly incorporate artifacts without the binding force of provenience.



**Figure 1.2: Museo de las Culturas del Norte at Paquimé (photo by author).**

### **The MPM Casas Grandes Collection**

The majority (67 out of 80) of the Casas Grandes ceramic vessels at the MPM were donated in 1977 by Peter G. Wray (accession number 24696); the accession also included artifacts from the Mimbres area of southwestern New Mexico, such as shell jewelry. The remaining vessels were donated earlier (1960s and 1970s) and include accession numbers 16680, 20717, 21024, 21190, 21209, 21262, and 22156 (see *Appendix A*). The place of origin indicated for the majority of vessels is simply “Casas Grandes” or “Casas Grandes, Mexico”; a more specific city or region is never listed. A jar donated as part of accession 16680 is the only vessel

for which a specific location is indicated (Jemez Springs, New Mexico); this is also the only vessel in the Casas Grandes collection that was found in the United States.

Wray lived in Phoenix, Arizona, at the time of his donation to the MPM. Unfortunately, the museum's documentation includes very little information about him. Several other institutions all over the U.S. have material that was once owned by Wray. Those with Casas Grandes from him include: the Amerind Foundation (Dragoon, Arizona), the Museum of Indian Arts and Culture (Santa Fe, New Mexico), and the Museum of Northern Arizona (Flagstaff). Interestingly, some of the MPM's vessels had original donor numbers either written on them or on a sticker attached by Wray. The Amerind Foundation archives has documentation associated with the vessels they received from Wray that include a similar numbering system. However, this system did not correspond with the one used to label the vessels in the MPM's collection, indicating that Wray used a new numbering sequence for each of his donations.

It should be noted that some of the monographs published by the JCGE researchers include pictures of vessels from Wray's private collection (e.g., Di Peso 1974b:534-539). These volumes were published in 1974 and the MPM collection was donated three years later, so it is possible that some of these vessels now reside at the Museum. However, it was not possible to determine this due to the poor quality of the black and white photos in the monographs.

I was unable to contact Wray in person, since he passed away in 2016, to ask if he had provenience information for the vessels. Unfortunately, living family members could not provide any additional information on the MPM collection. According to a New York Times article, "Mr. Wray, a major rancher who raises cattle and is in agriculture, with large land holdings in Arizona and New Mexico, assembled his collection of thousands of such art works in the late 1960's and 70's. He is selling, he said, to cover losses in his agricultural business" (Reif 1984).

Wray donated and sold hundreds of Precolumbian artifacts to museums around the country. It remains unknown whether he knew the exact provenience for these items before they were brought to Phoenix for his purchase. There is no documented evidence that he went to Mexico himself to obtain the artifacts.

The Casas Grandes collection at the MPM includes jars, bowls, and effigy vessels representing a variety of types and wares, including plain, textured, and painted styles. There are fifteen different types in the collection, including a handful of variants. The majority (80%) are polychromes—and 42% of the collection is of a single type, Ramos Polychrome.

## **Research Goals**

My thesis research had several interrelated goals. This included questions such as, how many Chihuahuan pottery types are represented in this collection? What kinds of design elements were represented in this collection? How do the types and iconography in the MPM collection compare to other collections of Casas Grandes pottery or excavation results? I hypothesized that the MPM collection would include a large number of Ramos Polychrome vessels, as this is the type most frequently found in collections and excavations (e.g., Di Peso et al. 1974b). I also hypothesized that vessels dating to the Medio Period—when the production of Casas Grandes pottery intensified—would be more numerous than those dating to the preceding Viejo Period.

The first phase of investigation focused on classifying each of the 80 Casas Grandes vessels at the MPM typologically and chronologically. I used a coding scheme to record 25 attributes on each vessel. The goal of the second phase of research was to examine iconography on the polychrome vessels in order to create an inventory of stylistic components present in this

specific collection so that it could be compared more easily with other Casas Grandes collections, especially those with associated provenience information. Iconographic analysis also yielded insights into ideological components of Casas Grandes culture. In order to contextualize the MPM collection, I visited four other institutions to study their Casas Grandes ceramics: the Amerind Foundation, the El Paso Museum of Archaeology (El Paso, Texas), the Museum of Indian Arts and Culture in Santa Fe, and the Museum of Northern Arizona. In addition to serving as a basis for comparison, vessels from these museums demonstrate the importance of reviewing other existing collections as potential sources of valuable data.

Additionally, this analysis helps to demonstrate the importance of research on unprovenienced museum collections, especially those from the Casas Grandes region. These museum collections “represent a wealth of untouched data for modern research” (Hendrickson 2003:ii). Lastly, this thesis will increase recognition of a valuable collection housed in a museum without any existing exhibition on the Casas Grandes culture. Hopefully these impressive artifacts can be used for education, research, and exhibition in the future.

## **Significance**

As the largest collection of Casas Grandes ceramics at a public institution in Wisconsin, this research will enhance the local community’s knowledge of and appreciation for the Casas Grandes cultural tradition. No exhibition currently exists at the Museum from this region, and no research has been done on the entire collection since the majority of the vessels were donated in the 1970s. This thesis will therefore call attention to the MPM collection among the Casas Grandes archaeological community. Indeed, many researchers with whom I have spoken have been surprised to learn that a collection of this type exists in Wisconsin.

Additionally, given that relatively few investigations—and particularly excavations—have been undertaken in the Casas Grandes region compared to areas in the southwestern United States and Mesoamerica, examining existing museum collections is more important than ever. Unprovenienced collections have largely been under-utilized in museums all over the country (e.g., Winters 1981), and Casas Grandes materials are no different. The MPM and Wisconsin residents are fortunate to have a such a significant collection of whole vessels when many institutions only have sherds—or no material at all—from the Casas Grandes region.

### **Overview of Thesis**

Chapter 2 provides background information on the Casas Grandes region and the history of archaeological research conducted there. In order to contextualize my own research, I also provide a brief overview of similar studies of Casas Grandes pottery, starting with the definition of a ceramic typology for the region.

Chapter 3 describes the methods used to type and date each vessel, as well as to conduct the iconographic analysis, which focused on the designs and motifs present on the polychrome vessels. This chapter also includes a discussion of data and techniques that were borrowed from similar ceramic studies, especially that of Di Peso et al. (1974b).

Chapter 4 presents the results of both phases of my analysis. These data include the ceramic types present in the collection as well as the time period when each vessel was likely produced. This chapter also includes a detailed discussion of the iconography present in the collection and how it compares to iconography on Casas Grandes pottery at the other institutions that I visited.

Lastly, Chapter 5 summarizes the results of my research and discusses how it relates to other studies of Casas Grandes pottery. I conclude by offering recommendations for additional research and comparisons that may be made between the MPM material and other museum collections.

## **Chapter 2: Background**

This chapter provides background information on the Casas Grandes region as well as the history of archaeological research conducted there. In particular, the history of Chihuahuan ceramic classification and major studies of Casas Grandes pottery that have been undertaken over the past century are discussed in order to contextualize my own research.

### **History of Archaeology at Paquimé and in the Casas Grandes Region**

Compared to the intensively studied Southwestern cultures north of the US-Mexico border, the Casas Grandes region has received less attention from archaeologists. A major exception to this generalization is the primary center of the Casas Grandes world, Paquimé. As noted in Chapter 1, this site was extensively excavated by Charles Di Peso and colleagues in the 1960s. The results of this research were published in a monograph series that included detailed data on ceramics and other artifacts found at the site (Di Peso 1974a, 1974b; Di Peso et al. 1974a, 1974b). Today Paquimé is an UNESCO World Heritage Site, and the research conducted there is key to our understanding of the Casas Grandes cultural tradition. Much more recently, archaeologists—particularly Paul Minnis and Michael Whalen—have undertaken excavations at smaller sites throughout the Casas Grandes region.

There are no known living descendants of the people who lived at Paquimé and in the Casas Grandes region during pre-Hispanic times, which makes learning about the history and archaeology of the area more difficult. However, Lekson (2015) presents an extensive amount of historical and ethnographic information related to Paquimé, including stories from the Acoma, Hopi, and Zuni. There is interesting overlap between the oral accounts of Acoma and Zuni,

where their shared ancestors split in two, each taking an egg and going in opposite directions. Supposedly, those that headed south took a macaw egg with them while those that stayed or went north had a crow egg. It is believed that those who went south eventually founded Paquimé (Lekson 2015:146-151). Additionally, Spanish historical records include a story of two brothers and an old witch or hag. The old woman had a large boulder, later revealed to be made of iron (meteorite). The hag told one brother to erect a city where she placed the boulder, while the other was to continue south. Interestingly, in 1867, treasure hunters discovered a meteorite wrapped in cloth at Paquimé which now resides at the American Museum of Natural History (Lekson 2015:149-150).

Newell and Gallaga (2004:115) argue that Paquimé was the first site to be described by Europeans in northwestern Mexico and the southwestern United States, circa 1584. Other researchers (e.g. Whalen and Minnis 2016) suggest that it was described even earlier, during an expedition led by Francisco de Ibarra and Baltasar Obregón in the 1560s, less than 100 years after the site was abandoned. The Spaniards observed six- and seven-story structures, towers, patios, and beautifully painted houses (Whalen and Minnis 2016:3). Obregón wrote:

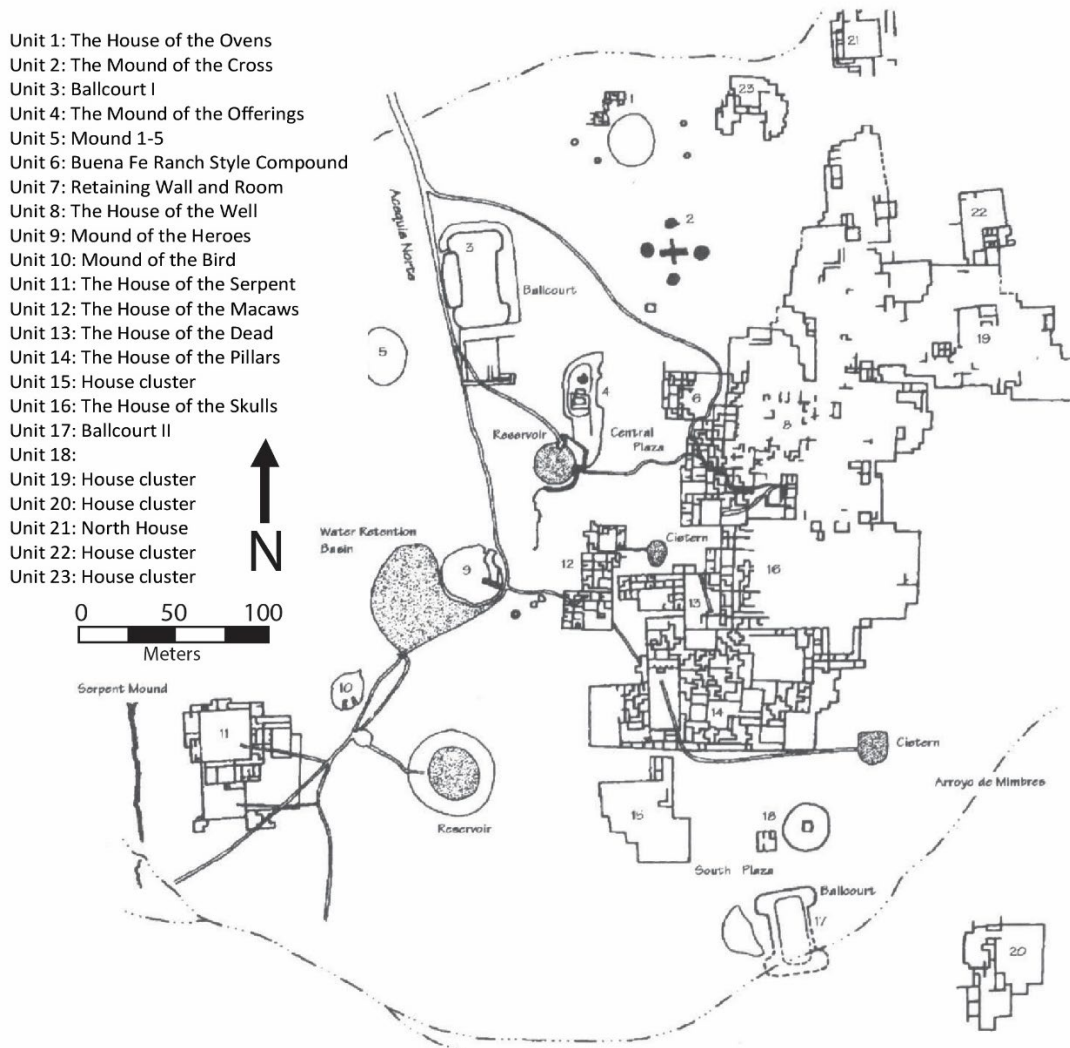
There are many houses of great size, length, and height. They are of six and seven stories, with towers and walls like fortresses for protection and defense against the enemies who undoubtedly used to make war on the inhabitants. The houses contained large and magnificent patios paved with enormous and beautiful stones resembling jasper. There were knife-shaped stones which supported the wonderful and big pillars of heavy timbers brought from far away. The walls of the houses were whitewashed and painted in many colors and shades with pictures of the buildings. The structures had a kind of adobe wall. However, it was mixed and interspersed with stone and wood, this combination being stronger and more durable than boards” (Obregón 1928[1584]:205-206).

The site was also visited by Franciscan missionaries in the sixteenth century (Blackiston 1905:69). Thereafter, little research was done or recorded Obregón in the Casas Grandes region

until the twentieth century. The renowned Southwest and Mesoamerican archaeologist Alfred Kidder visited and wrote about the area as early as 1916, and, in fact, he established one of the earliest classifications of Chihuahuan pottery (Kidder 1916). Later, E. B. Sayles (1936b) compiled a detailed classification that included most of the main Casas Grandes pottery types and is still used by archaeologists today (see Chapter 3 for further discussion of Casas Grandes pottery classifications). Other early researchers who contributed to the development of Casas Grandes archaeology include Eduardo Noguera (1926), Carmen Robles (1929), Henry Carey (1931), David Brand (1935), and Robert Lister (1946, 1953, 1958).

The most important research at Paquimé was conducted centuries after Ibarra and Obregón's expedition, and well after the site's massive painted walls had become ruins (Whalen and Minnis 2016:3-7). The Joint Casas Grandes Expedition (JCGE), undertaken between 1958 and 1961, was "[t]he single largest and most influential project in the history of northwest Mexican archaeology" (Whalen 2001:32). Over fourteen years of field and lab work, millions of artifacts were excavated and studied from the site. Whalen (2001:33) emphasizes the importance of the JCGE: "Few studies done before or since in the U.S. Southwest or in Mesoamerica can match the depth and breadth of the Joint Casas Grandes Project's analysis, and few have set so influential an interpretive standard." The results of the JCGE were published in an eight-volume monograph series entitled *Casas Grandes: A Fallen Trading Center of the Gran Chichimeca* (Di Peso 1974a; Di Peso et al. 1974a). The sixth volume of this series presented ceramic data from the project and, building on earlier work in the region (e.g. Sayles 1936b), established a detailed ceramic typology that has served as a foundation for all subsequent research, including this thesis.

Although some survey and excavations have been conducted in the Casas Grandes region in the years following the JCGE, Paquimé is still largely unexcavated (Cordell and McBrinn 2012:273). Compared to other sites in the Southwest, “Casas Grandes has to date been studied at a level so far below what has been achieved among its northern neighbors that it scarcely can be discussed in the same terms” (Whalen and Minnis 2003:2). Nevertheless, the research that has been undertaken at Paquimé has revealed its many unique features. Excavation data indicate that during its heyday, the site may have had as many as 2,000 rooms and housed more than 2,000 people. It also has two Mesoamerican-style I-shaped ball courts, several platform mounds, such as the Mound of the Cross and the Serpent Mound, and an advanced canal system to carry water into and out of the city (Figure 2.1). Several other features may have been used communally, such as agave roasting ovens. Thousands of trade goods were also recovered in the excavations, including turquoise, marine shell, and copper artifacts. Paquimé is also famous for its breeding pens in which turkeys and scarlet macaws were kept (Whalen and Minnis 2016:3-15).



**Figure 2.1: Paquimé site map (adapted from Ravesloot et al. 1995:224).**

In recent years Whalen and Minnis have undertaken research in and around Casas Grandes. In 1994 and 1995, they conducted a settlement pattern survey in order to study the Casas Grandes regional system. They documented over 300 sites dating to the Medio Period (AD 1200-1450), and the size, spacing, and composition of these sites suggest a complex, regional settlement system (Whalen and Minnis 2001, 2009). A “Core Zone” within 30 km of Paquimé includes sites with large ovens, agricultural terraces, ball courts, and the stone doors of birdcages

for parrots. About half of the sites documented during the survey were located between 30 and 90 km from Paquimé (designated the “Middle Zone” by Whalen and Minnis). In contrast to evidence of large group activities (e.g., public feasting) found at sites in the Core Zone, settlements located in the Middle Zone consist of purely domestic facilities; ball courts, extensive agricultural terrace systems, and large ovens are rare or absent at these sites. The “Outer Zone” includes sites located more than 60 km from—and that were least influenced by—Paquimé (Whalen and Minnis 2001:157-176). Whalen and Minnis (2009:3-5) concluded that the Core Zone was “the most organized part of the Casas Grandes regional system.” Moreover, the results of their research suggest that proximity to the primate center had important effects on daily life in the Casas Grandes region.

Other sites in the Casas Grandes region (Sierra Madres) include cliff dwellings (e.g., Cueva de la Olla, Cueva Grande, Cueva de la Serpiente), which are found throughout the different zones defined by Whalen and Minnis. The Outer Zone includes cave sites in the Sierra Madre Occidental. Although such sites are often less accessible than those located outside of canyons, they nonetheless exhibit many characteristics associated with Casas Grandes culture. Indeed, scholars have highlighted various attributes linking sites in this region, including T-shaped doorways, ball courts, adobe architecture, and Casas Grandes polychrome pottery (Di Peso et al. 1974a; Lekson 1999:175-181; Mathiowetz 2011:497-506; VanPool and VanPool 2012:25-30; Whalen and Minnis 2001:157-176; Whalen and Minnis 2009:77-86). T-shaped doorways and adobe architecture are the most obvious architectural features linking these sites, as I personally observed during my explorations of the region in 2019 (Figure 2.2).



**Figure 2.2: T-shaped doorways; left: Paquimé, right: Cueva de la Serpiente (photos by author).**

Recent research in the vicinity of Paquimé has focused on specific time periods, especially the Medio Period, when Casas Grandes culture was at its apex. Investigations have also examined more distant sites related to Paquimé in order to better understand broader regional trends (Whalen and Minnis 2016). For example, the Joyce Well Site in southern Hidalgo County, New Mexico, was excavated in 1963 and 1999. The first season yielded both locally made and imported pottery. The former included examples of Ramos Polychrome, one of the most abundant and widespread types of Medio-period Casas Grandes pottery. Such evidence may indicate that the inhabitants of the Joyce Well Site were “either Casas Grandes people or their close relatives inhabiting a northern peripheral village” (Skibo et al. 2002:44-45).

## **Regional Relationships**

Recent research has also compared the Casas Grandes region, especially Paquimé, to the southwestern United States and Mesoamerica. Many similarities exist between these areas, and scholars suggest that additional archaeological research is needed to understand the extent of interregional relationships and the role Paquimé played as an intermediary. For example, Mathiowetz (2011:x) writes: "A central concern of archaeologists has been to seek connections between [the] two broad regions and [the] social changes, whether in material culture or ideology, that help to clarify the nature and extent of long-distance interaction and integration of people in the past." His dissertation (Mathiowetz 2011) compares iconography in the Casas Grandes region, Mesoamerica, and the southwestern United States and proposes that religious ideologies were shared between these regions. Much of Mathiowetz's discussion of iconography focuses on the plumed serpent or other painted deity imagery (see Figure 2.3). Unfortunately, the MPM collection does not include any painted images of this kind, so it is difficult to make direct comparisons between the vessels I analyzed, and the particular iconographic elements discussed by Mathiowetz.



Figure 2.3: Example of the kind of painted deity and macaw iconography discussed by Mathiowetz (2011). Photo by author from the Museo de las Culturas Norte.

Stephen Lekson has long argued that there was a significant relationship between the Southwestern United States and the Casas Grandes region, especially in his book *The Chaco Meridian: Centers of Political Power in the Ancient Southwest* (Lekson 1999) and the second edition (Lekson 2015). As noted above, T-shaped doorways are one of the more obvious visual links, but evidence of this interregional relationship also includes trade goods, iconography, and other architectural features (Lekson 1999).

Ultimately, most Casas Grandes archaeologists seem to concur with the perspective expressed by Whalen and Minnis (2003:328):

We do not seek to deny the importance of distant contacts and of borrowing from the outside. Mesoamerican elements clearly were critical parts of the ritual system and political prestige economy that underlay power at Casas Grandes. Instead of

being reflections of distant developmental stimuli, however, we interpret these elements as imports used to support and augment the power of local political entrepreneurs.

### **Casas Grandes Ceramic Studies**

Because the Casas Grandes region is well known for the polychrome pottery produced there, ceramic studies have constituted much of the research conducted in the area. Early studies focused on the relationship between Casas Grandes and sites in the U.S. Southwest and Mesoamerica (e.g., Carey 1931; Chapman 1923; Hewett 1908; Kidder 1916; Lumholtz 1902; Brand 1933, 1935; Sayles 1936b). As noted above, Kidder was one of the first archaeologists to classify Chihuahuan (Casas Grandes) wares, dividing them into four categories: Rough dark ware, Polished blackware, Redware, and Painted ware (Kidder 1916:253). Building on Kidder's work, other scholars began to refine the Casas Grandes ceramic typology. Di Peso et al. (1974b) undertook the largest analysis of Casas Grandes pottery, and even more importantly, the material they studied came from a known site (Paquimé). Unfortunately, not all Casas Grandes collections have associated provenience information. For example, the collection that Kidder studied was "acquired by purchase in lots from local diggers and are accompanied with few or no data" (Kidder 1916:253). The MPM collection likewise lacks specific provenience information.

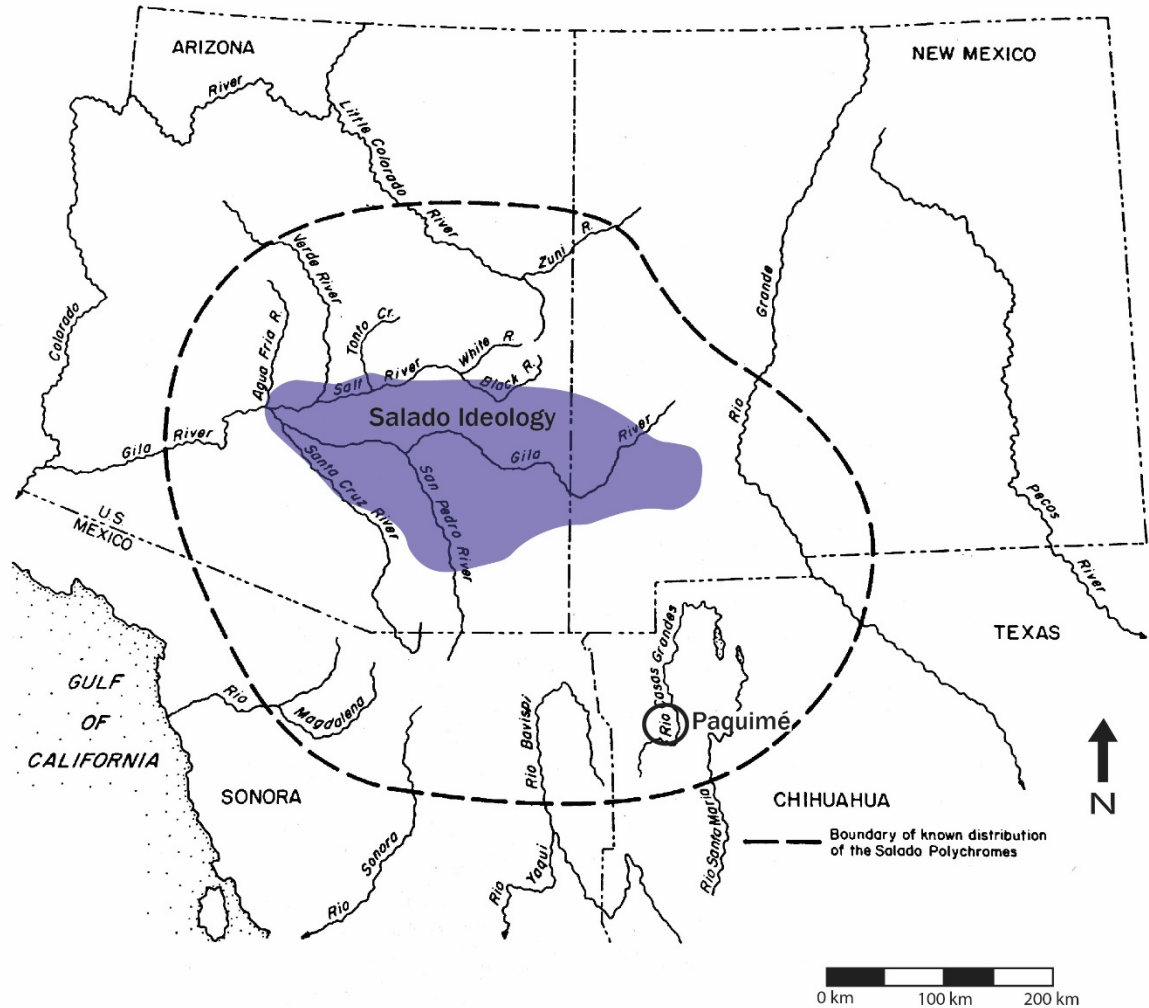
Recent investigations undertaken in the area are quite varied, especially those focused on ceramics. Mathiowetz's (2011) dissertation and ongoing studies compare the Casas Grandes and Aztatlán cultures with special interest in iconography and symbolism. This includes a focus on human or supernatural forms on Casas Grandes pottery. Phillips (2012) discusses ceramic chronology and trends through time, such as continuity between polychrome types in which red and black paint are not touching; he suggests that this represents a "culture's selective expression of the technology available to it" (Phillips 2012:38). Searcy and Pietzel (2017) are among the

few archaeologists whose research focuses solely on the Viejo Period. They stress the need for revisions to Viejo Period type classifications, and they plan to study museum and personal collections with whole vessels in hopes of addressing these issues. Whalen and Minnis (e.g., 2001, 2009, 2012, 2016) have done the most archaeology in the Casas Grandes region in the last twenty-five years. Their research has helped to revise chronology and typologies in the region as well as explore smaller, outlying sites. Their discussions of design styles/horizons, and how these may be used to further divide and date Medio-period painted wares (Whalen and Minnis 2012:406-410), are particularly relevant to this thesis. Christine and Todd VanPool are well-known for their publications on the iconography on painted pottery in the region. In her dissertation, Christine VanPool (2003b) provides a very detailed analysis of ceramic iconography from the region and argues that the duality represented on Casas Grandes pottery is related to larger themes in Casas Grandes belief systems, a point that I will return to in Chapter 4.

Lastly, important similarities have long been recognized between the Salado and Casas Grandes polychrome traditions. The Salado culture is not well understood. Many archaeologists believe that the Salado tradition began with a group that archaeologists today call the Kayenta, who were, socially distinct from other pueblo groups (Hopi and Zuni). In the later thirteenth century AD the Kayenta emigrated to several areas in southeastern Arizona (Clark and Abbott 2017:362-364) where, as Borck (2013:22) explains, they transformed social interactions among other groups,

Widely dispersed in small enclaves, they essentially inverted their former social organization, creating long-distance ties among these enclaves throughout the entire southern Southwest, as well as short-distance ties with local groups in the areas where they resettled. This intricate web of connections and group interactions, spanning cultural and environmental boundaries, was probably a major impetus for the widespread Salado phenomenon, which arguably had a strong ideological component focused on inclusion

It is believed that Salado ceramics played a key role in this process: "...the Kayenta and their descendants initiated an inclusive ideological movement that was expressed largely through iconography on the Salado polychromes they manufactured" (Clark and Abbott 2017:367). This ideology eventually spread to a much larger area, as did Salado polychrome pottery, which was very widespread in the American Southwest and has been found at sites in the Casas Grandes region (Figure 2.3). In fact, Di Peso's excavations at Paquimé uncovered seven types of imported pottery, three of which were Salado types (Tucson Polychrome [two variants], Tonto Polychrome, and Gila Polychrome). Likewise, Casas Grandes pottery has been found in excavations in the Salado region. This overlap has complicated efforts to define the Salado tradition, especially pottery (Crown 1994:11-16).



**Figure 2.4: Distribution of Salado polychromes in the fourteenth century AD (adapted from Crown 1994:2) and the spread of Salado ideology (adapted from Clark and Abbott 2017:366).**

In addition to evidence of interregional trade, the Salado and Casas Grandes traditions were characterized by a number of stylistic similarities, although the nature of influence between these cultures/areas is debated by scholars. Crown (1994:224) notes that Salado Polychrome designs “show influence from southern Arizona and northern Chihuahua.” Likewise, Casas Grandes polychromes are similar to Salado Polychrome pottery (also referred to as Roosevelt Red Ware) in several ways. The most common iconography depicted on Salado polychromes is serpent imagery (Clark and Abbott 2017:367). This imagery is also quite common on Casas

Grandes pottery, as will be discussed in Chapter 4. Escondida Polychrome, a Casas Grandes type defined by Di Peso and Fenner (1974b), exhibits traits of Roosevelt Red Ware, especially Gila and Tonto Polychrome; it has a light-colored paste like Ramos Polychrome but with designs similar to Salado Polychrome types. Bowls are characterized by a white slip with black paint, and their exteriors are red (OAS 2017). Controversy surrounds this type and its relationship to the Salado and Casas Grandes pottery traditions. Some researchers believe Escondida could represent a hybrid of the two traditions while others have different ideas about how the Casas Grandes and Salado cultures influenced one another (e.g. Adams 1991; Crown 1994; Wilcox 1993). Interestingly, the people who produced Salado polychromes depopulated the area by A.D. 1450 (Crown 1994:224)—which was about the same time that the Medio Period (during which Casas Grandes culture reached its zenith) ended.

### **Iconographic Studies**

Iconographic analyses are very important when studying archaeological remains. Iconography can provide windows into the ideology of its creators, and patterns and similarities can suggest relationships between and within cultures. Although iconographic representations can differ considerably from culture to culture, decorated pottery is a common medium that tends to preserve well in the archaeological record.

Many pre-Hispanic cultures in the American Southwest produced pottery with painted designs and motifs. The elaborately painted ceramics of the Mimbres culture are perhaps the most famous. While representational painting mainly occurs on bowls, these images include a wide range of figures from humans to animals to mythical figures. Through a combination of ethnographic research and ceramic analysis, painted figures on Mimbres ceramics can be linked

to origin stories and myths (Cordell and McBrinn 2012:218-19). Although there are no clear living descendants of pre-Hispanic Casas Grandes society, inferences about ideology and other facets of Casas Grandes culture can be made based on iconographic representations on pottery.

As outlined by Munson and Hays-Gilpin (2017), scholars in the Southwest are currently pursuing three different approaches to the study of iconography: formal, informed, and artifactual. Formal analysis is “essentially an art historical mindset” which “focuses on the content of the image itself, considering the shape/structure of the image, rather than material or contextual aspects (Munson and Hays-Gilpin 2017:671). While this approach is certainly appropriate with more distinctive iconographic forms (e.g., bird effigies or painted macaws), it may have limited value when analyzing more abstract iconography such as geometric designs. Secondly, the informed approach “draw[s] on information external to the images themselves,” such as ethnography and descendant communities (Munson and Hays-Gilpin 2017:672). Unlike some archaeological cultures in the northern part of the Southwest, Casas Grandes does not have a clear descendant community. This makes the second approach more difficult, although there is certainly historical data on the Casas Grandes region, as mentioned previously in this chapter. Lastly, the artifactual approach to iconographic analysis recognizes that “[i]mage-making is a complex process” and that “not all images are equal: a bird painted on a wall is not necessarily the same as a bird woven into a basket” (Munson and Hays-Gilpin 2017:672). This approach considers the materials used to create iconography to be as important as images themselves (e.g., a color may have an association with a natural phenomenon such as water) (Munson and Hays-Gilpin 2017:672-673).

My analyses of iconography on vessels in the MPM collection draws upon the various approaches outlined above, when possible, and within the limitations imposed by a lack of

associated provenience information. Links can be made between the iconography and other aspects of Casas Grandes culture preserved in the archaeological record, such as architecture. Data from my iconographic analyses can also be used to make connections to similar studies and collections with provenience records, and to suggest additional research that would further strengthen my interpretations. They also contribute to a broader understanding of the Casas Grandes culture. Finally, this thesis briefly touches on the theoretical debate regarding Paquimé's relationships to the American Southwest and Mesoamerica, and to with region the site was most closely associated. Ceramic iconography suggests that these relationships were complex and, like many archaeological issues, not so black and white.

### **Chapter 3. Methods**

In this chapter I explain the methods used to type and date each of the ceramic vessels in the MPM's Casas Grandes collection as well as examine iconography on the polychromes. Because no exact provenience was known for the collection, a detailed coding scheme was developed for the ceramic analysis. The coding scheme included attributes derived from other published Casas Grandes ceramic studies, particularly Di Peso et al. (1974b), Phillips (2010), and Minnis and Whalen (2015).

#### **Ceramic Analysis: Coding Scheme**

The coding scheme used to record qualitative and quantitative data for each vessel in the MPM collection included 26 attributes, many of which were modeled after the coding scheme published in the sixth volume of the JCGE monograph series (Di Peso et al. 1974b:18). The attributes included vessel number, accession number, old collector number, vessel form, effigy or miniature, orifice form, vertical section, neck form, rim form, horizontal section, handle presence and type, temper, exterior surface treatment, interior surface treatment, manufacture method, paint, decoration, paste texture, orifice diameter (cm), maximum height (cm), maximum width (cm), hanging holes, residue, ware, type, and time period. Period dates were based on Minnis and Whalen (2015): Viejo (AD 700-1200) and Medio (AD 1200-1475). Notes on the current condition of each vessel, as well as additional comments, were also recorded. The complete coding scheme, including all of the attributes and variants that were observed during the analysis, are provided in Appendix B.

## *Ceramic Types*

Casas Grandes pottery types were first defined by Kidder (1916), Carey (1931), and Brand (1935). Brand defined what would later be known as Ramos Polychrome, as well as the less common types, Babícora and Villa Ahumada Polychrome. Sayles (1936a) named Ramos Polychrome and added Dublán, Carretas, and Corralitos Polychromes as well as Madera Black-on-red. Table 3.1 summarizes Sayles' definitions of the types represented in the MPM collection. Di Peso and his colleague's (1974b) work expanded the classifications even further and included many new subcategories.

**Table 3.1: Definitions from Sayles (1936a:1-56) and adapted from (Lee 2013:132).**

Type	Color	Shapes
Babícora Polychrome	Dark cream to light brown or tan surface	Bowls, jars, effigies
Carretas Polychrome	Surface is light yellowish-brown to deep orange	Bowls, jars, effigies
Corralitos Polychrome	Dull brownish-red or tan	Jars, effigies
Dublán Polychrome	Cream or light tan surface	Jars and Effigies
Madera Black-on-red	Brown or full tan to deep red or orange	Bowls, jars, effigies
Playas Red	Brilliant reddish-brown, or orange	Bowls, jars, effigies
Playas Red Incised	Dull brownish-red or tan	Jars, effigies
Ramos Black	Dark grey to jet or black surface	Bowls, jars, effigies
Ramos Polychrome	Surface mellow old ivory shade ranging from almost pure white to brown	Bowls, jars, effigies
Villa Ahumada Polychrome	Brown or tan surface; white or ivory slip on zone of decoration	Bowls, jars, effigies

When typing the MPM collection I referenced several of these earlier sources, especially Di Peso et al. (1974b) as well as Sayles (1936a). I also referred to the “Pottery Typology Project” website maintained by the New Mexico Office of Archaeological Studies (OAS 2017), which includes excellent information (based on the most recent classifications) for five polychrome, one bichrome, and six plainware Casas Grandes pottery types. David Phillips’ “Casas Grandes Pottery: A Key” website (Phillips 2010) likewise contains valuable information, particularly for less common vessel types. I also used typing trees presented by Lee (2013:135; see Figure 3.1) and Hendrickson (2003:8) when classifying vessels in the MPM collection. Lastly, Thatcher Rogers (University of New Mexico, Ph.D. student), a colleague with experience typing Casas Grandes pottery, was consulted to get his opinion on vessel classification.

While Di Peso et al. (1974b) is a foundational and often-cited source, it can be difficult to use and the classifications it includes have received considerable criticism in the years since it was published. Some researchers argue that the subcategories and variants listed in the monograph are too narrow. For example, Hendrickson (2003:9) writes: “The conflicting traits listed in individual type descriptions and the problem of affixing variant status on incomplete vessels has caused most archaeologists to disregard Di Peso’s categories.”

**Table 3.2: Polychrome types (adapted from Lee 2013:135).**

Textured	Type of Texture	Slip	Slip Color	Surfaces Slipped	Unslipped Surface Color	Design	Type		
No		Yes	White only	Exteriors of jars & bowls. Slip is soft & often worn away in places.	Tan Gray Brown	Bold B&R over white slip. Lots of opposing B&R lines, loose designs, & lots of open space.	Villa Ahumada		
				Bowl Interiors, jar exteriors (harder slip, less worn than above)	Orange Gray-Red	Bold Black Designs. (sometimes B&R) over the unslipped white surface.	Huerigos-jars: white exterior, unslipped interior		
			Red only	Bowl exteriors	White to Light Gray	Bold Black geometrics (sometimes B&R) over the unslipped white surface	Escondida R&W slip: Gila		
		No					White to Light Gray	Fine B&R geometrics. Red solids w/ fine black outlines. Pendant dots on outlines, tight precise designs. Some zoomorphs, effigies.	Ramos
							Tan, Light Red, Gray Brown, Brown	Bold, balanced geometrics in B&R swirls, bull's eyes, circles often used. Lacks precision of Ramos.	Babicora
							Orange, Gray/ Orange	Bold, linear B&R lines, much opposition of B&R lines. Triangles often seen. Black paint is a subglaze.	Carretas
Yes	Textured neck bands, mostly corrugated or corrugated incised; paint below bands.	No			Light Gray/ Tan	Thin, alternating lines of B&R. Much use of parallel lines. Some parts have only black lines.	Mata (Viejo type) rare		
	Fine corrugated. May be with incising, painted over corrugations.	No			Light Gray	Thin-to-medium geometrics in sloppy B&R. Simple designs (e.g. Chevrons) painted over the fine corrugations.	Dublan-rare		
	Fine, incised lines around painted lines, punching also.	No			Red-Brown, Light Brown	Thick opposing B&R lines. Frequent bands of B&R geometrics Thin, incised lines separate the B&R parts. Punched areas can also separate.	Corralitos-rare		

In any archaeological classification of prehistoric materials, there is some degree of subjectivity and overlap among categories. Moreover, classifications that were established in the early twentieth century were adapted when Di Peso and his colleagues unearthed more material in the 1960s, and their classification is, in turn, being further modified today. As with any archaeological study, especially artifact classification, our understanding is always changing. Artifacts from the Medio Period are the most studied because of researchers' interest in painted wares and the boom in pottery production that occurred during that period; in contrast, earlier artifacts from the Viejo Period have been studied less and are therefore not as well understood. Additionally, although few sites outside the core area near Paquimé have been excavated, new information from research in this zone has increased in recent years. Such findings are changing our understanding of the Casas Grandes region and the classification of Casas Grandes pottery. Thus, the ceramic typology presented in this thesis will inevitably be debated in the future.

Babícora Polychrome and Ramos Polychrome were the hardest types to distinguish in the Museum's collection. As noted in Figure 3.1, Babícora is often described as having decoration that "lacks the precision of Ramos" (Lee 2013:135). This distinction can be quite subjective especially when classifying a somewhat smaller sample of vessels such as the ones in the MPM collection.

### *Ceramic Chronology*

Dating in the Casas Grandes region has been problematic, especially regarding ceramic types. Tree-ring samples from the area are poor when they exist at all. The JCGE researchers collected 386 tree-ring samples from Paquimé which produced 53 dates spanning a 294-year time period from AD 1044 to 1338. Although all were noncutting dates, Di Peso argued that they

were near-cutting dates, assuming few exterior rings were missing (Dean and Ravesloot 1993:89). However, researchers now consider these dates to be inaccurate because the *vigas* (structural beams) from which they were taken had been trimmed (Dean and Ravesloot 1993, 1995). Additionally, the last prehistoric period defined by Di Peso, Tardío, has subsequently been removed from the Casas Grandes chronological sequence by most archaeologists. As my research was based on the most current typological and chronological schemes, vessels were dated to either the Viejo or the Medio Period. Given that the MPM collection is unprovenienced, my chronological classification of vessels is based solely on their typological characteristics rather than contextual data.

Recent research has begun to refine the placement of some types within time periods, especially the three most common polychromes (Ramos, Babícora, and Villa Ahumada) within the Medio Period (e.g., Hendrickson 2003; VanPool 2003b; Whalen and Minnis 2012). For example, archaeologists have introduced the terms Design Horizon A and B to divide painting styles within the Medio Period; the division suggests that earlier, coarser painting may have led to fine, complex styles (Hendrickson 2000, 2003; Whalen and Minnis 2012). However, this progression is still debated. Regardless, most researchers agree that Ramos Polychrome is a finer, more elaborate type than Babícora and Villa Ahumada (Di Peso et al. 1974b; Hendrickson 2000, 2003; Whalen and Minnis 2012).

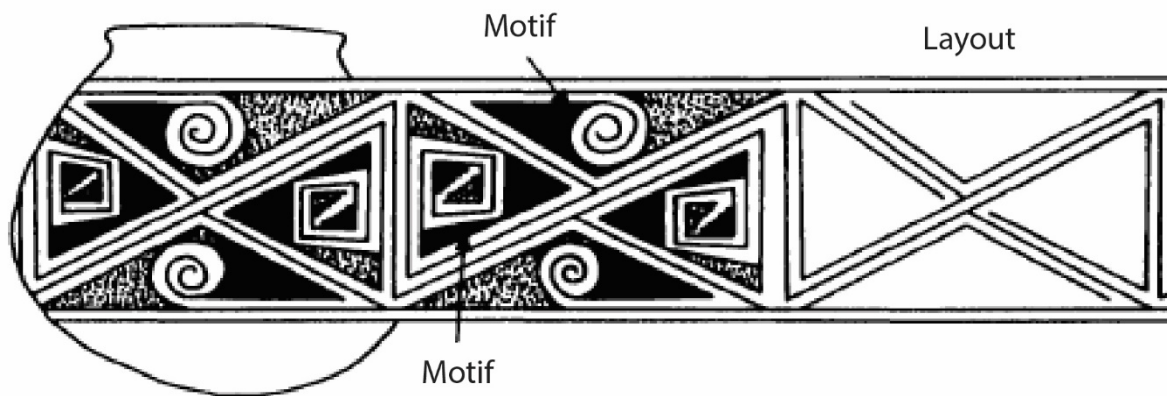
Phillips (2010) believes the notion that Babícora predated, and evolved into Ramos, is too simple. Instead, he suggests that Babícora changed over generations as people become more skilled at intricate painting: "...the locally dominant Medio Period type, Babícora Polychrome, shows a tendency toward finer and more widely spaced lines, while the potters became much better at creating a dynamic balance between red and black, and between painted and unpainted

spaces” (Phillips 2012:36). Moreover, Ramos Polychrome might have links to Mimbres pottery rather than evolving out of a Viejo type (Phillips 2012:38-40).

In my analyses I did not attempt to narrow the time periods to which I assigned vessels, with the exception of two vessels (object numbers 57311 and 57312) that may be classified as Babícora Polychrome style B, which represents Design Horizon B (Thatcher Rogers, personal communication 2020). While confirmed dates for Design Horizon A and B do not yet exist, it is generally agreed that earlier Horizon A designs led to finer, later Horizon B designs (Hendrickson 2000, 2003; Whalen and Minnis 2012). Therefore, these are the only two vessels in the collection that could be assigned to a more restricted period of time within the (later) Medio Period.

### Design Analysis

A design coding scheme was created to systematically record data on the iconography represented on the Casas Grandes vessels in the MPM collection. The attributes included in this coding scheme were adopted from several other ceramic studies, as noted below. The coding scheme incorporates two main design components: layout and motifs (see Figure 3.1).



**Figure 3.1: Example of motif and layout (adapted from Hendrickson 2000:206).**

## *Layout*

Layout is defined as “the framework of lines that provides the basic design structure on the surface of a vessel” (Lee 2013:213). The layout classification I used was largely derived from the coding scheme developed by Di Peso et al. (1974b:7-12) to record design layouts. This system has been used by other researchers to analyze similar collections (e.g., Hendrickson 2000).

Recording the layouts present in the Museum’s collection was much more labor-intensive than anticipated. After using Di Peso’s coding scheme for some vessels, I decided to simplify the terminology. The layouts defined in Di Peso et al. (1974b) are highly specific and include several subcategories within each band layout option. Indeed, their classification scheme includes over 300 variants, and I found some of these to be contradictory as well as subjective. Other researchers have commented on some of the issues with the JCGE scheme. For example, Hendrickson (2000:68-69) notes:

...as with Di Peso’s type descriptions, the layout variants were found to overlap layout classes, specifically examples associated with 3-Line and Semi-Paneled format.... Layout variants were originally incorporated in this study to enable a more specific comparison.... However, upon completing the analysis of layout, it was determined that the immense diversity and uneven distribution of layout variants would prove too difficult to incorporate at this stage.

Likewise, Lee (2013) opted to use a simplified version of the JCGE scheme and primarily consulted earlier work by Kidder (1916).

The classification of layouts that I ultimately used draws upon both Di Peso et al. (1974b:12-15) and Hendrickson (2000:68). These sources use the same layout categories but different layout definitions. Generally, I found Hendrickson’s terminology easier to understand,

although I also used some definitions from Di Peso et al. (1974b). For the sake of clarity, I have cited the source from which each definition was derived below.

Layout designs observed on vessels in the MPM collection were divided into three categories: (1) Primary Layout, (2) Secondary Layout, and (3) Over-All Layout. Primary and secondary layouts apply to the exterior of a vessel including both jars and bowls. The primary layout is the most dominant or main layout while the secondary is an additional layout on some vessels. For example, Figure 3.2 shows a primarily layout. Over-All layout is only applicable to bowls with interior decoration. It should be noted that Hendrickson (2000) includes only primary layout categories, and Di Peso et al.'s (1974b:12-15) descriptions of secondary layouts are less detailed than primary layouts. Therefore, I composed my own definitions for the four secondary layouts present in the MPM collection based on the descriptions and illustrations in the JCGE monograph.

#### *Primary Layout* (Figure 3.2)

1. *Simple*: “Continuous solid colors and/or simple repeated, continuous or alternating motifs” (Di Peso et al. 1974b:7-15)
2. *Two Line*: “Layout composed of lines extending from the upper and lower borderlines that repeat around the band” (Hendrickson 2000:68).
3. *Four Line*: “Layout composed of lines extending from the upper and lower borderlines that interact with a third and fourth line running continuously around the vessel” (Hendrickson 2000:68).
4. *Paneled*: “Layout is divided by vertical lines into separate rectangular panels: vertical lines attached to upper and lower borderlines” (Hendrickson 2000:68).
5. *Semi-Paneled*: “Layout subdivided by vertical lines into rectangular panels; vertical lines do not necessarily touch upper and lower borderlines” (Hendrickson 2000:68).

6. *Zig-Zag*: “Layout composed of central band or pair of lines that form a zig-zag pattern running continuously around the vessel; band or lines do not interact with lines extending from the borderlines” (Hendrickson 2000:68).
7. *Repeated Figures*: “Layout demarcated by the presence of large repeated figures” (Hendrickson 2000:68).

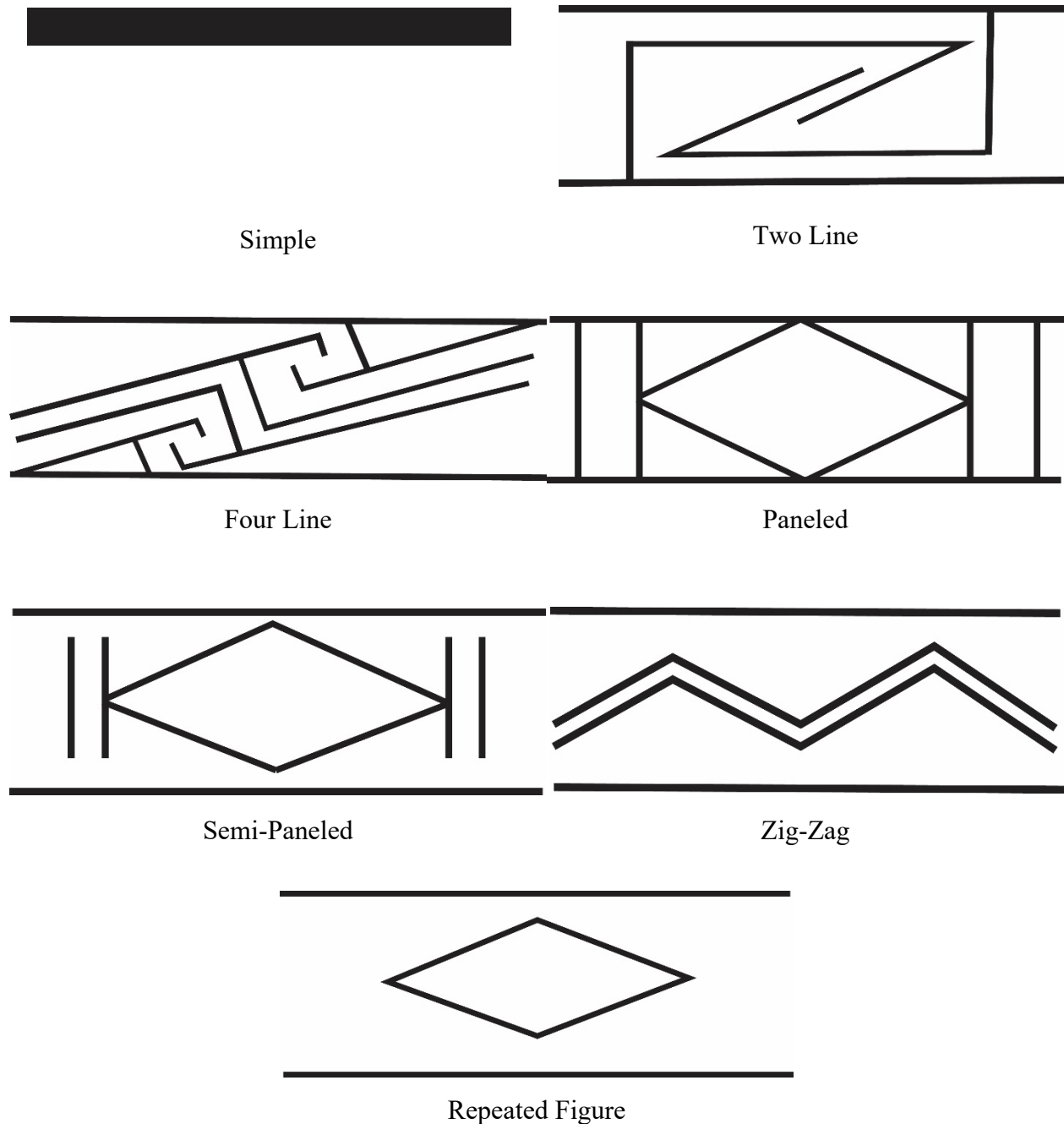


Figure 3.2: Examples of primary layouts (adapted from Di Peso et al. 1974b:7-10).

Secondary Layout (Figure 3.3)

1. *Solid Color*: Solid band(s) of paint running horizontally within the primary layout.
2. *Elaborated Lines*: Thin solid band(s) with evenly spaced ticks attached to the band.
3. *Ladders, Checkerboards*: Band(s) of square or rectangular shapes extending horizontally with alternating painted and unpainted/empty squares with a dot sometimes occupying negative (or empty) squares.
4. *Sawtooth Lines*: Band(s) painted in a jagged repeated pattern; when two opposite bands are present they form a negative zig-zag pattern.
5. *Miscellaneous*: Bands whose layout does not correspond to those previously described.

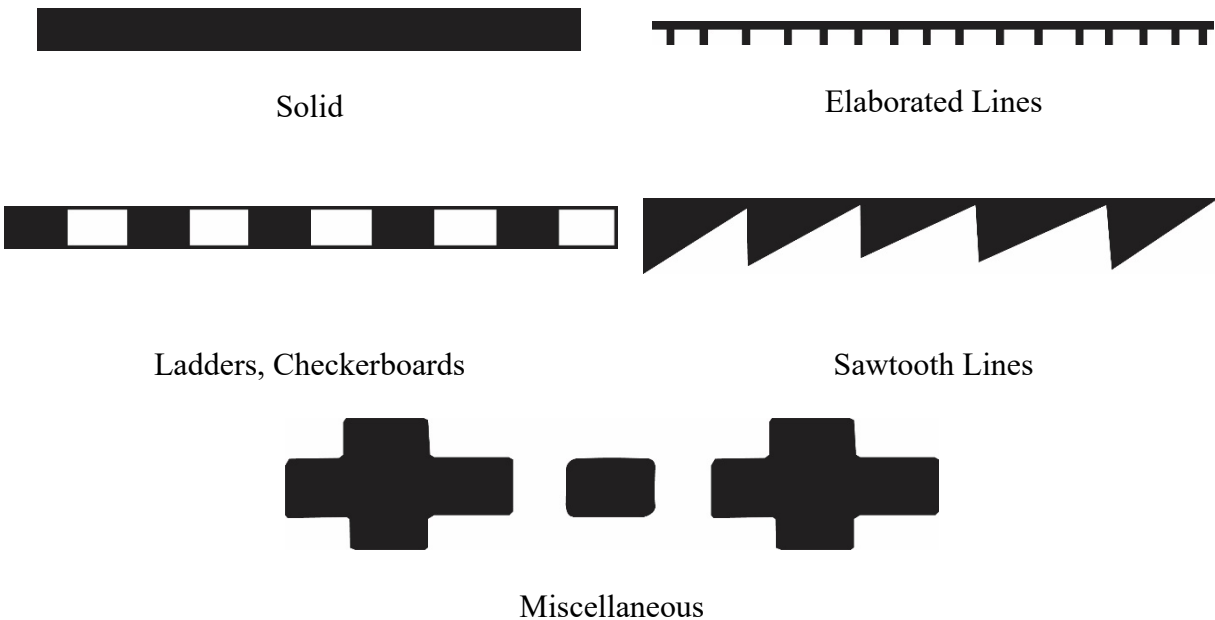
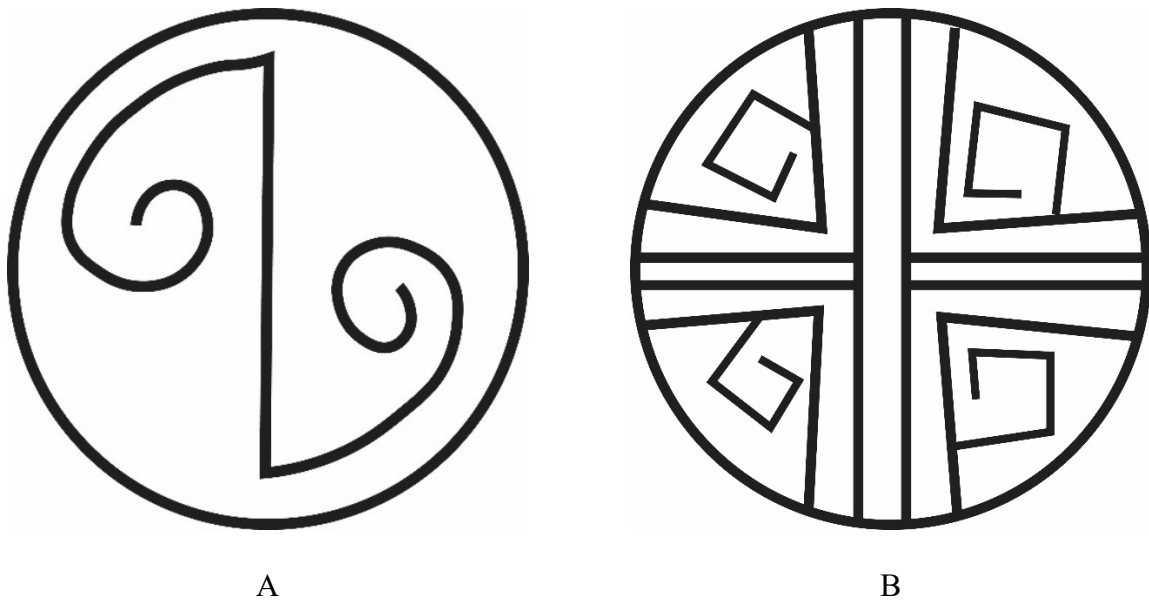


Figure 3.3: Examples of secondary layouts (adapted from Di Peso et al. 1974b:7-10).

Over-All Layout is the third type of layout defined by Di Peso et al. (1974b:10-12), and it applies only to bowls with interior designs. There were only three bowls with interior designs in the MPM collection, all of which represent a single variant (Sectioned: Bisected). However, because Di Peso et al.'s category includes eleven subcategories and the collection only has three bowls, I decided to use the subcategories to provide a more distinct classification. Here, they are called subcategories A and B but can be found in the JCGE volume as 11.A.1 and 11.A.3 (Di Peso et al. 1974b:14).

*Over-All Layout* (Figure 3.4)

1. *Sectioned: Bisected:*
  - a. "Bisected by a single line" (Di Peso et al. 1974b:14).
  - b. "Bisected by double line with secondary subdivision into quadrant pattern by means of double line at right angle to bisecting lines" (Di Peso et al. 1974b:14).



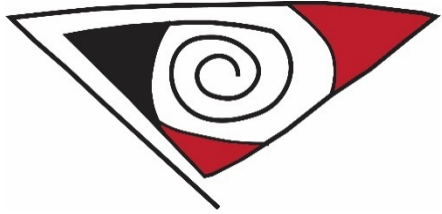
**Figure 3.4: Examples of Over-All Layout (adapted from Di Peso et al. 1974b:7-10).**

I found the over-all layout illustrations and descriptions in the JCGE ceramics volume to be quite difficult to use for a couple reasons. First, as was also the case with some of the primary and secondary layout options, the definitions of over-all layout categories are not clear, and one often has to rely heavily on the illustrations to understand the associated descriptions. In analyzing the bowls in the MPM collection I was fairly confident that they represented two different over-all layouts defined by Di Peso et al. (subcategories A and B). However, in the book a vessel that is very similar to a bowl at the MPM that I had classified as category B is defined as category A, but this seems to contradict the description provided by Di Peso et al., at least according to my interpretation. This is a clear example of how confusing and subjective the classifications in the JCGE monograph can be. Secondly, two of the bowls at the MPM are damaged in their center, so the interior designs are not clear. Whether or not lines intersect in the center of a bowl is one of the most important criteria that separate subcategories in Di Peso et al.'s classification, so it was difficult to classify the broken MPM bowls according to the JCGP scheme. Therefore, the reader should understand that my classifications of over-all layouts in this thesis might be debated by other researchers using the same classification system.

### *Motifs*

Motifs are design elements found within layouts that often represent an idea or object (e.g., macaw). Eight distinct motifs were identified on the vessels in the MPM collection. The presence of each motif was recorded for each vessel, rather than the number of times a particular motif appeared on the vessel. The eight motifs include: Swirl/Scroll, Interlocking Scroll, Barbed, Stepped, P/Club, Circles, Running Band of Circles, and Macaw (see Figure 3.5). These motifs—which I independently recognized to be the most common motifs in the MPM collection—

overlap with the nine design elements that according to Carey (1931:346) appear on approximately 80% of decorated Casas Grandes vessels. His classification included interlocking scrolls, step design, single spiral (swirl), leaf element (P/club), circle in negative drawing with dot inside, and dot within a small square (running band of circles).



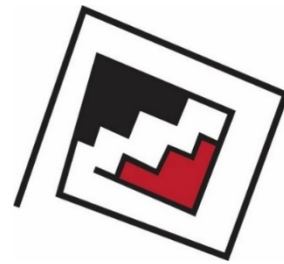
Swirl/Scroll



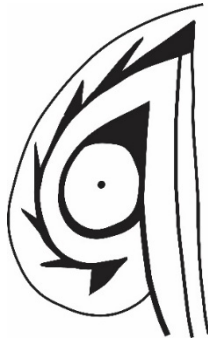
Interlocking Scroll



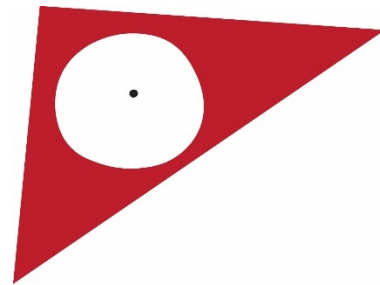
Barbed



Stepped



"P"/Club



Circles



Running Band of Circles



Macaw

**Figure 3.5: Examples of the eight motifs in the MPM Collection.**

## **Effigies**

Kidder's (1916:256) initial publication on Casas Grandes pottery divided effigy vessels into three categories: "1) Examples with plastic features added to the sides of standard jars, 2) Examples of heads of animals, birds, or human beings added to the rims of standard jars, 3) True effigies." In my analysis I used similar categories but with simplified names: (1) appliquéd effigy, (2) hooded effigy, and (3) true effigy. The term "hooded effigy" was used by Di Peso et al. (1974b:18) to refer to vessels with a jar-shaped body and the face of an animal or person on the vessel neck. Likewise, Sprehn (2003:108) indicates that on a hooded effigy the "head is formed on the rim of the vessel in a mask-like manner that leaves a void where the back of the head would be in a fully sculptural representation."

The identification and analysis of effigies intersects with the design analysis, as more information can often be derived from these unique vessel forms than from a jar or bowl. In Chapter 4 I discuss how effigies depict animals in the Chihuahuan environment as well as human attributes like status and gender. Data from effigies can be considered together with information from painted designs in order to make broader inferences- about representation as a whole in Casas Grandes culture.

## **Collection Photographs**

While conducting my research I photographed all 80 vessels in the MPM collection, as well as a cast of a Casas Grandes effigy that is housed at the Museum (with the permission of the MPM Anthropology Department). Each vessel was fully documented by rotating it in a clockwise fashion and photographing each of its four sides. This created a complete visual record of the vessel and will allow other researchers to see the entire band layout on the vessel exterior.

In addition, the base and top of each vessel were photographed. It was possible to document all of the vessels in this manner except for one bowl that had been reconstructed and was held together with masking tape and a paper support on its interior. It was decided that this vessel was too fragile to have its support removed, so the interior was not photographed. However, the bowl's interior lacked decoration, so the results of the design analysis (see Chapter 4) are not skewed.

At least one photo of each vessel is provided in Appendix D, along with the catalog number and type classification for the vessel. In addition, all of these photographs will be added to the MPM's collections database (KE EMu). No photographs of the Casas Grandes collection existed in KE EMu before this project. Thus, the new photos provide more complete documentation of the collection and will help staff and volunteers at the Museum to track and find the objects in storage more easily as well as share the images with off-site researchers.

Lastly, as I noted in Chapter 1, four other institutions were visited to compare their Casas Grandes ceramics to the MPM collection: the Amerind Foundation, the El Paso Museum of Archaeology (El Paso, Texas), the Museum of Indian Arts and Culture in Santa Fe, and the Museum of Northern Arizona. Permission was obtained to photograph ceramic vessels at each of these institutions (Figure 3.6). Some of these photos are used in this thesis, particularly Chapter 4, as a basis for comparison with the MPM collection and to illustrate types or characteristics not present at the MPM.



**Figure 3.6: Photographing station at the Museum of Northern Arizona. Photos used with permission of the Museum of Northern Arizona.**

### **Motif and Layout Illustrations**

In addition to photographing the collection, I also made drawings (using Adobe Illustrator) of many of the designs present on the vessels. These drawings, which are incorporated into this chapter as well as Chapter 4, complement and enhance the descriptions of the vessels and particular layouts/motifs observed during the analysis.

## Chapter 4. Data and Analyses

This chapter presents the results of the typological and chronological analyses of the MPM collection. The designs on painted vessels also were analyzed and are described in detail here, as are effigy vessels.

### Typological and Chronological Analyses

The MPM collection includes 15 different ceramic types, with a handful of vessels representing variants within those types. It was possible to type all but two vessels.

#### *Typology*

The total number of jars and/or bowls of each type identified in the collection is provided in Table 4.1. The most abundant type in the collection is Ramos Polychrome (34 out of 80 vessels, 42.5%). Often referred to the Casas Grandes Polychrome or Paquimé style, Ramos Polychrome exhibits fine line work and generally more decorative motifs than other types (Di Peso et al. 1974b:250). Because of this, it is a favorite among collectors and pot hunters, so it is not surprising that it is well represented in the MPM collection. Because Casas Grandes pottery housed by museums are often donated by or purchased from collectors, it seems likely that they will often have a high percentage of Ramos Polychrome vessels. Ramos Polychrome was also one of the most frequently produced and heavily traded pottery types in the Casas Grandes tradition. The type constituted 12% of the total ceramics found in all contexts at Paquimé (Di Peso et al. 1974b:250-251). Moreover, 64.7% of the polychrome vessels in the MPM collection were Ramos Polychrome; this frequency is quite similar to the polychrome ceramic assemblage

recovered in the JCGE excavations at Paquimé, 68.7% of which was typed as Ramos Polychrome (Di Peso et al. 1974b:543).

**Table 4.1: Types and Vessel Forms Represented in the MPM Collection**

Type	Jars	Bowls	Total	Percentage
Ramos Polychrome	30	4	34	42.50
Ramos Black	7	2	9	11.25
Villa Ahumada Polychrome	8	-	8	10.00
Babícora Polychrome	5	-	5	6.25
Carretas Polychrome	-	4	4	5.00
Playas Red	4	-	4	5.00
Madera Black-on-red	3	-	3	3.75
Ramos Black-on-white	3	-	3	3.75
Casas Grandes Plainware	2	-	2	2.50
Indeterminate	2	-	2	2.50
Corralitos Polychrome*	1	-	1	1.25
Huerigos Polychrome	-	1	1	1.25
Leal Red-on-brown	1	-	1	1.25
Mata Red-on-brown	1	-	1	1.25
Pilon Red-on-brown	1	-	1	1.25
Villa Ahumada Black-on-white	-	1	1	1.25
<b>TOTAL</b>	<b>68</b>	<b>12</b>	<b>80</b>	<b>100.0</b>

\* The Corralitos Polychrome vessel is an eccentric vessel (double jar).

Villa Ahumada Polychrome and Babícora Polychrome were the other two most common painted wares in the MPM collection. This corresponds with the results of the JCGE at Paquimé, where the same patterns exist (Whalen and Minnis 2012:413). Ramos, Villa Ahumada, and Babícora are often referred to as the main Casas Grandes polychromes. The ceramic assemblage recovered by Whalen and Minnis (2012:413) during their excavations at Site 204 (Tinaja site) in the Arroyo la Tinaja—one of the largest Core Zone sites outside Paquimé—likewise was similar.

Recently archaeologists have begun to discuss the evolution of painted Casas Grandes pottery (e.g. Hendrickson 2000; VanPool 2003; Whalen and Minnis 2012); these discussions

have emphasized the similarities between Babícora Polychrome and Ramos Polychrome. Hendrickson was the first to coin the terms Design Horizon A and Design Horizon B to divide Medio Period painting styles: “Design Horizon A is comprised of the Continuous layouts, Simple motifs” while Design Horizon B vessels “are decorated with Segmented layouts, show an increased reliance on Complex motifs, an affinity for BoR [Black-on-red], and three to four different motifs per vessel” (Hendrickson 2000:111-112). Similarly, VanPool (2003) uses the terms “Paquimé style” and “non-Paquimé style” which are often equated with Hendrickson’s Design Horizons A and B. The Paquimé style refers to fine-lined painting with solid red elements outlined in black (Whalen and Minnis 2012:410). Whalen and Minnis (2012) have suggested that the Medio Period should be divided into Early and Late Medio Periods, with the division around AD 1300 (see also Lekson 1984); that Babícora is an early version of Ramos; and that Ramos began during the Late Medio Period and was contemporaneous with Babícora thereafter. As previously discussed, some researchers have adopted Hendrickson’s terms Design Horizons A and B. Whalen and Minnis (2012:416) argue that before AD 1300 (Design Horizon A), the Chihuahuan ceramic tradition consisted of painting with “bold, thick-lined linear designs of simple geometrics in red and black.” At the beginning of the late Medio Period, fine-lined variants of Babícora, Ramos, and Villa Ahumada were introduced. These new pottery types (Design Horizon B) originated from three Design Horizon A types: Standard Babícora, White-Paste Babícora, and Standard Villa Ahumada (Whalen and Minnis 2012:416).

These arguments are important to acknowledge when considering the pottery analyzed in this thesis. There is quite a bit of overlap among the three main Casas Grandes polychromes, particularly Babícora and Ramos. This means that it is often difficult to assign vessels to either Design Horizon A or Design Horizon B. Only two Babícora vessels could be distinguished as

style B (Design Horizon B), with assistance from another archaeologist (Thatcher Rodgers, personal communication, 2020).

Several additional patterns are evident in the MPM collection. The four Carretas Polychrome vessels in the collection are all bowls (this was also the largest number of bowls for any single type in the collection). In contrast, the excavations at Paquimé yielded an even distribution of Carretas Polychrome bowls (58%) and jars (42%) (Di Peso et al. 1974b:198). Huerigos Polychrome was one of the few types recovered in the JCGE excavations that was represented by many more bowls (91%) than jars (9%) (Di Peso et al. 1974b:243). The MPM collection includes only one Huerigos Polychrome vessel, which is a bowl.

Among the utilitarian wares in the MPM collection, Ramos Black is the most frequent (9 vessels). It is also the second most common type represented in the entire collection (11.3%). At Paquimé, the ratio of Ramos Black bowls and jars was fairly even, with 48% bowls and 62% jars (Di Peso et al. 1974b:160). In contrast, the MPM collection includes only 2 bowls and 7 jars. At Paquimé, Casas Grandes Plainware was heavily dominated by jars (90%) (Di Peso et al. 1974b:108). Likewise, the MPM collection only includes two Casas Grandes Plainware vessels, both of which are jars. Playas Red vessel forms at Paquimé were similar, with over 90% of recovered sherds or whole vessels being jars (Di Peso et al. 1974b:147). Not surprisingly, both of the Playas Red vessels in the MPM collection are jars.

### *Time Periods*

I found that 77 of the 80 vessels in the MPM collection dated to the Medio period (AD 1200 to 1475), while only three belonged to the Viejo Period (AD 700 to 1200). During the Viejo Period, brownware pottery that was plain, textured, or decorated with red geometric designs was

produced. Most vessels were “likely used for cooking and storing water and food” (Searcy and Kelley 2016:20). All three of the Viejo vessels at the MPM are jars and include the following types: Leal Red-on-brown, Mata Red-on-brown textured, and Pilon Red-on-brown. It was not surprising to find few Viejo vessels in this collection, as it was during the Medio Period that ceramic production in the Casas Grandes region flourished. The Viejo Period assemblage from the JCGE excavation comprised 28,728 sherds, whereas there were 771,274 sherds dating to the Medio Period (Di Peso et al. 1974b:21, 77). One can see why Viejo Period vessels are much rarer, especially within museum collections. While all three of the Viejo vessels at the MPM are jars, it is interesting to note that only one of the Viejo types represented in the MPM collection consisted primarily of jars in the JCGE analyses. More than 75% of both Leal Red-on-brown and Pilon Red-on-brown sherds and vessels recovered at Paquimé were bowls (Di Peso et al. 1974b:68,71). In contrast, over 95% of the Mata Red-on-brown textured vessels were jars (Di Peso et al. 1974b:65).

It is also worth noting that although only 78 of the vessels could be typed; the time period for all vessels could be determined because the two untyped vessels are effigies, which were not manufactured until the Medio Period.

### *Measurements*

Three measurements were recorded for each vessel: orifice diameter, maximum height, and maximum width (all data are provided in Appendix B). Published measurements on whole Casas Grandes vessels are relatively rare (e.g. Di Peso et al.’s [1974b] analyses of pottery from Paquimé were primarily based on sherds and not whole vessels), which is yet another reason why collections of whole vessels like that at the MPM are so important. Table 4.2 lists the average

measurements for the most important polychrome types (Ramos, Villa Ahumada, and Babícora), while average measurements for utilitarian wares, which constitute a large portion of the collection, are provided in Table 4.3.

**Table 4.2: Average Measurements of Most Frequent Painted Types**

Type	Orifice Diameter (cm)	Maximum Height (cm)	Maximum Width (cm)
Babícora Polychrome	10.48	16.46	18.70
Carretas Polychrome	22.76	12.63	24.63
Corralitos Polychrome*	8.00	14.00	24.50
Huerigos Polychrome	27.10	12.80	28.50
Leal Red-on-brown*	8.10	15.50	17.00
Madera Black-on-red	10.90	18.90	19.50
Mata Red-on-brown textured*	13.80	25.20	31.00
Pilon Red-on-brown*	9.20	14.80	16.50
Ramos Black-on-white	9.40	14.55	15.50
Ramos Polychrome	11.59	19.32	20.86
Villa Ahumada Black-on-white*	18.40	18.00	27.00
Villa Ahumada Polychrome	10.95	18.80	20.34

\* Type represented by only one vessel

**Table 4.3: Average Measurements of Utilitarian Types**

Type	Orifice Diameter (cm)	Maximum Height (cm)	Maximum Width (cm)
Casas Grandes Plainware	14.25	19.50	21.50
Playas Red	10.18	14.93	16.50
Ramos Black	12.70	15.31	19.98

In the Paquimé excavations, Di Peso and colleagues (1974b:160-161) collected 60 whole or restorable Ramos Black vessels, the orifice diameters of which ranged from 10.2 to 23.8 cm.

In contrast, the average orifice diameter for Ramos Black vessels in the MPM collection is 12.7 cm.

Lastly, although the collection includes only three vessels dating to the Viejo Period, I still decided to calculate their average measurements so they may be compared to other collections in the future (Table 4.4). Interestingly, on average Viejo and Medio Period vessels are comparable in size, except for their orifice diameter (Viejo vessels are slightly smaller).

**Table 4.4: Average Measurements by Time Period**

Time Period	Orifice Diameter (cm)	Maximum Height (cm)	Maximum Width (cm)
Viejo (A.D. 700-1200)	10.37	18.50	21.50
Medio (A.D. 1200-1475)	12.29	17.65	20.51

With such a small sample size, it would be unwise to draw large inferences from these data, although these patterns are interesting to note. Of course, one of the explanations that archaeologists have proposed for large ceramic vessels relates to feasting (e.g., Blitz 1993; Lee 2013; Mills 2013; Whalen and Minnis 2001). Blitz’s (1993:93) analyses of prehistoric Mississippian vessels indicated that “variation in vessel size is directly related to the size of the social group and the variety of food-processing tasks.”

Brand’s (1933:77) dissertation notes that Casas Grandes vessels larger than eighteen inches (45.72 cm) have been found. Mills’ (2013:113) research in the northern Southwest suggested that large vessels were associated with “larger sized, extended households with increasing participation in supra-household ritual feasting.” Lee (2013:156-159) also addresses

the topic based on her research on the Lumholtz Collection of Casas Grandes pottery at the American Museum of Natural History (see Table 4.5). She writes: “It is clear from these data that there may have been occurrences of large-scale feasting as demonstrated by vessel sizes that range from 9 inches in height to 14 inches in height [22.86-35.56 cm]” (Lee 2013:156). Sites with evidence of feasting and large group gatherings tend to be close to Paquimé (see discussion of the Core Zone defined by Whalen and Minnis [2001] in Chapter 2). Additionally, public feasting was likely an important aspect of the ball game (Whalen and Minnis 2001:133). Ball courts are also found only within the Core Zone. Therefore, the presence of large vessels in a museum collection may indicate that the collection (or parts of it) could have originated from the Core Zone.

To provide some context for these data, Brand (1933:77) indicates that the average height of Casas Grandes jars is approximately eight inches (20.32 cm). In comparison, the MPM vessels are smaller on average. However, there are some outliers. Three of the largest vessels in the MPM collection are A57405 (height = 27.5 cm; width = 28.5 cm; Villa Ahumada Polychrome), A57368 (height = 26 cm; width = 29 cm; Ramos Black), and A57411 (height = 25.8 cm; width = 29.5 cm; Ramos Polychrome) (Figure 4.1).



**Figure 4.1: Three of the largest vessels in the MPM collection. Photos used with permission from the Milwaukee Public Museum.**

Additionally, Lee (2013) conducted a jar-size analysis in her dissertation. The collection she analyzed has extensive contextual data, and according to Lee (2013:278) is “the most comprehensive and varied [Casas Grandes] collection with complete and exact provenience.”. The Lumholtz collection includes pottery from multiple sites, including cave dwellings in Cave Valley, which provides a more holistic perspective of Casas Grandes culture and pottery than the JCGE’s excavations at Paquimé. Lee’s (2013) measurements, which are expressed in terms of ranges rather than averages, are listed in Table 4.5 along with comparable data on the MPM collection.

**Table 4.5: Jar and Bowl Measurements from the MPM and Lumholtz Collections  
(Lee 2013:163-198).**

Type	JARS		BOWLS	
	MPM Height Range (cm)	Lumholtz Height Range (cm) <sup>a</sup>	MPM Diameter Range (cm)	Lumholtz Diameter Range (cm) <sup>a</sup>
Babícora Polychrome	14 - 16.5	12.38 - 25.4	n/a	5.08 - 10.16
Playas Red	13.5 - 15.7	6.35 - 21.59	n/a	7.94 - 18.42
Ramos Black	9.5 - 18.5	5.72 - 20.32	18.2 - 20.8	3.81 - 19.49
Ramos Polychrome	8 - 25.8	7.94 - 35.56	10.7 - 17	6.99 - 20.32
Villa Ahumada Polychrome	13.8 - 27.5	10.16 - 17.46	n/a	5.75 <sup>b</sup>

<sup>a</sup> converted from inches

<sup>b</sup> only one measurement provided

n/a: no vessel of this kind represented in the collection

As is evident from the data in Table 4.5, for several types, the MPM collection includes a narrower range of vessel sizes than the Lumholtz collection. This may be due to various factors, including the sample sizes (80 versus more than 415 vessels) and how the collections were acquired (donation versus excavation). The MPM collection may lack extra-large vessels compared to other collections because such vessels are harder to transport, and collectors are less likely to acquire such large (and breakable) artifacts. In contrast, the Lumholtz and other collections of excavated pottery may include a more complete and representative sample of vessels used in the Casas Grandes region.

### Iconographic Analysis

Design analysis was conducted on 63 vessels in the MPM collection that revealed painted layouts. Only one of these painted vessels (Ramos Polychrome) does not exhibit a layout design because it is an effigy of two snakes winding their way around the vessel (see *Effigies* section below). Patterns and common layout themes were identified within types. Most vessels exhibit

only a primary layout, and few have both primary and secondary layouts. Only three bowls have interior decoration with over-all layouts.

### *Primary Layout*

Sixty MPM vessels exhibit primary layouts. In his analysis of pottery from Paquimé, Hendrickson (2000:36) found that paneled layouts were most frequent (21.6%), especially on Ramos and Villa Ahumada Polychrome vessels, while two-line bands were slightly less common (18.7%). Similar patterns are evident in the MPM collection. Paneled layouts are most common (50% of the primary layouts), while 28.3% of layouts are semi-paneled. Two-line bands are evident on only 2 of the vessels (0.03%). The most common secondary layouts (40%) are ladders and checkboards.

A number of patterns were evident when looking at a single type. The majority (73%) of Ramos Polychrome vessels have paneled layouts, while 21% are semi-paneled. In comparison, equal numbers of Villa Ahumada Polychrome vessels are paneled (38%) and semi-paneled (38%), and nearly two-thirds (60%) of the Babícora Polychrome vessels are semi-paneled.

In his study, Hendrickson (2000:75)—who uses the terms “segmented” (semi-paneled and paneled) and “continuous” (4-line and zig-zag)—found that the majority (74%) of segmented (i.e., paneled) layouts occurred on Ramos Polychrome vessels. Conversely, 81% of Villa Ahumada vessels had continuous layouts, and among Babícora vessels, 31% had segmented layouts and 61% had continuous layouts. While the Ramos Polychrome vessels in the MPM collection are similar to those analyzed by Hendrickson (a majority of paneled bands), the Villa Ahumada and Babícora vessels are not. It should be noted that the MPM collection only includes five vessels of the latter type, so the sample size is small.

All three of the Viejo Period vessels exhibit only a primary layout. Two of these vessels (belonging to the types Pilon Red-on-Brown and Leal Red-on-Brown) have simple bands, and one Mata Red-on-Brown vessel has a paneled design. One might assume that early painted types would exhibit a simpler band layout and therefore, I was not surprised to find that two of the three Viejo Period vessels have a simple layout.

**Table 4.6: Primary Layout Results by Type**

Type	Simple	2 Line	4 Line	3 Line	4 Line	Paneled	Semi- Paneled	Zig- Zag	Repeated Figures	Misc.
Babícora Polychrome	-	-	-	-	-	1	3	1	-	-
Carretas Polychrome	-	-	3	-	-	-	1	-	-	-
Corralitos Polychrome	-	-	-	-	-	-	-	-	1	-
Huerigos Polychrome	-	-	-	-	-	-	-	-	-	-
Leal Red-on-brown	1	-	-	-	-	-	-	-	-	-
Madera Black-on-red	2	-	-	-	-	-	-	-	1	-
Mata Red-on-brown	-	-	-	-	-	1	-	-	-	-
Pilon Red-on-brown	1	-	-	-	-	-	-	-	-	-
Ramos Black-on-white	-	-	-	-	-	-	3	-	-	-
Ramos Polychrome	-	1	-	-	-	24	7	-	1	-
Villa Ahumada Black-on-white	-	-	-	-	-	1	-	-	-	-
Villa Ahumada Polychrome	-	1	-	-	-	3	3	-	1	-

### *Secondary Layout*

Only 10 vessels have secondary layouts that were recorded. The most common were ladders/checkerboards (40%) and elaborated lines (30%). Interestingly, the type exhibiting the most secondary bands was Villa Ahumada Polychrome; these included elaborated lines (25%), sawtooth (13%), and ladders/checkerboards (13%).

**Table 4.7: Secondary Layout Results by Type**

Type	Elaborated Lines	Ladders/ checkerboard	Sawtooth	Solid	Misc.
Babícora Polychrome	-	-	-	-	1
Carretas Polychrome	-	-	-	-	-
Corralitos Polychrome	-	-	-	-	-
Huerigos Polychrome	-	-	-	-	-
Leal Red-on-brown	-	-	-	-	-
Madera Black-on-red	-	-	-	-	-
Mata Red-on-brown	-	-	-	-	-
Pilon Red-on-brown	-	-	-	-	-
Ramos Black-on-white	-	1	-	1	-
Ramos Polychrome	1	2	-	-	-
Villa Ahumada Black-on-white	-	-	-	-	-
Villa Ahumada Polychrome	2	1	1	-	-

### *Over-All Layout*

The MPM collection includes 12 bowls, only three of which have interior decoration (Figure 4.2). Using Di Peso et al.'s (1974b:10-15) layout classifications for bowl interiors, all three of the bowls were classified as "Sectioned: Bisected." This category has 11 subcategories distinguished by their number of lines, angle of lines, line shape, etc. As noted in Chapter 3, only two of these subcategories are present in the MPM collection: A) "Bisected by a single line" and B) "Bisected by double line with secondary subdivision into quadrant pattern by means of double line at right angle to bisecting lines" (Di Peso et al. 1974b:14).

Vessels 57376 and 57401 are fairly similar in design, with 90-degree angles and stepped motifs; both were classified as subcategory B. Vessel 57396, which has a softer swirling design with P/club motifs, was classified as subcategory A. Both 57396 and 57401 were typed as Carretas Polychromes; their exteriors exhibit both red and black paint while their interiors have only black paint. Both have similar designs on the exterior with interlocking scrolls of red and black that mirror one another but do not touch. Vessel number 57376 is the only Huerigos Polychrome represented in this collection. The exterior is decorated with red and black paint on an orange background, while the interior has a white background and black paint. This stark contrast is particularly ornate and reminiscent of Mimbres black-on-white pottery.



Catalog # A57376

Catalog # A57396

Catalog # A57401

**Figure 4.2: Bowls with interior decoration. Photos used with permission from the Milwaukee Public Museum.**

Additionally, it is worth noting that the Huerigos Polychrome bowl has been restored with two sherds not belonging to this vessel. One sherd sits in the exact center while the other replaces a large portion of the vessel wall. These sherds also appear to be from a Huerigos Polychrome vessel (or vessels) with an orange polychrome exterior and white interior decorated only with black, although the vessel(s) had very different designs. The large wall sherd exhibits a portion of a stepped design and a swirl motif with much thinner painted lines. Unfortunately,

poor restoration is not uncommon in this collection; many vessels were either poorly glued together or now include sherds clearly belonging to another vessel.

The fact that two of the bowls with interior decoration have sherds missing or were reconstructed using sherds from another vessel (restoration not done by the MPM), made classifying their decoration difficult. These bowls are also reminiscent of “killed” Mimbres bowls whose centers were purposely punched out (the meaning of such holes is not clear, although they may have been intended to release the spirit of deceased individuals with whom the vessels were buried; see Cordell and McBrinn 2012:218). However, with only two examples in the collection and no contextual data, little can be inferred from these vessels. During my research at other institutions I observed similarly damaged vessels, such as the bowl with interior decoration from the Museum of Northern Arizona shown in Figure 4.3.



**Figure 4.3: Decorated bowl (catalog number 5827a) at the Museum of Northern Arizona. Photos used with permission from the Museum of Northern Arizona.**

## Design Motifs

Eight motifs were recorded in my design analysis coding scheme. These are the most common motifs found on Casas Grandes pottery and in the MPM collection: swirl/scroll, interlocking scroll, barbed, stepped, P/club, circles/bull's eye, running band of circles, and macaw. While a single vessel may have more than one of a single motif, only the presence/absence of motifs on each vessel was recorded (rather than the total number of each motif present). Therefore, the numbers recorded using the coding scheme indicate how many vessels at the MPM have at least one of each of the motifs (see Table 4.6).

**Table 4.6: Frequencies of Motifs in the MPM Collection**

<b>Motif</b>	<b>Number of Vessels in Collection</b>	<b>Percentage of Vessels in Collection</b>
Stepped	32	50.8
P/Club	25	39.7
Interlocking Scroll	22	34.9
Circles/Bull's Eye	13	20.6
Swirl/Scroll	12	19.0
Barbed	6	9.5
Running Band of Circles	4	6.3
Macaw	4	6.3

**Table 4.7: Number of Painted Vessels Exhibiting Each Motif, by Type**

Type	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circles/ Bull's Eye	Running Band of Circles	Macaw
Babícora Polychrome	-	3	2	2	3	1	-	-
Carretas Polychrome	1	2	1	1	1	1	-	-
Corralitos Polychrome	-	-	-	-	-	-	-	-
Huerigos Polychrome	-	-	-	1	-	-	-	-
Leal Red-on-brown	-	-	-	-	-	-	-	-
Madera Black-on-Red	1	1	-	-	1	1	-	-
Mata Red-on-brown	-	-	-	-	-	-	-	-
Pilon Red-on-brown	-	-	-	-	-	-	-	-
Ramos Black-on-white	1	1	1	2	2	-	-	-
Ramos Polychrome	9	10	-	23	17	9	3	4
Villa Ahumada Polychrome	-	4	2	3	1	1	1	-
Villa Ahumada Black-on-white	-	1	-	-	-	-	-	-

### *Swirl/Scroll*

The swirl or scroll motif is common on Chihuahuan painted pottery, especially polychromes. The majority (9 of 12, 75%) of vessels in the MPM collection with swirl motifs were typed as Ramos Polychrome.

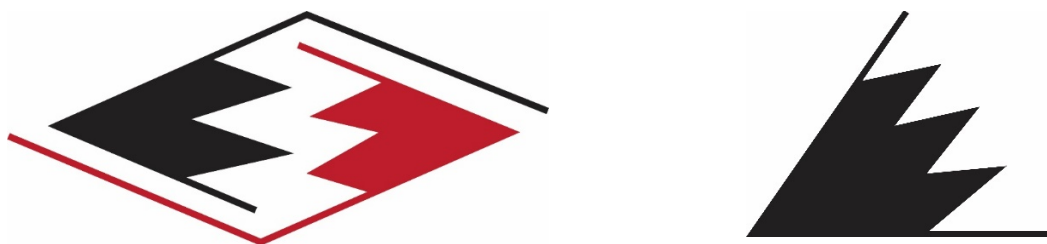
### *Interlocking Scroll*

The interlocking scroll motif is also common on Casas Grandes polychrome pottery, and it often includes opposing red and black paint. This motif “is often interpreted as a stylized representation of the plumed/horned serpent” (Lee 2013:219). Ten of the 22 vessels (45%) in the MPM collection exhibiting this motif are Ramos Polychrome.

### *Barbed*

This motif can easily be confused with the stepped motif, and not all researchers have distinguished them in their analyses of Casas Grandes pottery (e.g., Carey 1931). However, the motif is illustrated by Di Peso et al. (1974b:5) and is clearly distinctive from the stepped design. Thus, I made the decision to distinguish the two motifs. The stepped motifs are depicted at 90-degree angles and barbed elements are usually diamond or V-shaped (Figure 4.4). However, not all barbed motifs have an opposing element and sometimes include only a single barbed element.

Interestingly, the barbed motif is not present on the Ramos Polychrome vessels in the MPM collection. All of the barbed motifs present in the collection (6 vessels total) included two opposing colors of red and black. Villa Ahumada Polychrome and Babícora Polychrome each hold 33% of the barbed motifs (2 vessels each).



**Figure 4.4: Barbed motif examples**

### *Stepped*

The stepped motif is one of the most frequently occurring motifs in the Casas Grandes tradition. It is also the most common motif in the MPM collection, appearing on a total of 32 vessels, of which 23 (72%) were typed as Ramos Polychrome. Mathiowetz (2011:54, 1264) believes that the stepped motif is a “spirit path” (the road traveled on by gods and spirits) representation commonly found in the American Southwest and northwest Mexico.

### *Circle/Bull’s Eye*

Another common Casas Grandes motif is a single circle formed in a negative space with a single dot in the middle. Carey (1931:346) refers to this as a “circle in negative drawing with dot inside,” although Lee (2013:220) notes that it is now referred to as a “bull’s eye.” One example in the MPM collection is illustrated in Figure 3.6; it consists of a circle painted as a negative space inside a red triangle. This motif is present on 13 vessels in the Museum’s collection, with the majority (69%) occurring on Ramos Polychrome.

### *Running Band of Circles*

Running band of circles is one of the rarest motifs in the MPM collection (4 vessels). This motif is a variation of the circle/bull's eye motif. "It may appear in either a dotted square band, dotted cross hachures and/or dotted checkerboarding" (Lee 2013:220). Interestingly, Mathiowetz (2011) argues that this type of motif is "flower road" symbolism (the floral road of the sun) and part of the Flower World Complex. He relates this to similar motifs from Mesoamerica which appeared even earlier than in the southwestern United States or northwest Mexico. This symbolism is still evident in native cosmologies in the American Southwest today (Mathiowetz 2011: 55, 133, 1261).

### *P/Club*

The "P" or Club motif is one of the most common and recognizable motifs on Casas Grandes pottery, especially Ramos Polychrome vessels. It has been referred to as the "club-shaped" motif (Kidder 1916:262), leaf element (Carey 1931:346), and "P" motif (Hendrickson 2003:41-43). This motif appears on 25 vessels in the MPM collection, 17 (68%) of which are Ramos Polychrome. As previously mentioned, this motif was later recognized as a stylized version of the macaw motif (Figure 4.5).



**Figure 4.5: Progression of P/club to macaw motifs**

### *Macaw*

The macaw motif is one of the most distinctive and diverse symbols on Casas Grandes pottery (e.g., Di Peso et al. 1974b:282). The curved beak of the bird is highly recognizable and depicted in a variety of ways. The painted macaw has been compared to Mimbres pottery. The heads are quite similar, although on Casas Grandes pottery the entire body of the macaw is not depicted while on Mimbres pottery it is (Di Peso et al. 1974b:99-100). Macaw motifs on Casas Grandes pottery are represented in various ways. Some researchers believe that its most stylized form is actually the P or club design. One vessel in the MPM collection (Figure 4.6) exhibits a motif combining both the P/club design and a macaw. This evidence further supports the relationship between the two motifs.



**Figure 4.6: Vessel number 57364 exhibiting macaw motif inside P/club motif. Photo used with permission from the Milwaukee Public Museum.**

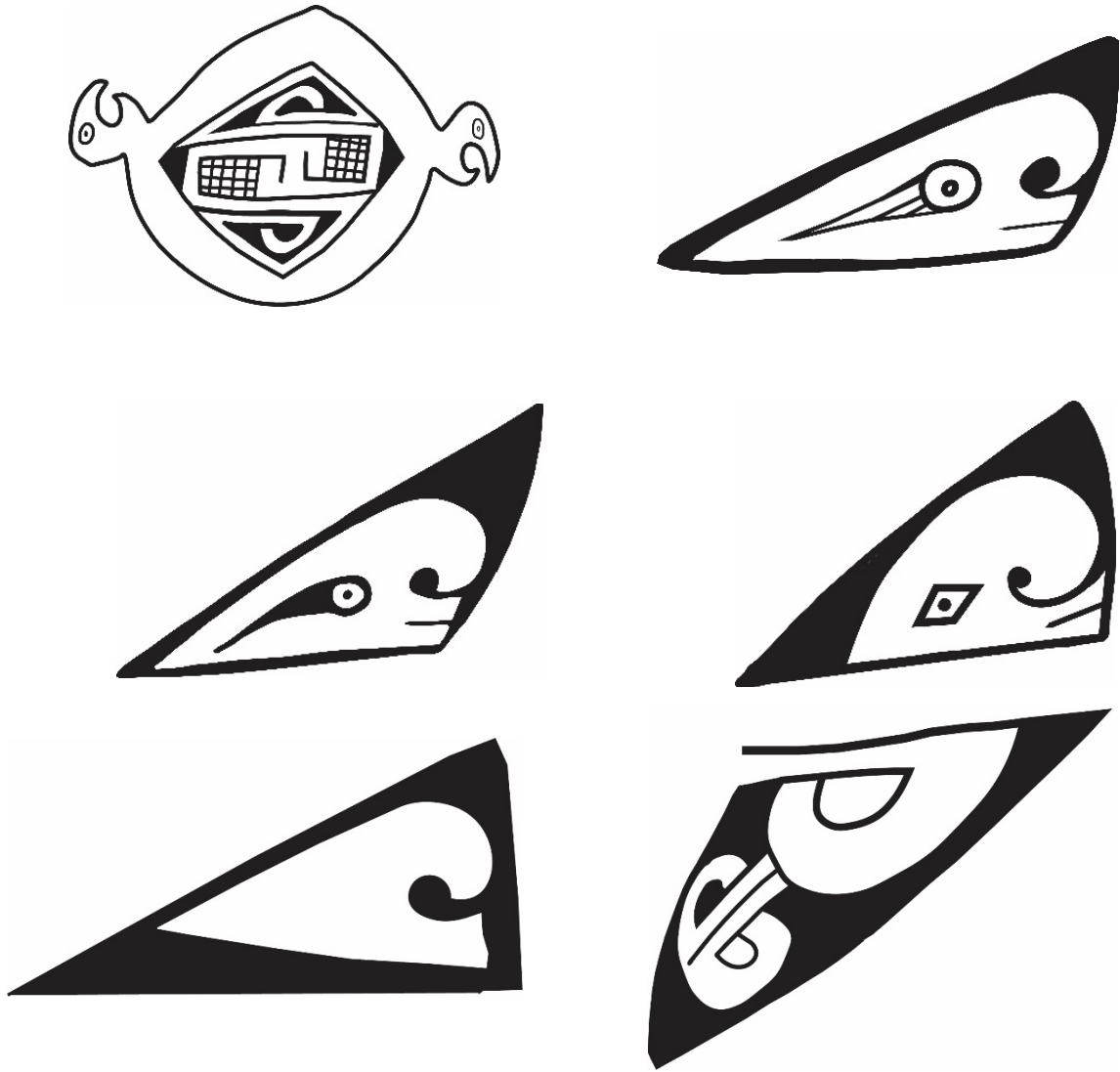
The macaw motif was found on all painted types recovered during excavations at Paquimé except Dublán Polychrome (Di Peso et al. 1974b:99). In the MPM collection, it occurs only on Ramos Polychrome. Di Peso et al. (1974b:99) remarked, “While it was not present on all of the whole [Ramos Polychrome] vessels examined, it was noted often enough to be considered a hallmark of this type, and further, a special hallmark, as its occurrence in other areas of the American Southwest was limited.” The motif is sometimes used as a filler for pottery designs (Figures 4.7 and 4.8), including instances in which it is also the prominent figure, such as the two-head diamond motif (Figure 4.9, upper left).



**Figure 4.7: Opposite sides of a vessel at the Amerind Foundation (catalog number 7459) exhibiting a variant of the macaw motif not present in the MPM collection. Photos used with permission from the Amerind Foundation.**



**Figure 4.8: Two jars from the El Paso Museum of Archaeology exhibiting variants of macaw motifs not present in the MPM collection. Right: catalog number 59-9-300. Left: 59-9-245. Photos used with permission from the El Paso Museum of Archaeology.**



**Figure 4.9: Examples of macaw motifs from the MPM collection (drawn by author).**

### **Effigies**

The MPM's collection included 20 effigy vessels, including 11 human effigies and 9 animal effigies (Table 4.8). The majority of human effigies are hooded effigies, and two-thirds of

the animal effigies are birds. In general, birds and snakes are the most common animals depicted on Casas Grandes ceramics.

**Table 4.8: Effigies in the MPM Collection**

Human Effigies	Number of Vessels	Animal Effigies	Number of Vessels
Hooded	5	Unidentified Animal	2
Full-Bodied	2	Bird	6
Misc. Human	1	Snake	1
Miniature Hooded	3		

### *Humans*

All of the human effigies at the MPM are hooded except for one. There are five hooded effigies with individualistic markings on the face and body of the jar. Because these vessels do not include body parts besides a head, sex cannot be determined like it can be for some full-bodied effigies. Figure 4.10 shows three hooded effigies with a range of decorative elements. Christine and Todd VanPool (2017) have written extensively on human effigy vessel decoration. They have identified patterns in how gender is represented on full-bodied effigies; for example, females are often depicted sitting with their legs straight out or holding bowls (VanPool and VanPool 2017:264-265). Some researchers have argued that painted designs on an effigy's face could represent tattoos and/or face paint (Sprehn Malagon 2001; VanPool 2003b). Often, these human faces are decorated with stepped designs on the cheeks or lines on the chin (see Figure 4.9), and they could represent real people or a type of person. VanPool (2003a) argues that some effigies may represent shamans. Other researchers believe that the tattoos are linked to rites of passage or important stages in an individual's life (Sprehn Malagon 2001). The VanPools' (2017) research on human effigies included recording facial decorations. Many of these designs

were similar to motifs found on non-effigy jars, such as running bands of dots, zigzag designs, scrolls, and stepped designs (VanPool and VanPool 2017:268).

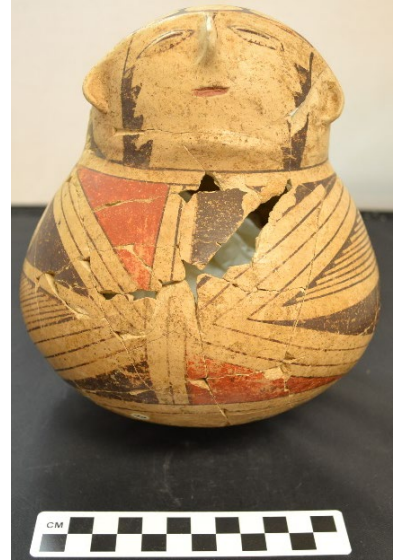
The MPM collection does not include any examples of painted humans or deities that some researchers have interpreted as shamans or gods. Shamans and deities occur most frequently as painted elements rather than effigies. These important figures are differentiated from human figures through various attributes including horned/plumed headdresses or serpent imagery, macaw feather adornment, or pound signs (VanPool 2003b:327). In the MPM collection, all but one of the human effigies are hooded effigies, which limits the amount of information that can be determined about the individuals that are depicted (e.g., sex). Because the lower body is not depicted, these vessels lack characteristics seen on some full-bodied effigies (e.g., items held by the individual, a reclined or squatting position, paintings or tattoos on parts of the body other than the face) that may be indicative of shamans or deities, or the distinction between males and females (VanPool 2003b).



**A57310**



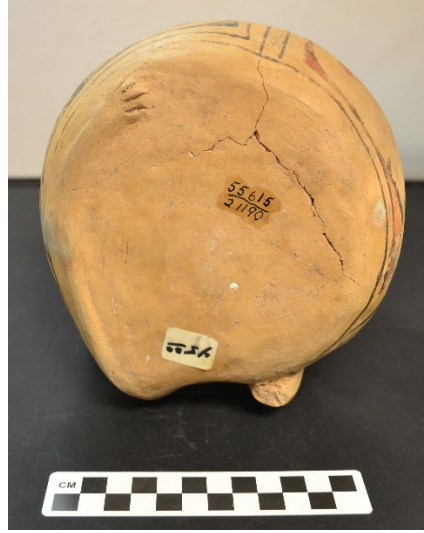
**A55632**



**A57375**

**Figure 4.10: Three hooded human effigies at the MPM. Photos used with permission from the Milwaukee Public Museum.**

Figure 4.11 shows the only full-bodied human effigy in the MPM collection. This male figure has decorative markings all over his body, including a bird on the left side of his chest. When the effigy is viewed from the bottom, it is also evident that he has an additional pair of hands that wrap around the underside of the vessel. Figure 4.12 shows an interesting example of a very different full-bodied human effigy from the El Paso Museum of Archaeology. This vessel depicts the male laying on his back with the jar orifice as his stomach.



**Figure 4.11: The only full-bodied human effigy at the MPM (catalog number A55615). Photos used with permission from the Milwaukee Public Museum.**



**Figure 4.12: Human effigy at the El Paso Museum of Archaeology. Photos used with permission from the El Paso Museum of Archaeology.**

## *Animals*

Various animals are commonly represented on Casas Grandes pottery including, fish, toads, turtles, mountain sheep, badgers, deer, and various birds (e.g., macaws, owls, ducks, quail) (Hendrickson 2000:33; Sprehn 2003:109; VanPool 2003:89). All are found on the Chihuahuan landscape except the macaw.

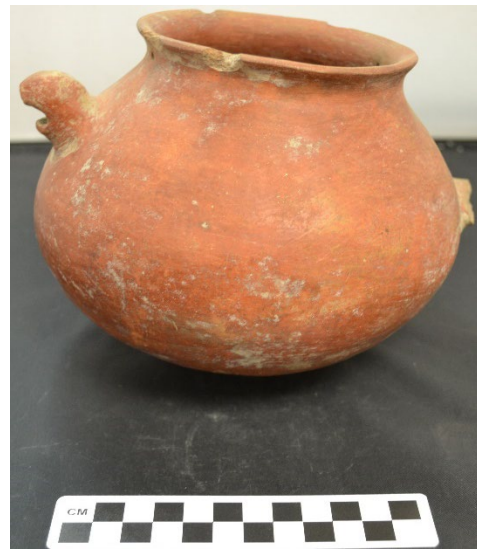
As noted above, macaws are a reoccurring decoration on Casas Grandes pottery. They are perhaps the most diversified decorative elements found on pottery from this region. When painted, this bird can be highly stylized as the P/club design or the macaw motif, and it is even incorporated with individuals on vessels with painted human figures, often as part of their headdress. Macaws were also added to the exteriors of vessels as appliqués or effigies. Figure 4.13 shows the two macaw effigies in the MPM collection.

Macaws were an important symbolic and ritual bird for the Casas Grandes people. The bird was bred and raised at Paquimé, where macaw pens and burials have been excavated by archaeologists. The animal's brilliant feathers were prized by pre-Hispanic cultures throughout Mesoamerica and the Southwest. Like other trade items (e.g., copper belts, turquoise), they were symbols of prestige and status and part of what Lekson (2015:30-31) refers to it as a political-prestige economy. Before Paquimé, there were two main cultural centers where macaws were kept: Chaco and Mimbres (Lekson 2015:33). Macaws and macaw feathers were luxury trade items that were transported hundreds of miles from the south (forested regions of Mesoamerica) to Chaco. There, archaeologists have excavated 34 macaw skeletons, 31 in Pueblo Bonito alone. A few macaw remains have also been recovered at Aztec Ruins, north of Chaco. In contrast, hundreds of macaws have been found at Paquimé, where they were actively bred and their feathers were traded (Lekson 2015:44, 147). Lekson (2015:44) also remarks how macaws seem

to historically link different Southwest cultures together; Mimbres and Chaco may have had such a connection, as more than seventeen macaws have been found at Mimbres sites. Creel and McKusick (1994:511) also write about the ceremonial importance of macaws and parrots to the Mimbres people, as evidenced by the sacrifice of young macaws and the use of macaw feathers. Additionally, a rare item was found at a cave site in Lavender Canyon, Utah—a macaw feather sash—which Lekson (2015:32) calls “the most impressive macaw artifact ever found in the Southwest.” Moreover, parrots were significant symbols to other cultures contemporaneous with Paquimé. For example, “parrot burials and parrot effigy pots [were] found in excavations at most large fourteenth century pueblos from the Homol’ovi sites on the north, to Tuzigoot on the west, to the El Paso area on the east” (Adams 1991:101).



Catalog # A57356



Catalog # A57362

**Figure 4.13: Macaw effigies. Photos used with permission from the Milwaukee Public Museum.**

Snakes are one of the most common effigy forms in the Casas Grandes region. Not only are they important on ceramics, but Paquimé has an effigy mound in the shape of a serpent. Snake imagery has also been found at other sites such as Cueva de la Serpiente, where a painted serpent decorated the archway of a T-shaped door. The horned or plumed serpent is also a prevalent motif/symbol in the region, as well as elsewhere in the Southwest and throughout Mesoamerica, although there are no vessels in the MPM collection with this design.

The MPM has one effigy with two snakes winding around the exterior of the vessel (Figure 4.13, left). Each snake is painted individually; one has a red belly with an opposing black ticked design, while the second has alternating black and white stripes with a single dot inside the white stripe. While some researchers (e.g., VanPool 2003) have been able to link snakes painted on Casas Grandes pottery to specific species in the Chihuahuan environment, I was not able to identify the particular species of snakes depicted on the effigy vessel at the MPM. VanPool (2003:202) also notes that of the 21 different snake depictions included in her study, none of the heads represented actual snake heads. The same appears to be true of the MPM's effigy, as the heads simply consist of two circles for eyes and a line for the mouth. Figure 4.14 shows the MPM's snake effigy in comparison to a similar vessel at the El Paso Museum of Archaeology.



**Catalog # A57359**



**Catalog # 81-12-21**

**Figure 4.14: The MPM snake effigy (left) in comparison to a similar snake effigy at the El Paso Museum of Archaeology (right). Photos used with permission from the El Paso Museum of Archaeology and Milwaukee Public Museum.**

As mentioned before, birds are commonly represented on Casas Grandes effigy vessels. Macaws and owls are the most common bird forms depicted (VanPool and VanPool 2007:96). The MPM has one example of an owl (catalog number A55251); this is the only hooded effigy of an animal in the collection. Figure 4.15 shows details of the heart-shaped face, beak, and horns/ear tufts. VanPool (2003b:49-50) notes that a number of owl species inhabit the Casas Grandes region (e.g., whiskered screech owl [*Otus trichopsis*] and spotted owl [*Strix occidentalis*]) with some living at higher altitudes than others. However, given that the effigy at the MPM has a heart-shaped face, it is more likely to be a representation of a barn owl. Barn owls are the only owls with heart-shaped faces and speckled faces, in addition to speckling (VanPool 2003b:167-8).



**Figure 4.15: Details of MPM's owl effigy (catalog number A55251). Photos used with permission from the Milwaukee Public Museum.**

Owls were significant to the people of the Casas Grandes region as well as other groups throughout the Southwest (e.g., Zuni). As birds of prey, they are highly skilled and cunning. In Casas Grandes culture owls may have been associated with warfare rituals (VanPool and VanPool 2007:106).

There are two other bird effigies in the MPM collection that possibly represent quails (Figure 4.16, left). Vessels number 57388 and 57415 have distinctive markings of the Montezuma quail (*Crytonyx montezumae*), including a dotted chest and dark crested head. VanPool (2003b:162) remarks that a similar vessel at the El Paso Museum of Archaeology (Figure 4.16, right) may represent the same bird.



**Catalog # A57415**



**Catalog # 7475/11**

**Figure 4.16: Probable Montezuma quail effigies at the MPM (left) and the El Paso Museum of Archaeology (right). Photos used with permission from the El Paso Museum of Archaeology and Milwaukee Public Museum.**

Other than macaw motifs, the MPM collection has only one other example of a painted bird, on the chest of the full-bodied human effigy described previously (Figure 4.10). However, painted birds do exist on Casas Grandes pottery. For example, Figure 4.17 shows both sides of a jar at the Museum of Indian Arts and Culture with two depictions of the same painted bird.



**Figure 4.17: Details of a painted bird on a jar at the Museum of Indian Arts and Culture, catalog number 57206/11. Photos used with permission from the Museum of Indian Arts and Culture.**

The MPM collection also includes two animal effigies (catalog # A57353 and A57373, Figure 4.18) that could not be identified with certainty but may be badgers (*Taxidea taxus*). As previously mentioned, badgers are among the animal species depicted on Casas Grandes pottery (Sprehn 2003:109; VanPool 2003b:89), and they are found in the Chihuahuan desert (Hendrickson 2000:33; VanPool 2003b:47).



**Catalog # A57353**



**Catalog # A57373**

**Figure 4.18: Unidentified animal (badger?) effigies. Photos used with permission from the Milwaukee Public Museum.**

One might assume that effigies were associated with funerary contexts, but there is little evidence of such an association at Casas Grandes sites. According to Sprehn's (2003:109), few effigy vessels have been found in burial contexts, and those that were had heavy use-wear. In fact, most Casas Grandes burials contain few or no grave goods at all. Rakita and Cruz's (2009) excavations at Reyes No. 1 and Reyes No. 2, Medio Period sites located near Paquimé, uncovered very few effigy pots in burial contexts. Even the most common polychrome type, Ramos Polychrome, was found in only 25% of the burials, while Ramos Black was more prevalent (63% of burials) (Rakita and Cruz 2009:139). At Paquimé itself, the vessels found most often in burials were standard-sized and miniature jars and bowls. In fact, there were no effigies with three-dimensional representations of fish, snakes, macaws, owls, or other birds found in excavations of burials (Di Peso et al. 1974b:86).

## Eccentric Vessels

The MPM collection includes one eccentric vessel, a double jar (catalog number A57403; Figure 4.19). Double jars are defined as “two small globular jars with everted rims... fashioned together at their equators by cylindrical tubes and at their rims by wide horizontal straps” (Di Peso et al. 1974b:89). The vessel at the MPM was typed as a Corralitos Polychrome, which is also the most common type of double jars excavated at Paquimé.



**Figure 4.19: Double jar from the MPM (catalog number A57403). Photo used with permission from the Milwaukee Public Museum.**

Although Di Peso’s definition of a double jar seems to suggest a vessel that looks similar to the example at the MPM, double vessels can be more varied than this. During my visits to other museums I photographed other examples that have square container-like appendages at the top of the handle (Figure 4.20). Di Peso and colleagues acknowledge that this vessel form appears in other cultures throughout North America. In the Southwest, this included Pueblo II

and III black-on-white types and El Paso Polychrome, but they also mention that “specimens have been found in Illinois, Arkansas, Mississippi, Tennessee, and Georgia” (Di Peso et al. 1974b:89). However, the authors do not discuss the possible function(s) of these vessel forms.



**Catalog # 7122**



**Catalog # 2017-001-045**

**Figure 4.20: Two double jar vessels with unique forms. Left: Amerind Foundation. Right: El Paso Museum of Archaeology. Photos used with permission from both museums.**

### **Design Analysis**

As previously mentioned in respect to polychrome dating, Design Horizons A and B were characterized by different painted designs. Archaeologists have been able to glean far more information from Design Horizon B iconography, which includes anthropomorphic and zoomorphic images that provide windows into the ideology of the Casas Grandes people (Whalen and Minnis 2012:416-17).

Many of these insights come from the most ornate and detailed Casas Grandes type, Ramos Polychrome. This is evident in the MPM collection, as Ramos is the only type that exhibits macaw motifs. In the JCGE analysis, macaw motifs also occurred most frequently on

Ramos Polychrome vessels (Di Peso et al. 1974b:283). The majority of effigies in the MPM collection were Ramos Polychrome. As discussed above, effigies can provide a significant amount of information about Casas Grandes culture, ideology, and the natural environment.

Researchers disagree about the origins and meaning of some abstract images and concepts relating to ritual activity and ideology in Casas Grandes culture. Horned or feathered serpent imagery is a prime example. It is unclear to what extent such imagery in the Casas Grandes region was influenced by Mesoamerican religion (e.g., the central Mexican god Quetzalcoatl) and/or the horned underworld serpents in Puebloan beliefs (Whalen and Minnis 2012:417). While Di Peso (1974b:620-633) believed primarily in Mesoamerican influence from the *pochteca* (Mesoamerican traders), recent researchers have argued for a mixture of Mesoamerican and American Southwest influences (e.g., Mathiowetz 2011). Similarities between pottery in the Southwest (e.g., Mimbres, Salado) and the Casas Grandes region have been noted. For example, macaw imagery is found on both Mimbres and Casas Grandes pottery (e.g., Di Peso et al. 1974b:100), and there are a number of similarities between Mimbres Polychrome and Ramos Polychrome (Phillips 2012). Phillips (2012) coined the term “Ramos Rule,” referring to the pattern on Ramos Polychrome in which red paint must be outlined in black. Phillips suggests that Ramos Polychrome was not derived from a Viejo Period pottery type, but rather Mimbres Polychrome, which followed the same black outline rule. He argues that this theory is feasible as Mimbres cultural traditions were highly influential in surrounding areas from A.D. 1000 to 1150 (about the time Ramos Polychrome was emerging) (Phillips 2012:38-40). In fact, it appears that the northern part of the Casas Grandes region was the center of the Ramos Polychrome tradition, while there is less evidence for specialized production of this type further to the south (Kelley 2009:94). In addition, as noted in Chapter 3, researchers have

highlighted many similarities between Salado and Casas Grandes pottery. These two traditions appear to have been largely contemporaneous, with both ending in the fifteenth century AD (Crown 1994). Although more research is clearly needed, it seems that the relationship between iconography in Mesoamerica and the American Southwest “may not have been a direct and simple one” (Whalen and Minnis 2012:417).

## Chapter 5. Conclusion

### Summary of Analyses

Before this thesis research, the Casas Grandes collection at the MPM had not been studied in-depth since it was donated in the 1970s. In the first phase of analysis, detailed information on each vessel was recorded, including measurements, decoration, and morphology following Di Peso et al. (1974b). Each vessel was then typed using established classifications of Casas Grandes pottery, and a total of fifteen different types were identified in the collection. Based on the typological classification, the time period during which each vessel was likely manufactured was also determined. Although two effigy vessels could not be typed, they could be assigned to the Medio Period because effigies were not produced before that period.

The second phase of analysis focused on the painted wares in the collection. The 63 decorated vessels exhibited a great variety of layout designs and motifs. Based on layout classifications from Di Peso et al. (1974b) and Hendrickson (2000), the primary layout, secondary layout, and (for decorated bowls) over-all layout for each vessel was recorded. These data were then compared among types to identify patterns. Additionally, eight distinct painted motifs were identified on the vessels. These motifs are among the most common motifs depicted on Casas Grandes pottery in general, as found by other researchers (e.g., Carey 1931; Di Peso et al. 1974b). Lastly, the effigies in the collection were analyzed in detail. For some of the animal effigies it was possible to identify the particular species that was represented. Likewise, the human effigies can provide information such as aspects of personal adornment.

## **Importance of Contextual Data**

As discussed in Chapter 2, although art historical or “formal analysis” of iconography is important, additional insights can be gained by considering iconography in relation to broader contextual data (Munson and Hays-Gilpin 2017:671-672). Although the MPM collection is unprovenienced, it is still possible to contextualize it and thus gain insights from studying it. For example, some animal effigies can be linked to particular species that inhabit the Chihuahuan desert.

The design analysis conducted on this collection is important when comparing iconography to other Casas Grandes ceramic collections. The MPM vessels can be compared to pottery with associated excavation records, such as material from the JCGE at Paquimé (Di Peso 1974; Di Peso et al. 1974) or the Lumholtz Collection at the American Museum of Natural History (Lee 2013). They can also be compared with other loosely provenienced collections, such as those analyzed by Hendrickson (2000) at the Royal Ontario Museum and the Wilderness Park (now the El Paso Museum of Archaeology), as well as the collections I studied at the Amerind Foundation, El Paso Museum of Archaeology, Museum of Indian Arts and Culture, and Museum of Northern Arizona. Comparisons with collections from excavations in the area can provide greater contextual information. For example, it may be possible to identify patterns in the pottery found at different sites based on their size or proximity to Paquimé. Comparison of unprovenienced museum collections can also be useful because it expands our datasets of existing design classifications and allows us to discern trends within types, wares, and time periods. Additionally, comparative iconographic analyses can be used to recognize regional differences or patterns beyond the Casas Grandes culture. This is especially true when comparing

motifs, such as the macaw, which was a symbol used by various cultures. Museums across North America house materials that can be compared and used to infer relationships between cultures.

As Kelley et al. (2011:214) have stated, “Many museums’ Chihuahuan collections consist primarily or entirely of painted Chihuahua Culture pots and other items selected for their aesthetic appeal to collectors.” However, many useful contributions can be made with a collection of this kind as discussed in detail throughout this thesis. Holistic analyses and data can be gleaned even further when comparing a collection of this type to other comparable collections. This thesis has also demonstrated that the MPM collection includes a wide range of ceramic types that may not appear in all museum or private collections.

### **Interregional Relationships**

The design analysis presented in this thesis clearly demonstrates the significant cultural relationships that existed between the Casas Grandes culture, Mesoamerica, and what is now the southwestern United States. Similarities certainly exist in the iconography and ceramic decoration in these regions. Although many researchers continue to discuss these regions in terms of modern political borders, it is important to remember that these borders are “neither environmental nor ethnographic” and “the distinction between Mexico and the American Southwest must be blurred” (Lee 2013:281). Diffusion of ideas and beliefs was greater than many believe in prehistoric times. Although a deeper discussion of interregional interactions were outside the scope of this thesis, many archaeologists are currently tackling the topic (e.g., Lekson 2015; Mathiowetz 2011).

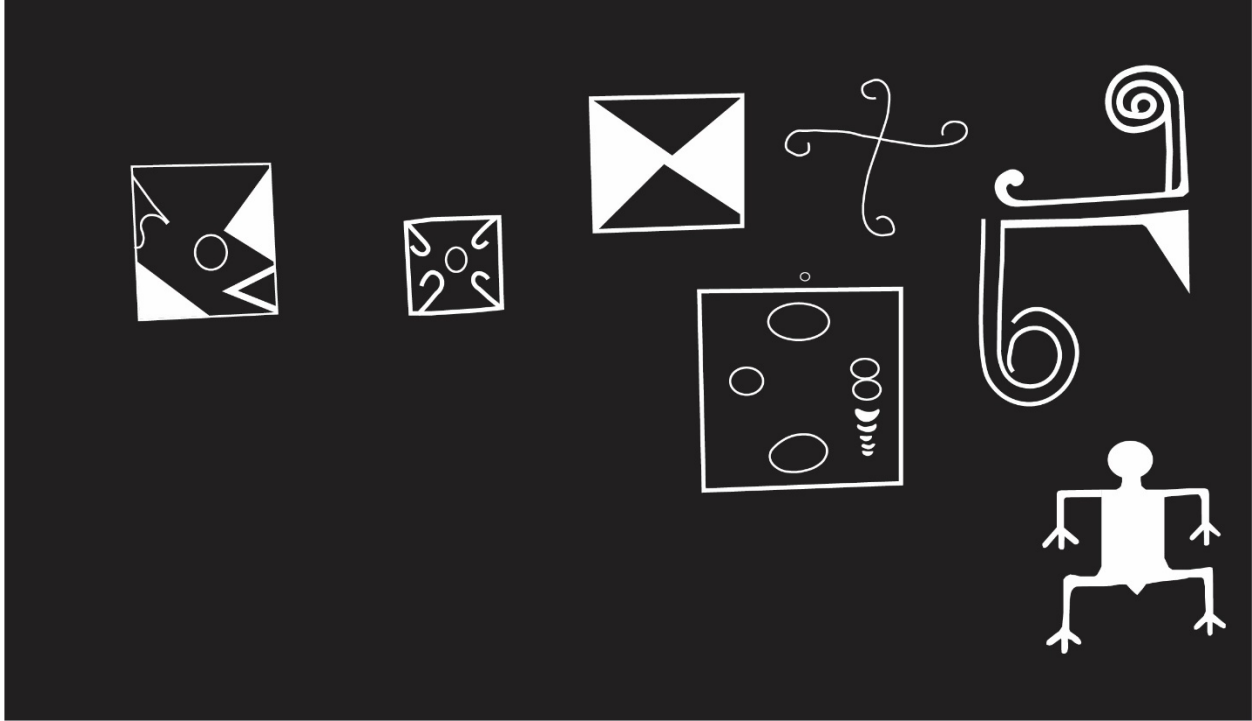
Not only has it been suggested that Casas Grandes had strong ties to Mesoamerica and the Southwest, but some researchers have also highlighted similarities with even more distant

cultures. For example, certain aspects of Mississippian culture show interesting similarities to Casas Grandes, especially ceramic effigies. Lee (2013:68-69) compares two Chihuahuan “head pots” excavated in the Casas Grandes region to one recovered from Rose Mound in Cross County, Arkansas. Alice Kehoe (1992:177) also points out similarities and suggests that “ideas and small objects probably passed from Mexico to the Southwest, and from the American Southwest to the Southeast, or back.” Thus, future research including comparisons with the MPM collection could be widened to include other regions of North America.

### **Future Research**

Considerable time and effort were dedicated to typing vessels and analyzing iconography in the MPM collection. Further research on the vessels’ morphological attributes and collection of additional quantitative data would complement the results presented in this thesis.

While this thesis focused primarily on ceramic iconography, designs on pottery are clearly related to other forms of representation in the Casas Grandes region, such as rock art. For example, Carl Lumholtz was one of the first scholars to document cave sites in 1902. Figure 5.1 shows one of his cave art illustrations, possibly from La Cueva de la Golondrina (for a photo and additional information, see O’Connor and Parks 2012). I was able to see some of this iconography from a distance during my trip to Chihuahua in 2019 (Figure 5.2).



**Figure 5.1: Cave Valley rock art (adapted from Lumholtz 1902:72).**



**Figure 5.2: Cave sites near Cueva de la Olla (photo taken by author).**

This illustration shows how further iconographic studies could compare Casas Grandes ceramics to rock art. Like iconography on Casas Grandes pottery, including the MPM collection, the rock art includes various geometric designs and dualism attributes. Schaafsma (1997) has presented particularly detailed information on rock art in the region, including similarities to painted pottery designs, such as the stepped motif. However, she notes that despite such similarities, “a systematic comparative study has not been made between Paquimé style motifs and designs on Medio Period pottery” (Schaafsma 1997:24).

Additionally, as mentioned in Chapter 2, Munson and Hays-Gilpin (2017:672-673) define a level of iconographic analysis, which they term an “artifactual approach,” that considers materials that were used and their association to the imagery depicted on that material. Because this thesis primarily considered ceramics, this level of analysis was not able to be fully explored. However, it would be interesting to follow this approach in future research on similar iconography throughout the Casas Grandes region.

Lastly, since the beginning of the twentieth century, archaeologists have been comparing the Salado and Chihuahuan pottery traditions. The MPM collection of Casas Grandes ceramics represents a great opportunity to compare vessels from these cultures, especially on a design analysis level. Researcher could even make such comparisons remotely, as images of all of the Casas Grandes vessels at the MPM have been included in Appendix D.

### **Significance of Research**

The publication of this thesis will bring awareness to a large and significant, but previously unresearched, collection of Casas Grandes pottery. The data presented in this thesis will allow the collection to be compared to other Chihuahuan ceramics from museum collections

and archaeological excavations, and even ceramics from other neighboring cultures with similar iconography. Thus, other researchers will be able to use the collection to address additional questions or further explore issues raised in this thesis.

It is amazing that such a remarkable collection of Casas Grandes materials exists so far from its home in Chihuahua. However, the MPM does not currently have an exhibition on Casas Grandes materials and the Museum's prehistoric Southwest cases are geographically, temporally, and culturally limited. As an archaeologist and museum professional, my hope is that in the future this research will allow the collection to be used at the Museum or in the Milwaukee community for research, programming, and/or exhibition. More broadly, the MPM's Casas Grandes collection, and the data presented in this thesis, will contribute to the ever-growing knowledge of Chihuahuan prehistory and Southwest archaeology.

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## **APPENDIX A: MUSEUM DOCUMENTATION**

**Table A.1: MPM Casas Grandes Collection Catalog Records by Accession**

<b>Accession Number</b>	<b>Locality</b>	<b>Accession Information</b>
16680	Jemez Springs, Sandoval Co., New Mexico	Found with burial at Jemez Springs, Sandoval Co., New Mexico. Mrs. D.J. Walsh *Note: no human remains associated with this accession exist at MPM.
18798	Casas Grandes, Mexico	From the National Institute of Anthropology and History-Mexico City, Mexico as an exchange. June 10, 1963. [Cast].
20717	Casas Grandes	Received May 10, 1967. Cataloged May 12, 1967. 20 items. Mr. Kirk Whaley, Milwaukee, WI.
21024	Casas Grandes, Mexico	Received 1967. Sold by E.K. Petrie, Chicago, IL. 1 item.
21190	Chihuahua, Mexico	Received Nov. 30, 1967. Cataloged Jan. 30, 1968. Mr. Kirk Whaley. Milwaukee, WI.
21209	Casas Grandes, Mexico	Received Jan 1968. Cataloged Feb. 14, 1968. New Mexico. 4 pots. J.E. Gilmore, Deming, New Mexico.
21262	Casas Grandes, Mexico	Received Jan 1968. Cataloged March 6, 1968. Ed Gilmore, Deming, New Mexico.
22156	Casas Grandes, Mexico	Received Jan. 1970. Cataloged Jan. 13, 1970. Mr. D.L. Erling. 10 objects total in the accession
24696	Casas Grandes, Chihuahua, Mexico	Received Oct. 1, 1977. Cataloged Oct. 17, 1977. 110 objects total (including Mimbres items). Peter G. Wray, Phoenix, AZ.

✓

**MILWAUKEE PUBLIC MUSEUM  
ACCESSION CARD**

Complete acc. file copied.

6/99

J.S.

Acc. No. 16680

Received Aug. 25, 1947

Classification Archaeology

Number of Specimens 3

Locality New Mexico

Cataloged Aug. 26, 1947

Catalog No. 49562-64

1 - pottery bowl, Mogollan

1 - olla, Mimbres<sup>2</sup>

1 - pot, Casas Grandes type

OK  
Ritzenthaler

From whom Mrs. D.J. Walsh

Street 419 S. Mildred St.

City Charles Town, W. Virginia

By (Gift, Exch., Purch., Coll., Made) Gift

V.30

DEPARTMENTAL REPORTS

164

(4510) ANTHROPOLOGY

JUNE REPORT

NEW EXHIBITS: Installed second case of exhibit on Old Stone Age Europe. Installed exhibit on Swiss Lake Dwellers in room 105.

WORK IN PROGRESS: A series of exhibits on Races of Man is in various stages of completion.

FIELD WORK: Spent June 3 gathering information, photographs, and plaster casts of petroglyphs at Twin Bluffs near New Lisbon in Juneau County. Took along Armin Schmidt, photographer, and Adolph Seebach, master plaster caster.

Left on June 16 for a month project with the Chippewa Indians. In cooperation with the Education department, we got a 2500 foot documentary movie of Building a Birchbark canoe. Also got a series of 230 kodachrome slides on the complete process. Acquired 15 Chippewa Indian specimens including some fine Peyote material, a tobaggan, sled, and 2 hunting medicine bundles.

16681

PERSONNEL: Mr. Rod Smith entered the department on June 2 as a student voluntary worker for the summer.

June 24, 1947 (Signed) Respectfully submitted, Robert E. Ritzenthaler, Asst. Curator

JULY REPORT

NEW EXHIBITS: Installed 3 new exhibits in room 105, illustrating racial types including Mongoloid, Negroid, and Caucasoid stocks.

WORK IN PROGRESS: A series of exhibits on Races of Man is in process.

FIELD WORK: Returned from a month field trip to Lac Du Flambeau where we recorded on film the making of birchbark canoe. (See June report for details). Returned on July 16.

July 31, 1947 (Signed) Respectfully submitted, Robert E. Ritzenthaler, Asst. Curator

AUGUST REPORT

NEW ACCESSIONS: Received 3 fine prehistoric Indian vessels of pottery from New Mexico through the courtesy of Mrs. D. J. Walsh of Charles Town, West Virginia.

16680

WORK IN PROGRESS: Four more exhibits on Races of Man are in various stages of completion.

FIELD WORK: Spent Friday, August 8, excavating three burials in a gravel pit at Long Lake, Fond du Lac County.

16681

IMPORTANT VISITORS: Dr. William Fenton of the Bureau of American Ethnology spent August 26 inspecting the laboratories and Iroquois collections.

August 29, 1947 (Signed) Respectfully submitted, Robert E. Ritzenthaler, Asst. Curator

(4520) HISTORY

JUNE REPORT

Two lectures were given by Mr. Wolff.

EXHIBITS: The log cabin school, loaned by Steuben Jr. High School, has been removed and returned. In its place the Chinese bowl, gift of Mr. J. M. Palakow, has been exhibited.

MISCELLANEOUS: Mr. Harrison spent 1 day and a half in the museum continuing the air gun studies. Considerable progress has been made.

MILWAUKEE PUBLIC MUSEUM  
ACCESSION CARD 3507

*(complete acc. file copied.  
6/99)*

Accession No. 24696

Accession Date \_\_\_\_\_

Catalog Classification Archeology

Date Rec'd 10 / 01 / 77 Date Cataloged 10 / 11 / 77

From Peter G. Wray (staff )

5251 N. 16th ST, Suite 800

Phoenix, AZ

Cat # Description

Casa Grandes: 57308-12, 57314-17, 57320  
57328-30, 57333, 57335-6, 57339-45,  
57347, 57349, 57351-80, 57383-96, 57398-  
99, 57401-15

Mimbres: 57313, 57318-19, 57321-27,  
57331-32, 57334, 57337-38, 57346,  
57348, 57350, 57381, 57397, 57400

TOTAL NUMBER OF OBJECTS/SPECIMENS 110

Gift  Purchase \_\_\_\_\_ Exchange \_\_\_\_\_

Field collection \_\_\_\_\_

Date of acknowledgment 10 / 11 / 77

10 January 1978

Mr. Peter G. Wray  
5251 North 16 Street, Suite 800  
Phoenix, AZ 85016

Dear Mr. Wray:

Thank you for your letter of 21 December and the accompanying inventory summary of the objects that you so kindly donated to the museum in the past autumn. As the inventory list agrees with the actual objects in the collection I return the signed statement to you. Mr. Phillip Sidoff, Assistant Curator of Anthropology here at the museum, and I both have signed the statement. It therefore should serve you properly in any discussions that you might have with representatives of the Internal Revenue Service.

At such time as you have provided the museum with an evaluation of the collection we of course will be pleased to provide you with the appropriate forms that you may use for your tax purposes.

Thank you again for your courtesy to the museum. The Milwaukee Public Museum, which soon will mark its centennial, is one of the half dozen larger museums of natural and human history in the United States. In addition, we are well known for our collections of American Indian materials, and so it is that we are especially pleased by the very meaningful gift that you have made. We look forward with feeling of pleasure to having you visit us at such time as you might come to the Midwest. For now, I take the opportunity of extending to you my very best wishes for a healthful and satisfying new year.

Sincerely,

Kenneth Starr  
Director

KS/kh  
Enclosure  
cc: Dr. Lurie  
✓ Mr. Sidoff

Oct. 11, 1977

Frederick J. Dockstader  
165 West 66th St.  
New York, N.Y. 10023

Dear Fred:

Just a note to say the crate arrived this weekend but it took until today to get it to the museum. We had to scrounge a large truck from the county car pool as crate wouldn't fit our vans. Air freight here won't door-to-door artworks! What a gorgeous job of packing! We trundled all the boxes down to our storage area to begin cataloging. Besides being confused about IRS forms (I trust MacBriar got everything straightened out to Mr. Wray's satisfaction and yours) we don't have a registrar. A nutty system for a big museum--each department handles cataloging with master file duplicate in main office. Starr has been slowly getting new positions and registrar is next priority. We didn't have a conservator until 3 years ago, either. Very hard to convince government officials that things have changed since the museum was chartered in 1882. However, our department has a good, orderly system. We've just opened box #1, but I wanted to write to you right away. It IS like Christmas!

I'm off to Ethnohistory meetings after tomorrow, so final work won't be completed until next week and we won't do final cataloging and marking of items until we get official letter from Mr. Wray. (Any relative of Fay of King Kogg fame? I bet he's tired of THAT question!)

Hope you can stop by Milwaukee on your way back west next spring. I'd like to get some P.R. on the donation--maybe a temporary exhibit in front lobby of some of the finest items and, if possible, newspaper coverage. Would this be O.K.?

Well, back to the bubble-wrapping! My best to Alice and hi' from my mother who said to send greetings when I write. Tusind Tak, as us Scandihoovians say, for all your efforts in behalf of the MPM.

Best wishes,

2000 copy with file



**FREDERICK J. DOCKSTADER**  
165 WEST 66<sup>TH</sup> STREET  
NEW YORK, NEW YORK 10023

October 13th

Dr. Nancy O. Lurie  
Milwaukee Public Museum  
Milwaukee, Wisconsin

Dear Nancy:

I hope that the shipment arrived in good shape, and was to your liking. Particularly do I hope that the collection will be useful.

I am enclosing an additional listing for you, in the event it may be helpful for any purpose. Please let me know if there is anything listed but not received, or received and not listed. At the last moment, Mr. Wray made a minor change in the group of objects, and it may have affected what you received. I hope not, but.....

As ever,

We're back in NYC now, for the Fall semester. Latest rumor I hear is that Roland Force is the new Director of MAI/HF, effective October 1.

Oct. 24, 1977

Frederick J. Dockstader  
165 West 66th Street  
New York, New York 10023

Dear Fred:

I've held off writing because I thought our letters might cross but evidently you have not discovered that you did not enclose the "additional listing" you said you were enclosing in your letter of Oct. 13. We have had no direct communication from Mr. Wray and still have not received the information you said you were sending describing and evaluating the objects.

So, I'll look forward to receiving the necessary information to complete cataloging and send our donor's form to Mr. Wray. I am enclosing three copies of the U.S. Statutes under which we grant IRS exemptions. Also, I'm enclosing a copy of the list as checked off. There were ~~four~~ additional numbered items besides those listed: 86, 2072, 2072 E, 2100 A, 3007 E, all shell necklaces. In addition there was a piece without any number, a ceramic V shaped rattle (?) which has two round heads.

I've also been delayed getting this off because I was at the Ethnohistory Meetings in Chicago and then get an emergency call to testify on a hunting bill the Winnebago have before the Wis. State Legislature.

Some sad news at Chicago. The regular meeting of the Newberry Library Center for the Study of American Indian History was scheduled during the Ethnohistory meetings and D'Arcy McNickle, Chairman, didn't appear. Not like him at all, so they called the Albuquerque police who entered his house and found him dead, apparently of a heart attack. Yesterday I got further information that the coroner figured he died on the tenth but wasn't found until the 15th of October. D'Arcy was a dear friend-- I saw him last August in Albuquerque--and I'm terribly distressed by not only his death but the circumstances that a man known all over the country should have died alone and no one know for nearly a week. He had just finished a new novel, by the way, on a medicine bundle lost in a museum. It should be published shortly if not already out but I don't know the publisher.

Hope you can get out this way returning from N.Y. to S.W. Meanwhile, many thanks and I look forward to hearing from you.

Best regards,



FREDERICK J. DOCKSTADER  
165 WEST 66<sup>TH</sup> STREET  
NEW YORK, NEW YORK 10023

October 28, 1977

Dear Nancy:

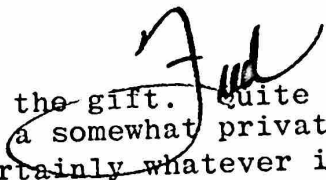
Your October 24th letter came, for which my thanks. No, you had not received the INventory listing, since this is to come from Mr. Wray, together with his Letter of Gift to make the whole thing formal. But that was held up, since he had never received a tax-exempt statement from your legal eagles. I talked to Ken Starr about this, to get it straightened out just what was needed. I am hopefully assuming that this has now all been taken care of.

I am apologetic for the mix-up in what was sent. This is largely a matter of last-minute rush (alibi!). I prepared six separate selections of gifts while in Arizona, and at the last minute, Mr. Wray changed his mind on one major section, and it required a lot of fast switching before the packers moved in. I am afraid here is where some of the changes came...particularly in the necklaces. But I have one question: I do not recall a V-shaped rattle of clay???????? Can you sketch it for me? There was a large carton of odds and ends, mostly Veracruz, which had nothing to do with the Casas Grandes gift. One of these pieces (most were fragments - the usual separate head, broken arm, etc. sort of thing) may have gotten into your carton by mistake. If so, no sweat; but I am curious about the "rattle". It does not ring a bell.

I was shocked out of my mind by your news about D'arcy. He was a great guy, a very good friend with whom I had worked in the past - matter of fact, I had hoped at one time to take on the Newberry job, but it didn't work out, and I was delighted to see he got it. I knew him quite well, and simply can't believe that he has left. His health was not of the best, as you know; but the circumstances are indeed especially tragic. Thank you for telling me.

Please let me know the moment you get the Gift Letter; this is out of my hands, but I am anxious to keep abreast of how it is all progressing. I hope that the material was useful to you, and met your anticipations favorably. I am forwarding the copies of your IRS papers to Phoenix, of course, although it is not exactly what one usually uses for this purpose. I am surprised you do not have the normal IRS form.

Cordially,

PS: Your question anent publicity on the gift.  quite OK, providing it's relatively low key. He is a somewhat private person; not psychotic about it, though. Certainly whatever is to MPM benefit.

FREDERICK J. DOCKSTADER  
165 West 66th Street  
New York City, N. Y. 10023

November 9, 1977

Dear Nancy:

AUWÉ, as they holler in Hawaii...howinell did THAT rattle ever get into your gift shipment???????

It is a Colima rattle, and part of a collection which Mr. Wray had just acquired. It was one of the reasons I was so anxious to get the Casas Grandes material shipped, to provide room to open out the collection.

I is verra embarrassed, since it is not part of the gift. So, sometime when the spirit moves you, if you would be so kindly, send it back to me here in NYC. I will be en route to Arizona in December, and will take it there for a reunion with the other 4,999 items.

The problem is simple: everything was packed in the big garage, and there were some other pieces of the Harner Collection which had been opened...it simply got included somehow, inadvertently. I sure never saw it get wrapped, and I was trying to check everything off as the pieces were up-ge-wrapped.

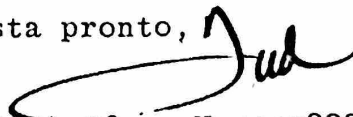
One headache was that I was handling four (4) different gift shipments - you'ns, Pacific Silence, Indian Apples Chilluns and Alberkookie.....all good museeems & true. But something over 250 objex. You're lucky they was no more than that in the mixup.

New Book out; had an autogiraffe party at Bloomingdale's Bookshop, lots of fun. Next week a couple TV shows to hustle the tome and bewilder the publick. Hope you like it when, as and if you see't. Maybe you can graft a free copy à la review. Try; it is peggad at the horrible rate of \$16.50 - too much, in view of the earlier schedule of \$14.95, sez I.

Now 2/3 way through the next: on N.A.I. Textiles. What have you of loom-woved Great Lakes-Midwestern material I could use? Need good photos to show the skill of the Woodlands weaver. I am trying to get the reader's eyes turned aside just a bit from Navajo weaving, to point out that others, besides the Navajo and NWC folk did it, too. HAVE you anything, prehistoric or historic? Special, good color photo (35mm slide will do).items.

So glad you're pleased (I hope) with the gift. Maybeso more to come later.

Hasta pronto,



Did you get the MEXican Masks data sheets from Harner????

## APPENDIX B: CERAMIC ANALYSIS CODING SCHEME

- A. Vessel Number
- B. Accession Number
- C. Old Collector Number
- D. Vessel Form (Di Peso et al. 1974b:18)
  - Jar
  - Bowl
  - Eccentric Vessel
- E. Effigy or Miniature
  - Not Effigy or Miniature (Di Peso et al. 1974b:18)
  - Hooded Effigy (Di Peso et al. 1974b:18)
  - Full-Bodied Effigy (added by author)
  - Misc. Human Effigy (added by author)
  - Animal Effigy (Di Peso et al. 1974b:18)
  - Bird Effigy (Di Peso et al. 1974b:18)
  - Snake Effigy (Di Peso et al. 1974b:18)
  - Miniature (Di Peso et al. 1974b:18)
  - Miniature Hooded Effigy (Di Peso et al. 1974b:18)
- F. Orifice (Di Peso et al. 1974b:18)
  - Restricted (Di Peso et al. 1974b:18)
  - Unrestricted (Di Peso et al. 1974b:18)
- G. Vertical Section (Di Peso et al. 1974b:18)
  - Ellipsoid, Rounded Base
  - Ovoid, Rounded Base
  - Spheroid, Rounded Base
  - Corner Point, Rounded Base
  - Ellipsoid, Sub-conoidal Base
  - Ovoid, Sub-conoidal Base
  - Ellipsoid, Flat Base
  - Human Effigy
- H. Neck (Di Peso et al. 1974b:18)
  - No Neck
  - Very Short
  - Conoidal
  - Medium Conoidal
- I. Rim (Di Peso et al. 1974b:18)
  - Incurved
  - Everted
  - Direct
- J. Horizontal Section (Di Peso et al. 1974b:18)
  - Circular
  - Rectangular

- Circular, Mammary Projections
  - Double Jar
  - Multiple Circular Body Projections
  - Asymmetrical Projections
- K. Handles
- Yes
  - No
- L. Temper
- Indeterminate
  - Grit
  - Sand
- M. Exterior Treatment
- Slipped
  - Polished
  - Painted
- N. Interior Treatment
- Slipped
  - Polished
  - Painted
- O. Paint
- Red
  - Black
  - Brown
- P. Decoration
- None
  - Incised
  - Geometric Paint
  - Effigy
  - Applique
- Q. Texture
- None
  - Incising
- R. Orifice Diameter (cm)
- S. Maximum Height (cm)
- T. Maximum Width (cm)
- U. Hanging Holes
- Yes
  - No
- V. Ware
- Utilitarian
  - Nonutilitarian
- W. Type
- Indeterminate
  - Babícora Polychrome

- Carretas Polychrome
  - Casas Grandes Plainware
  - Corralitos Polychrome Incised
  - Huerigos Polychrome
  - Leal Red-on-Brown
  - Madera Black-on-Red
  - Mata Red-on-Brown Textured
  - Pilon Red-on-Brown
  - Playas Red
  - Ramos Black
  - Ramos Black-on-White
  - Ramos Polychrome
  - Villa Ahuamada Black-on-White
  - Villa Ahumada Polychrome
- X. Time Period (Minnis and Whalen 2015)
- Viejo: AD 700- 1200
  - Medio: AD 1200-1475

Table B.1: Ceramic Analysis Data

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
49564	16680	1386?	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A53466	18798	19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A55251	20717	n/a	Jar	Bird Effigy	Restricted	Ovoid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A55252	20717	n/a	Jar	Hooded Effigy	Restricted	Ellipsoid, Rounded base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A55253	20717	n/a	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Rounded base	Very short	Everted	Multiple Circular Body Projections	No	Indeterminate	Slipped, Painted, polished
A55542	21024	n/a	Jar	Hooded Effigy	Restricted	Spheroid, Rounded Base	No neck	Everted	Circular	No	Indeterminate	Slipped, painted, polished
A55615	21190	n/a	Jar	Full-Bodied Effigy	Restricted	Human Effigy	Very short	Everted	Asymmetrical Projections	No	Indeterminate	Painted, polished
A55631	21209	n/a	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Conoidal	Everted	Circular	No	Indeterminate	Painted, polished
A55632	21209	n/a	Jar	Hooded Effigy	Restricted	Human Effigy	Very short	Everted	Asymmetrical Projections	No	Indeterminate	Painted, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A55633	21209	n/a	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Sand	Painted, polished
A55634	21209	n/a	Bowl	Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Indeterminate	Painted, polished
A55644	21262	n/a	Jar	Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Indeterminate	Polished
A56357	22156	L2002	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Sand	Painted, polished
A56358	22156	L2003	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Grit	Painted, polished
A57308	24696	PW44	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Rounded base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57309	24696	PW1967	Jar	Miniature Hooded Effigy	Restricted	Human Effigy	No neck	Incurved	Circular	No	Indeterminate	Painted, polished
A57310	24696	PW52	Jar	Miniature Hooded Effigy	Restricted	Ellipsoid, Sub-conoidal Base	Very short	Everted	Circular	No	Sand	Painted, polished
A57311	24696	PW101	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	No neck	Incurved	Circular	No	Indeterminate	Painted, polished
A57312	24696	PW2088	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	No neck	Incurved	Circular	No	Indeterminate	Painted, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57314	24696	PW126	Jar	Not Effigy or Miniature	Restricted	Ovoid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57315	24696	PW458	Jar	Not Effigy or Miniature	Restricted	Ovoid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57316	24696	PW189	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Indeterminate	Slipped, polished
A57317	24696	PW11	Jar	Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57351	24696	PW502	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Direct	Circular	No	Indeterminate	Slipped, painted
A57352	24696	PW485	Jar	Bird Effigy	Restricted	Ovoid, Rounded Base	Medium Conoidal	Everted	Circular	No	Sand	Slipped, painted, polished
A57353	24696	PW158	Jar	Animal Effigy	Restricted	Ovoid, Rounded Base	Very short	Everted	Circular	No	Sand	Slipped, painted, polished
A57355	24696	PW253	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Sub-conoidal Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57356	24696	PW212	Jar	Bird Effigy	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Sand	Slipped & Painted
A57357	24696	PW194	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	Yes	Sand	Slipped, painted, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57358	24696	PW490	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Subconoidal Base	Medium Conoidal	Everted	Circular	No	Indeterminate	Slipped, painted, polished
A57359	24696	PW79	Jar	Snake Effigy	Restricted	Ovoid, Subconoidal base	Very short	Direct	Circular	No	Sand	Slipped
A57360	24696	PW231	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57361	24696	PW3	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Grit	Painted, polished
A57362	24696	3028	Jar	Bird Effigy	Restricted	Ellipsoid, Rounded base	Very short	Everted	Asymmetrical Projections	No	Grit	Slipped, polished
A57363	24696	PW9	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Indeterminate	Slipped, painted, polished
A57364	24696	PW116	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Sand	Painted, polished
A57365	24696	PW194	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	Yes	Indeterminate	Polished
A57366	24696	PW194	Jar	Miniature	Restricted	Ellipsoid, Rounded base	Conoidal	Everted	Circular	No	Indeterminate	Painted, polished
A57367	24696	PW212	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Rounded base	Conoidal	Everted	Circular	No	Indeterminate	Painted, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57368	24696	PW227	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Polished
A57369	24696	PW483	Bowl	Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Sand	Painted, polished
A57370	24696	PW2079	Jar	Hooded Effigy	Restricted	Human Effigy	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57371	24696	PW2089	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57372	24696	PW469	Jar	Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	Yes	Indeterminate	Slipped, painted, polished
A57373	24696	PW58	Jar	Animal Effigy	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Sand	Slipped, painted, polished
A57374	24696	PW1961	Jar	Miniature Hooded Effigy	Restricted	Human Effigy	No neck	Incurved	Circular	No	Indeterminate	Plain
A57375	24696	PW2123	Jar	Hooded Effigy	Restricted	Human Effigy	Very short	Everted	Circular	No	Sand	Painted, polished
A57376	24696	PW163	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Grit	Slipped, painted, polished
A57378	24696	PW1943	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Direct	Circular	No	Indeterminate	Slipped, painted, polished
A57379	24696	PW1962	Jar	Full-Bodied Effigy	Restricted	Human Effigy	No neck	Everted	Asymmetrical Projections	No	Sand	Painted, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57380	24696	PW185	Jar	Not Effigy or Miniature	Restricted	Elipsoid, rounded base	Very short	Everted	Circular	No	Sand	Slipped, polished
A57383	24696	PW226	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Conoidal	Everted	Circular	No	Indeterminate	Plain
A57384	24696	PW118	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57385	24696	PW196	Jar	Misc. Human Effigy	Restricted	Human Effigy	Very short	Everted	Circular	No	Indeterminate	Slipped, painted
A57386	24696	PW211	Jar	Not Effigy or Miniature	Restricted	Elipsoid, flat base	Very short	Everted	Circular	Yes	Grit	Slipped, polished
A57387	24696	PW178	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Everted	Circular	No	Sand	Polished
A57388	24696	PW202	Jar	Bird Effigy	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Slipped, painted, polished
A57389	24696	PW18	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Rectangular	Yes	Indeterminate	Slipped, painted, polished
A57390	24696	PW674	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Rounded base	Conoidal	Everted	Circular	No	Indeterminate	Slipped, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57391	24696	PW224	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Flat Base	Conoidal	Everted	Circular	Yes	Indeterminate	Slipped, painted, polished
A57392	24696	PW27	Jar	Miniature	Restricted	Ellipsoid, Rounded base	Very short	Everted	Circular	No	Indeterminate	Slipped, Painted, polished
A57393	24696	PW152	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Medium Conoidal	Everted	Circular	No	Grit	Slipped, polished
A57394	24696	PW233	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Sub-conoidal Base	Very short	Everted	Circular	No	Grit	Slipped, painted, polished
A57395	24696	PW225	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Medium Conoidal	Everted	Circular	No	Indeterminate	Slipped, painted, polished
A57396	24696	PW7	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Indeterminate	Painted, polished
A57398	24696	PW6	Bowl	Not Effigy or Miniature	Restricted	n/a	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57401	24696	PW165	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Grit	Slipped, painted, polished
A57402	24696	PW2084	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Indeterminate	Painted, polished
A57403Lot (2)	24696	PW105	Eccentric Vessel	Not Effigy or Miniature	Restricted	Ellipsoid, Sub-conoidal Base	Conoidal	Everted	Double jar	No	Grit	Slipped, painted, polished; textured

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57404	24696	PW124	Jar	Not Effigy or Miniature	Restricted	Ovoid, Rounded Base	Very short	Everted	Circular	No	Indeterminate	Painted, polished
A57405	24696	PW133	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Sub-conoidal Base	Very short	Everted	Circular	No	Grit	Slipped, painted
A57406	24696	PW486	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Grit	Painted, polished
A57407	24696	PW3034	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Everted	Circular	No	Indeterminate	Slipped, painted, polished
A57408	24696	PW2121	Jar	Not Effigy or Miniature	Restricted	Ovoid, Rounded Base	Very short	Direct	Circular	No	Sand	Plain
A57409	24696	PW183	Jar	Not Effigy or Miniature	Restricted	Ellipsoid, Rounded base	Very short	Everted	Circular	No	Indeterminate	Polished
A57410	24696	PW471	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Sand	Polished
A57411	24696	PW457	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Very short	Everted	Circular	No	Sand	Slipped, polished
A57412	24696	PW196	Bowl	Not Effigy or Miniature	Unrestricted	n/a	No neck	Incurved	Circular	No	Indeterminate	Slipped, polished
A57413	24696	PW1	Jar	Not Effigy or Miniature	Restricted	Spheroid, Rounded Base	Conoidal	Everted	Circular	No	Sand	Painted, polished

Vessel Num.	Acc. Num.	Old Num.	Vessel Form	Effigy or Miniature	Orifice	Vertical Section	Neck	Rim	Horizontal Section	Handle	Temper	Exterior Treatment
A57414	24696	PW2	Jar	Not Effigy or Miniature	Restricted	Corner Point, Rounded base	Very short	Everted	Circular	No	Sand	Painted, polished
A57415	24696	PW2118	Bowl	Bird Effigy	Unrestricted	n/a	No neck	Incurved	Asymmetrical Projections	No	Indeterminate	Slipped, painted, polished

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
49564	Plain	Red, black	Geometric paint	n/a	13.5	22.5	23.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A53466	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A55251	Plain	Red, black	Geometric paint; effigy	n/a	11.2	24	19	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A55252	Plain	Red, black	Geometric paint; effigy	n/a	11	19	19	No	Nonutilitarian	Babicora Polychrome	Medio (1200-1475)
A55253	Plain	Red, black	Geometric paint	n/a	10	13.8	19.2	No	Nonutilitarian	Villa Ahumada Polychrome	Medio (1200-1475)
A55542	Plain	Red, black	Geometric paint	n/a	12	22	21		Nonutilitarian	Villa Ahumada Polychrome	Medio (1200-1475)
A55615	Plain	Red, black	Geometric paint; effigy	n/a	11.5	20.5	17.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A55631	Plain	Red, black	Geometric paint	n/a	12.4	22.3	24.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A55632	Plain	Red, black	Geometric paint; effigy	n/a	10	20.5	16	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A55633	Plain	Black	Geometric paint	n/a	10	15.6	16.5	Yes	Nonutilitarian	Ramos Black-on-white	Medio (1200-1475)
A55634	Plain	Red, black	Geometric paint	n/a	12.5	9	14.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A55644	Plain	n/a	None	n/a	7.8	9.5	12	Yes	Utility Ware	Ramos Black	Medio (1200-1475)
A56357	Plain	Red, black	Geometric paint	n/a	10	14.5	17.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A56358	Plain	Red, black	Geometric paint	n/a	12.7	23.5	24.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57308	Plain	Red, black	Geometric paint	n/a	9.8	16.5	19	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57309	Plain	Red, black	Geometric Paint	n/a	7.7	12.5	12	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57310	Plain	Red, black	Geometric paint; effigy	n/a	10.8	16	15	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57311	Plain	Brown, red, black	Geometric paint	n/a	10	17.3	19	Yes	Nonutilitarian	Babicora Polychrome, Style B	Medio (1200-1475)
A57312	Plain	Red, black	Geometric paint	n/a	9.9	15.5	20	Yes	Nonutilitarian	Babicora Polychrome, style B	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57314	Plain	Red, black	Geometric paint	n/a	12	21.5	21		Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57315	Plain	Red, black	Geometric paint	n/a	13.5	19.5	21.5		Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57316	Plain	n/a	None	n/a	10.7	18.5	21		Utility Ware	Ramos Black	Medio (1200-1475)
A57317	Plain	Black	Geometric paint	n/a	8.8	13.5	14.5		Nonutilitarian	Ramos Black-on-White	Medio (1200-1475)
A57351	Plain	Red, black	Geometric paint	n/a	5.8	19.5	18	Yes	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57352	Plain	Red, black	Geometric paint; applique	n/a	12	22.5	26		Nonutilitarian	Villa Ahumada Polychrome	Medio (1200-1475)
A57353	Plain	Black	Geometric paint; effigy	n/a	9.5	18.5	16		Nonutilitarian	Madera Black-on-Red	Medio (1200-1475)
A57355	Plain	Red, black	Geometric paint	n/a	10.2	15.7	18.5	Yes	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57356	Plain	Red, black	Geometric paint; effigy added	n/a	11.8	18	23		Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57357	Plain	Red, black	Geometric paint	n/a	11	16.5	19	No	Nonutilitarian	Villa Ahumada Polychrome	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57358	Plain	Black	Geometric paint	n/a	13.2	22.7	24	No	Nonutilitarian	Madera Black-on-Red	Medio (1200-1475)
A57359	Plain	Brown, red	Geometric paint; effigy applique	n/a	9.3	20	26	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57360	Plain	Red, black	Geometric Paint	n/a	13.5	25.7	30	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57361	Plain	Red, black	Geometric paint	n/a	13.7	24.5	25.5	Yes	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57362	Slipped	n/a	Applique	n/a	9.8	15	18	Yes	Utility Ware	Playas Red	Medio (1200-1475)
A57363	Slipped	Red, black	Geometric paint	n/a	22.5	13	25	No	Nonutilitarian	Carretas Polychrome	Medio (1200-1475)
A57364	Plain	Red, black	Geometric paint	n/a	11.4	23	24	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57365	Polished	n/a	n/a	n/a	9.7	16	19	No	Utility Ware	Ramos Black	Medio (1200-1475)
A57366	Painted, polished	Red, black	Geometric paint	n/a	11	13.5	16	No	Nonutilitarian	Ramos Polychrome Black on White	Medio (1200-1475)
A57367	Painted, polished	n/a	Geometric paint	n/a	9.2	14.8	16.5	No	Nonutilitarian	Pilon Red-on-brown	Viejo (700-1200)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57368	Polished	n/a	n/a	n/a	16	26	29	No	Utility Ware	Ramos Black	Medio (1200-1475)
A57369	Plain	Red, black	Geometric paint	n/a	10.7	8	13.1	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57370	Plain	Red, black	Geometric paint	n/a	12	22	19	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57371	Plain	Red, black	Geometric paint	n/a	12.2	23	23.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57372	Plain	Red, black	Geometric paint	n/a	10	15.5	15	No	Nonutilitarian	Villa Ahumada Polychrome	Medio (1200-1475)
A57373	Polished	Red, black	Geometric paint	n/a	9	17.1	18	No	Nonutilitarian	Villa Ahumada Polychrome	Medio (1200-1475)
A57374	Plain	n/a	Effigy applique	n/a	12	16.5	15	No	Utility Ware	Casas Grandes Plainware	Medio (1200-1475)
A57375	Plain	Red, black	Geometric paint; Effigy	n/a	10	20	17.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57376	Slipped, painted, polished	Red, black	Geometric paint	n/a	27.1	12.8	28.5	No	Nonutilitarian	Huerigos Polychrome	Medio (1200-1475)
A57378	Slipped, polished	Red, black	Geometric paint	n/a	10	15.7	17.5	Yes	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57379	Plain	Red, black	Geometric paint; Effigy	Incising	10	19.5	15.5	No	Nonutilitarian	Indeterminate	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57380	Slipped, polished	n/a	None	n/a	10	13.3	16.5	Yes	Utility Ware	Ramos Black	Medio (1200-1475)
A57383	Plain	n/a	incised	Incising	16.5	22.5	28	No	Utility Ware	Casas Grandes Plainware	Medio (1200-1475)
A57384	Plain	Red, black	Geometric paint	n/a	11.8	21	22	No	Nonutilitari an	Ramos Polychrome	Medio (1200-1475)
A57385	Plain	Red, black	Geometric paint, applique effigy	n/a	11	13	21	Yes	Nonutilitari an	Indeterminate	Medio (1200-1475)
A57386	Slipped, polished	n/a	None	n/a	9	13.5	15	No	Utility Ware	Playas Red	Medio (1200-1475)
A57387	Polished	n/a	n/a	n/a	18.2	11	22	No	Utility Ware	Ramos Black	Medio (1200-1475)
A57388	Plain	Red, black	Geometric paint & applique effigy	n/a	14.4	21	23	No	Nonutilitari an	Ramos Polychrome	Medio (1200-1475)
A57389	Polished	Red, black	Geometric paint	n/a	8	15.5	16	No	Nonutilitari an	Villa Ahumada Polychrome	Medio (1200-1475)
A57390	Slipped, polished	n/a	n/a	n/a	11.9	15.7	17.5	Yes	Utility Ware	Playas Red	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57391	Plain	Black	Geometric paint	n/a	10	15.5	18.5	No	Nonutilitarian	Madera Black-on-Red	Medio (1200-1475)
A57392	Plain	Red, black	Geometric paint	n/a	9.5	14	16.5	Yes	Nonutilitarian	Babicora Polychrome	Medio (1200-1475)
A57393	Slipped, polished	n/a	Incised	Incising	10	15.5	15.5	No	Utility Ware	Playas Red Incised	Medio (1200-1475)
A57394	Plain	Red, black	Geometric paint	n/a	12.5	21	24		Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57395	Plain	Red	Geometric paint, incised	Incising	13.8	25.2	31	No	Nonutilitarian	Mata Red-on-Brown Textured	Viejo (700-1200)
A57396	Slipped, painted, polished	Red, black	Geometric paint	n/a	27.5	11.5	29	No	Nonutilitarian	Carretas Polychrome	Medio (1200-1475)
A57398	Plain	Red, black	Geometric paint	n/a	13	17	24.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57401	Slipped, painted, polished	Red, black	Geometric paint	n/a	20.8	12	23	No	Nonutilitarian	Carretas Polychrome	Medio (1200-1475)
A57402	Plain	Red, black	Geometric paint	n/a	17	13	20	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57403Lot (2)	Plain	Black	Geometric paint; incised	Incising	8	14	24.5	No	Nonutilitarian	Corralitos Polychrome Incised	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57404	Plain	Red, black	Geometric paint	n/a	10.9	22.5	23.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57405	Plain	Red, black	Geometric paint	n/a	15.6	27.5	28.5	No	Nonutilitarian	Villa Ahumada Polychrome (Ramos variant)	Medio (1200-1475)
A57406	Painted	Red, black	Geometric Paint	n/a	12.5	19.5	21.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57407	Slipped, painted	Red, black	Geometric paint	n/a	20.3	14	21.5	No	Nonutilitarian	Carretas Polychrome	Medio (1200-1475)
A57408	Plain	Red	Geometric Paint		8.1	15.5	17		Nonutilitarian	Leal Red-on-brown	Viejo (700-1200)
A57409	Plain	n/a	n/a	n/a	10.8	14.5	18.3		Utility Ware	Ramos Black	Medio (1200-1475)
A57410	Plain	n/a	n/a	n/a	10.3	14.5	18	Yes	Utility Ware	Ramos Black	Medio (1200-1475)
A57411	Plain	Red, black	Geometric paint	n/a	12.8	25.8	29.5	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57412	Slipped, polished	n/a	n/a	n/a	20.8	14.5	24	No	Utility Ware	Ramos Black	Medio (1200-1475)
A57413	Plain	Red, black	Geometric paint	n/a	12	16.5	19	No	Nonutilitarian	Babicora Polychrome	Medio (1200-1475)

Vessel Num.	Interior Treatment	Paint	Decoration	Texture	Orifice Diam (cm)	Max. Height (cm)	Max. Width (cm)	Hanging Holes	Ware	Type	Time Period
A57414	Plain	Red, Black	Geometric paint	n/a	11.7	24	25	No	Nonutilitarian	Ramos Polychrome	Medio (1200-1475)
A57415	Plain	Black	Geometric paint	n/a	18.4	18	27	No	Nonutilitarian	Villa Ahumada Black-on-White	Medio (1200-1475)

## APPENDIX C: DESIGN ANALYSIS CODING SCHEME

### Primary Layout

1. Simple Bands
2. Two Line
3. Three Line
4. Four Line
5. Paneled
6. Semi-Paneled
7. Zig-Zag
8. Repeated Figures
9. Miscellaneous

### Secondary Layout

1. Solid Color
2. Elaborated Lines
3. Ladders, Checkerboards
4. Repeated Negative Motifs
5. Scalloped and Sawtooth Lines
6. Hooked Triangle
7. Stepped and Barbed
8. Miscellaneous

### Over-All Layout

1. Sectioned: Bisected

**Table C.1: Design Analysis Data**

Vessel #	Type	Primary Layout	Secondary Layout	Over-All Layout	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circle(s)/ Bull's Eye	Running Band of Circles	Macaw Motif
A55253	Villa Ahumada Polychrome	2-Line	N/A	N/A	0	0	0	1	0	0	0	0
A57309	Polychrome	2-Line	N/A	N/A	0	1	0	1	0	0	0	0
A57363	Carretas Polychrome	4-Line	N/A	N/A	0	1	0	0	0	0	0	0
A57396	Carretas Polychrome	4-Line	N/A	Sectione d:	1	1	0	0	1	0	0	0
A57401	Carretas Polychrome	4-Line	N/A	Sectione d: Bisected	0	0	0	1	0	0	0	0
A53466	N/A	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A55644	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57316	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57359	Ramos Polychrome	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57362	Playas Red	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57365	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57368	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57374	Casas Grandes Plainware	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57376	Huerigos Polychrome	N/A	N/A	Sectione d:	0	0	0	1	0	0	0	0
A57379	Indeterminate	N/A	N/A	N/A	0	0	0	0	0	0	0	0

Vessel #	Type	Primary Layout	Secondary Layout	Over-All Layout	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circle(s)/ Bull's Eye	Running Band of Circles	Macaw Motif
A57380	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57383	Casas Grandes Plainware	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57385	Indeterminate	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57386	Playas Red	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57387	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57390	Playas Red	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57393	Incised	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57409	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57410	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
A57412	Ramos Black	N/A	N/A	N/A	0	0	0	0	0	0	0	0
49564	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	0	1	1	0	0
A55251	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	1	0	0	0
A55615	Ramos Polychrome	Paneled	N/A	N/A	0	1	0	0	1	0	0	0
A55631	Ramos Polychrome	Paneled	Ladder, Checkerboard	N/A	1	0	0	1	1	1	1	0
A55632	Ramos Polychrome	Paneled	Ladder, Checkerboard	N/A	1	1	0	1	1	0	0	0

Vessel #	Type	Primary Layout	Secondary Layout	Over-All Layout	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circle(s)/ Bull's Eye	Running Band of Circles	Macaw Motif
A56357	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	0	0	0	1
A56358	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	1	0	0	0
A57308	Ramos Polychrome	Paneled	N/A	N/A	1	0	0	1	0	0	0	0
A57310	Polychrome	Paneled	N/A	N/A	0	0	0	1	0	0	0	0
A57314	Ramos Polychrome	Paneled	N/A	N/A	1	0	0	1	0	0	0	0
A57356	Ramos Polychrome	Paneled	N/A	N/A	1	0	0	1	0	1	0	0
A57357	Polychrome	Paneled	Scalloped/	N/A	0	1	0	1	0	0	0	0
A57360	Ramos Polychrome	Paneled	N/A	N/A	0	1	0	0	0	1	0	0
A57364	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	1	0	0	1
A57370	Polychrome	Paneled	N/A	N/A	1	1	0	0	1	0	0	0
A57371	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	0	1	1	0
A57372	Villa Ahumada Polychrome	Paneled	N/A	N/A	0	1	0	0	0	0	0	0
A57375	Ramos Polychrome	Paneled	N/A	N/A	0	1	0	0	0	0	1	0
A57384	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	1	0	0	0
A57388	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	1	1	0	0
A57394	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	0	0	0	0

Vessel #	Type	Primary Layout	Secondary Layout	Over-All Layout	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circle(s)/ Bull's Eye	Running Band of Circles	Macaw Motif
A57395	Mata Red-on-Brown	Paneled	N/A	N/A	0	0	0	0	0	0	0	0
A57398	Ramos Polychrome	Paneled	N/A	N/A	0	0	0	1	1	1	0	0
A57402	Ramos Polychrome	Paneled	N/A	N/A	0	1	0	1	0	0	0	0
A57405	Villa Ahumada Polychrome (Ramos variant)	Paneled	N/A	N/A	0	0	0	0	1	0	1	0
A57406	Polychrome	Paneled	N/A	N/A	0	0	0	1	1	0	0	1
A57411	Ramos Polychrome	Paneled	N/A	N/A	1	0	0	1	0	0	0	0
A57413	Babicora Polychrome	Paneled	Misc.	N/A	0	1	0	1	1	1	0	0
A57414	Ramos Polychrome	Paneled	Elaborated Lines	N/A	0	1	0	0	0	1	0	0
A57415	Black-on-	Paneled	N/A	N/A	0	1	0	0	0	0	0	0
A57352	Polychrome	Repeated	Elaborated	N/A	0	0	0	0	0	1	0	0
A57358	Madera Black-on-Red	Repeated Figures	N/A	N/A	1	0	0	0	1	1	0	0
A57369	Ramos Polychrome	Repeated Figures	N/A	N/A								
A57403LO	Polychrome	Repeated	N/A	N/A	0	0	0	0	0	0	0	0
A55252	Babicora Polychrome	Semi-Paneled	N/A	N/A	0	0	1	0	1	0	0	0
A55542	Villa Ahumada Polychrome	Semi-Paneled	N/A	N/A	0	1	1	0	0	0	0	0

Vessel #	Type	Primary Layout	Secondary Layout	Over-All Layout	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circle(s)/ Bull's Eye	Running Band of Circles	Macaw Motif
A55633	Ramos Black-on-white	Semi-Paneled	Solid Color	N/A	0	0	1	0	1	0	0	0
A55634	Ramos Polychrome	Semi-Paneled	N/A	N/A	0	0	0	1	0	0	0	1
A57312	Babicora Polychrome, style B	Semi-Paneled	N/A	N/A	0	1	1	0	0	0	0	0
A57315	Ramos Polychrome	Semi-Paneled	N/A	N/A	0	1	0	1	1	1	0	0
A57317	Ramos Black-on-White	Semi-Paneled	N/A	N/A	1	1	0	1	1	0	0	0
A57351	Ramos Polychrome	Semi-Paneled	N/A	N/A	1	0	0	0	1	0	0	0
A57355	Ramos Polychrome	Semi-Paneled	N/A	N/A	0	0	0	1	1	0	0	0
A57361	Ramos Polychrome	Semi-Paneled	N/A	N/A	0	1	0	1	0	0	0	0
A57366	Ramos Black on White	Semi-Paneled	Ladder, Checkerboard	N/A	0	0	0	1	0	0	0	0
A57373	Villa Ahumada Polychrome	Semi-Paneled	Elaborated Lines	N/A	0	1	0	1	0	0	0	0
A57378	Ramos Polychrome	Semi-Paneled	N/A	N/A	1	0	0	0	1	0	0	0
A57389	Villa Ahumada Polychrome	Semi-Paneled	Ladder, Checkerboard	N/A	0	0	1	0	0	0	0	0
A57392	Babicora Polychrome	Semi-Paneled	N/A	N/A	0	0	0	1	0	0	0	0
A57404	Ramos Polychrome	Semi-Paneled	N/A	N/A	0	0	0	0	1	0	0	0

Vessel #	Type	Primary Layout	Secondary Layout	Over-All Layout	Swirl/ Scroll	Interlocking Scroll	Barbed	Stepped	P/ Club	Circle(s)/ Bull's Eye	Running Band of Circles	Macaw Motif
A57407	Carretas Polychrome	Semi-Paneled	N/A	N/A	0	0	1	0	0	1	0	0
A57353	Madera Black-on-Red	Simple	N/A	N/A	0	1	0	0	0	0	0	0
A57367	Pilon Red-on-brown	Simple	N/A	N/A	0	0	0	0	0	0	0	0
A57391	Madera Black-on-Red	Simple	N/A	N/A	0	0	0	0	0	0	0	0
A57408	Leal Red-on-brown	Simple	N/A	N/A	0	0	0	0	0	0	0	0
A57311	Babicora Polychrome, Style B	Zig-Zag	N/A	N/A	0	1	0	0	1	0	0	0

**APPENDIX D: MPM VESSEL PHOTOGRAPHS**

(Vessels photographed in clockwise fashion; 4 sides; arranged here in clockwise fashion left to right)



**Figure D.1: Catalog Number A49564, Ramos Polychrome**



**Figure D.2: Catalog Number A53466, N/A – Cast/ Reproduction**



Figure D.3: Catalog Number A55251, Ramos Polychrome



Figure D.4: Catalog Number A55252, Babícora Polychrome



Figure D.5: Catalog Number A55253, Villa Ahumada Polychrome

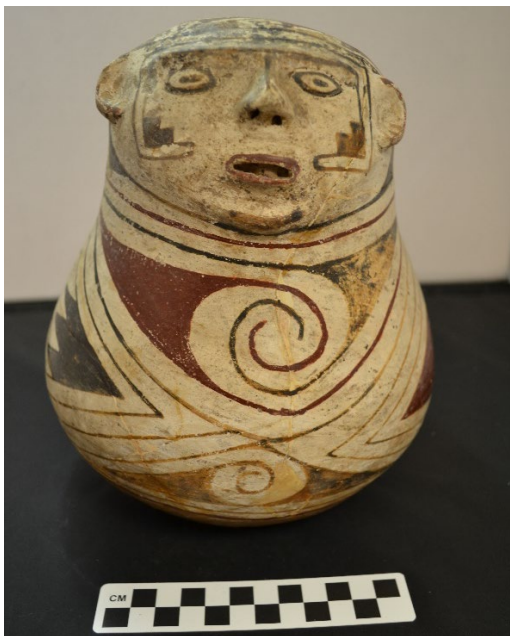


Figure D.6: Catalog Number A55542, Villa Ahumada Polychrome



Figure D.7: Catalog Number A55615, Ramos Polychrome



Figure D.8: Catalog Number A55631, Ramos Polychrome

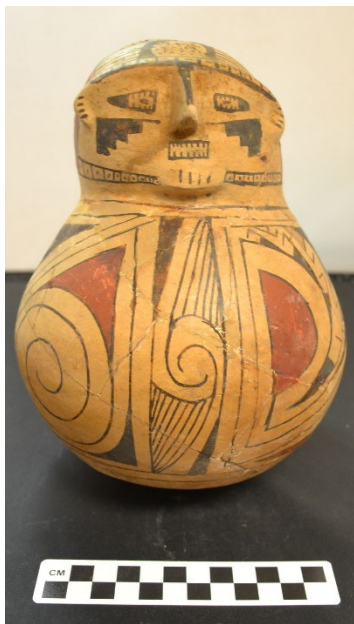


Figure D.9: Catalog Number A55632, Ramos Polychrome

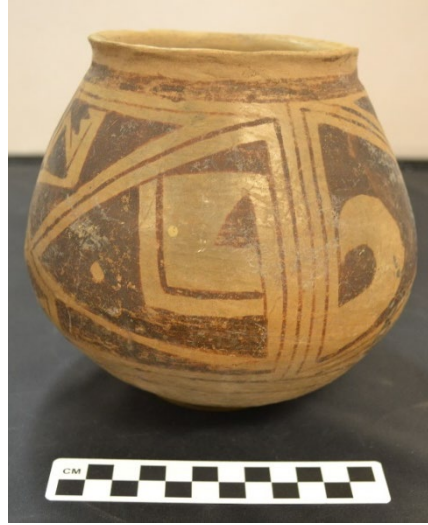


Figure D.10: Catalog Number A55633, Ramos Black-on-White



Figure D.11: Catalog Number A55634, Ramos Polychrome



Figure D.12: Catalog Number A55644, Ramos Black

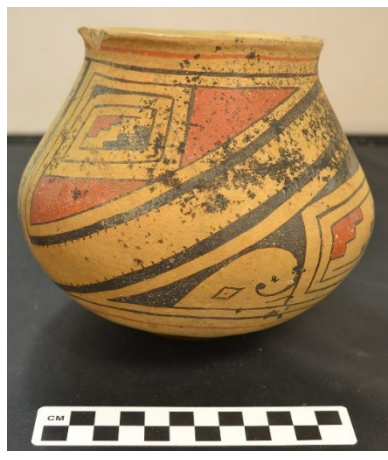
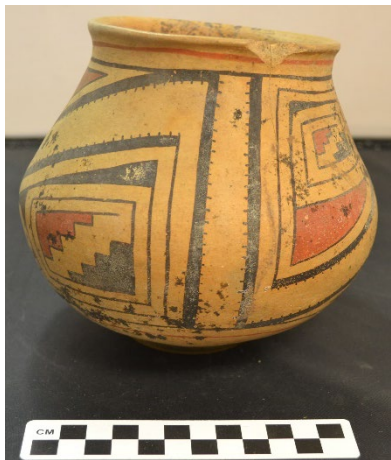


Figure D.13: Catalog Number A56357, Ramos Polychrome



Figure D.14: Catalog Number A56358, Ramos Polychrome

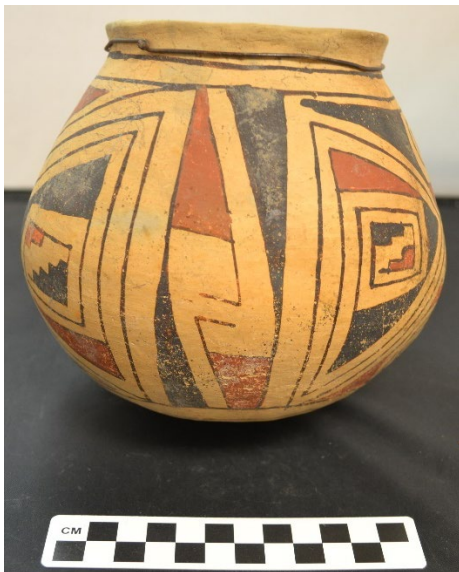


Figure D.15: Catalog Number A57308, Ramos Polychrome



Figure D.16: Catalog Number A57309, Ramos Polychrome



Figure D.17: Catalog Number A57310, Ramos Polychrome

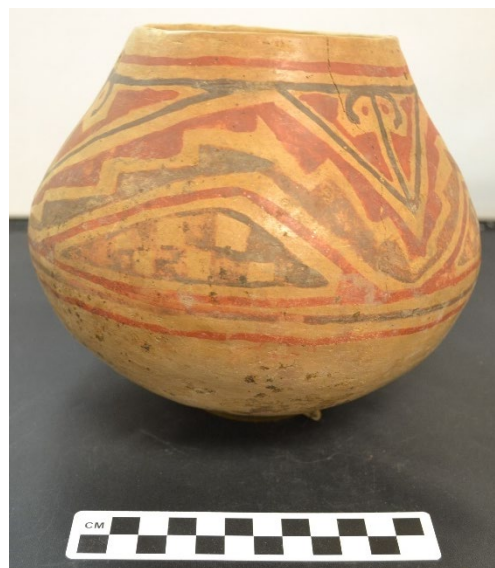
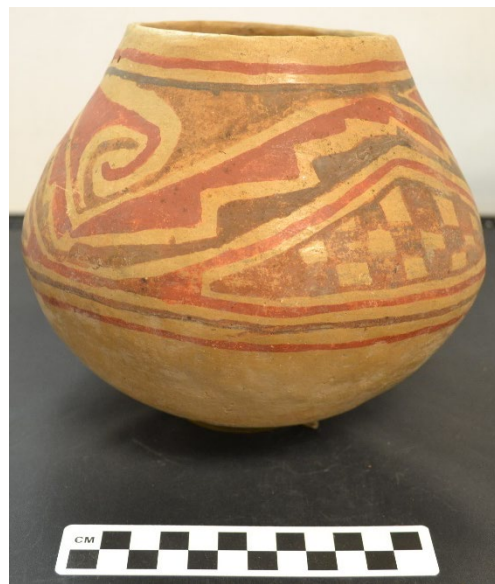
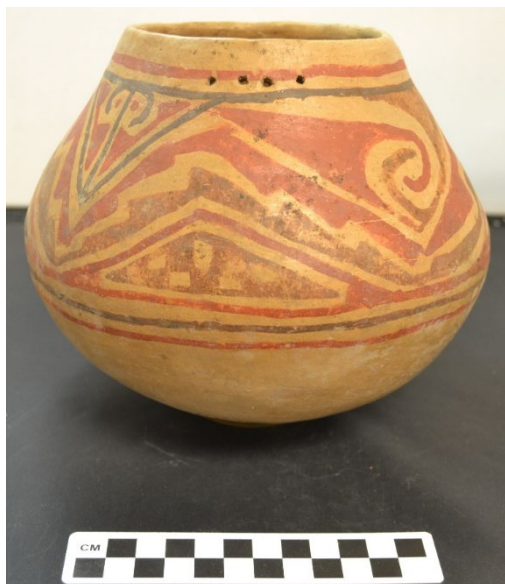


Figure D.18: Catalog Number A57311, Babícora Polychrome, Style B



Figure D.19: Catalog Number A57312, Babícora Polychrome, Style B



Figure D.20: Catalog Number A57314, Ramos Polychrome

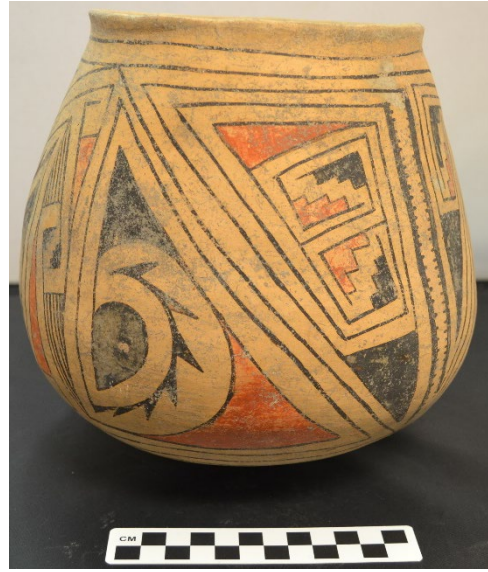
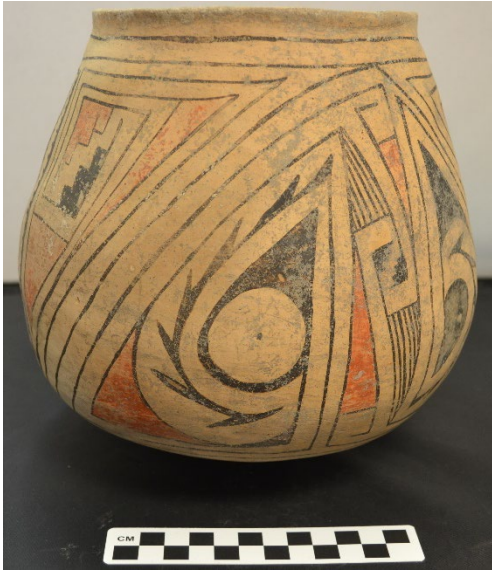


Figure D.21: Catalog Number A57315, Ramos Polychrome



Figure D.22: Catalog Number A57316, Ramos Black

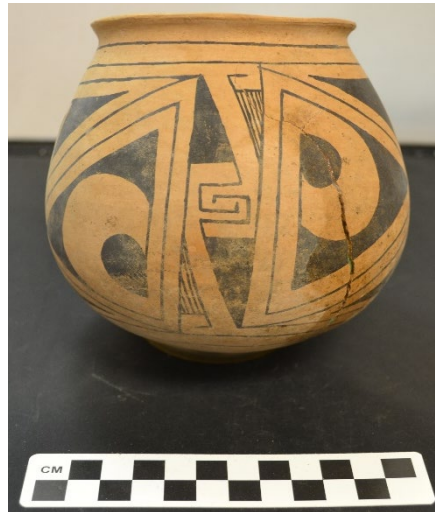


Figure D.23: Catalog Number A57317, Ramos Black-on-White

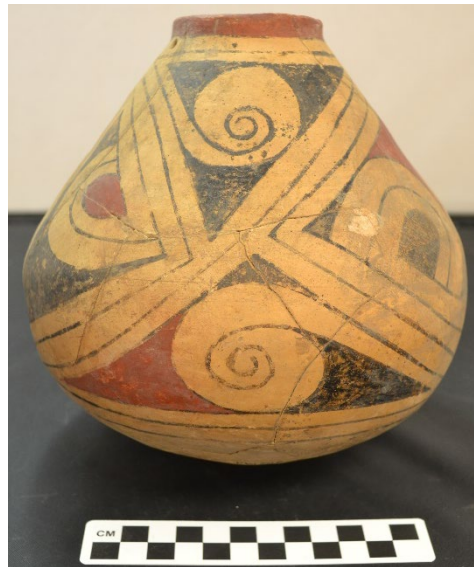
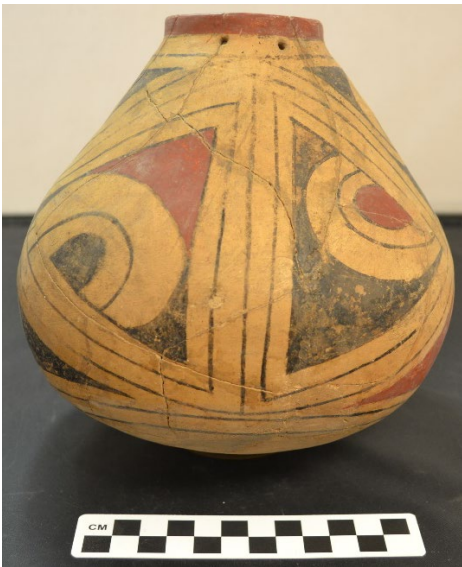


Figure D.24: Catalog Number A57351, Ramos Polychrome



Figure D.25: Catalog Number A57352, Villa Ahumada Polychrome



Figure D.26: Catalog Number A57353, Madera Black-on-Red



Figure D.27: Catalog Number A57355, Ramos Polychrome



Figure D.28: Catalog Number A57356, Ramos Polychrome

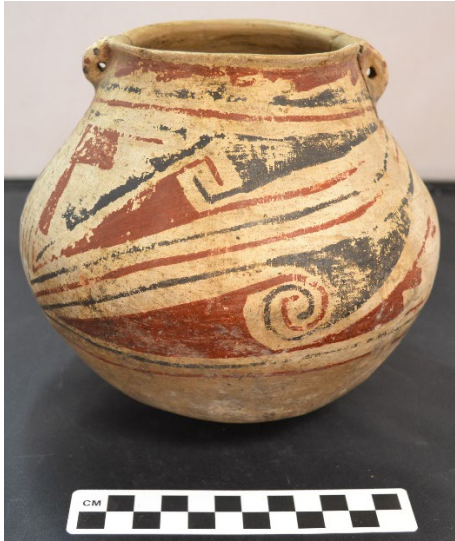


Figure D.29: Catalog Number A57357, Villa Ahumada Polychrome



Figure D.30: Catalog Number A57358, Madera Black-on-Red



Figure D.31: Catalog Number A57359, Ramos Polychrome



Figure D.32: Catalog Number A57360, Ramos Polychrome

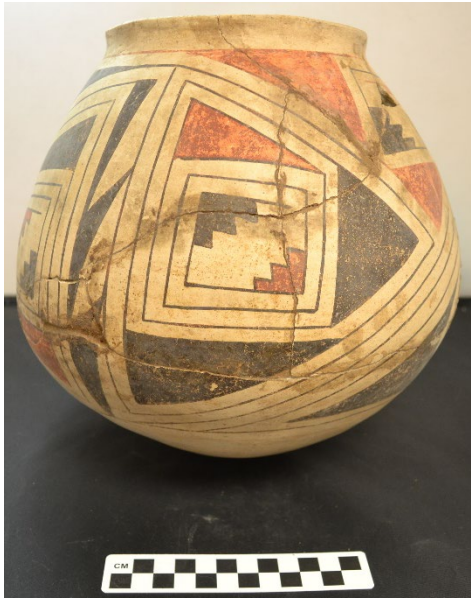


Figure D.33: Catalog Number A57361, Ramos Polychrome

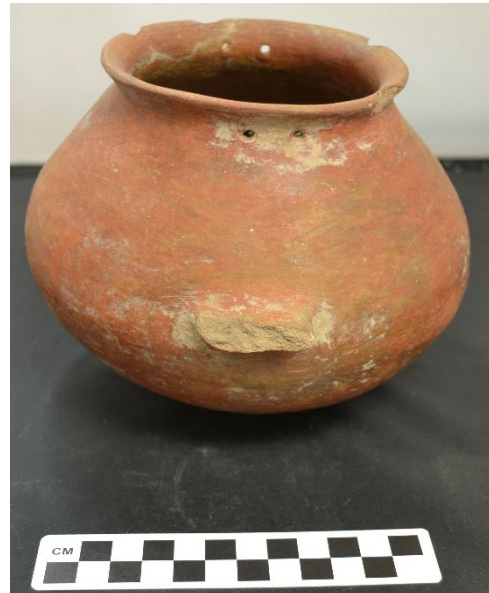
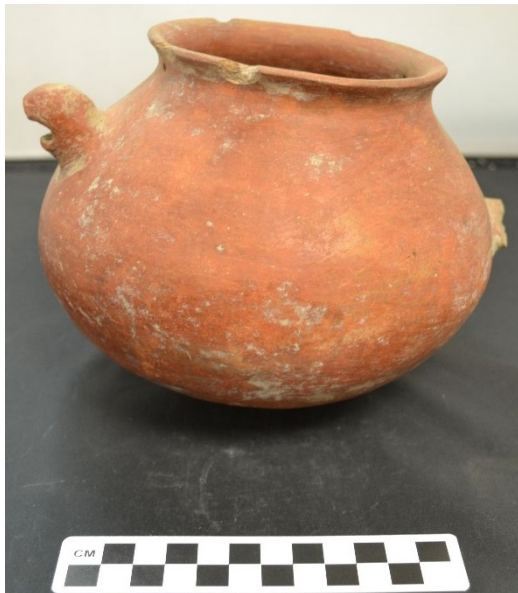


Figure D.34: Catalog Number A57362, Playas Red



Figure D.35: Catalog Number A57363, Carretas Polychrome



Figure D.36: Catalog Number A57364, Ramos Polychrome

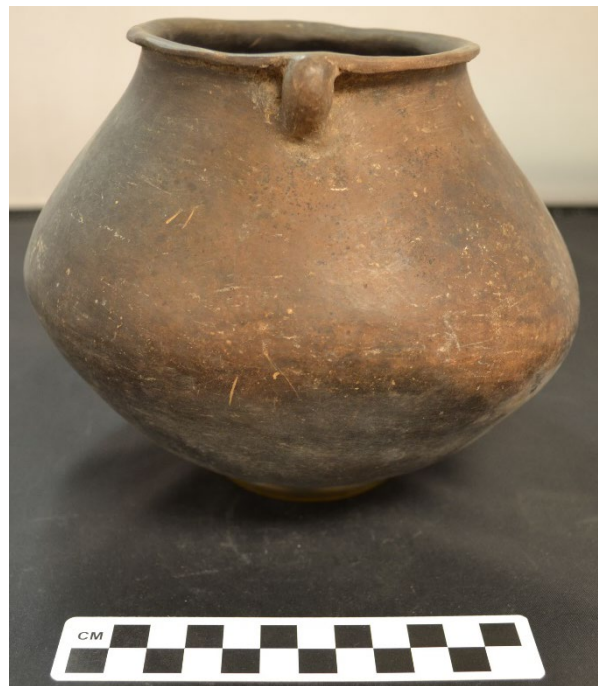


Figure D.37: Catalog Number A57365, Ramos Black



Figure D.38: Catalog Number A57366, Ramos Black-on-White



**Figure D.39: Catalog Number A57367, Pilon Red-on-Brown**



**Figure D.40: Catalog Number A57368, Ramos Black**



Figure D.41: Catalog Number A57369, Ramos Polychrome



Figure D.42: Catalog Number A57370, Ramos Polychrome

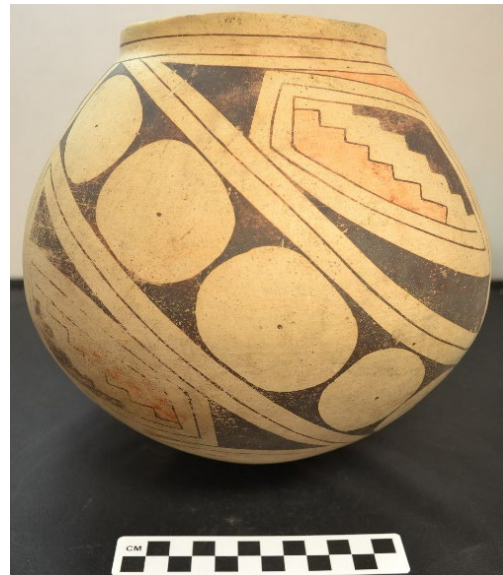


Figure D.43: Catalog Number A57371, Ramos Polychrome

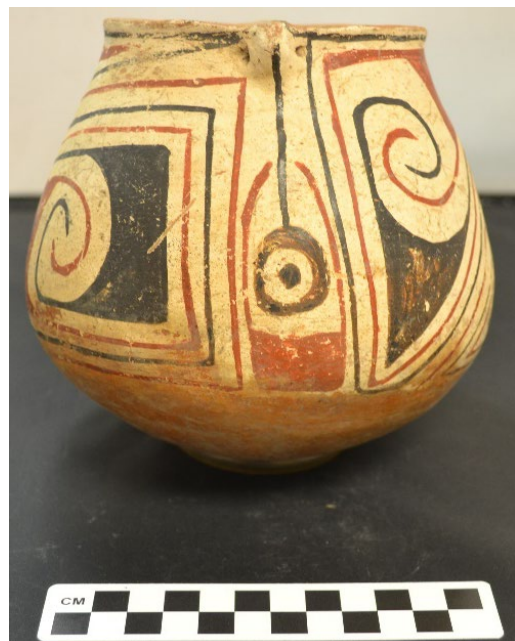
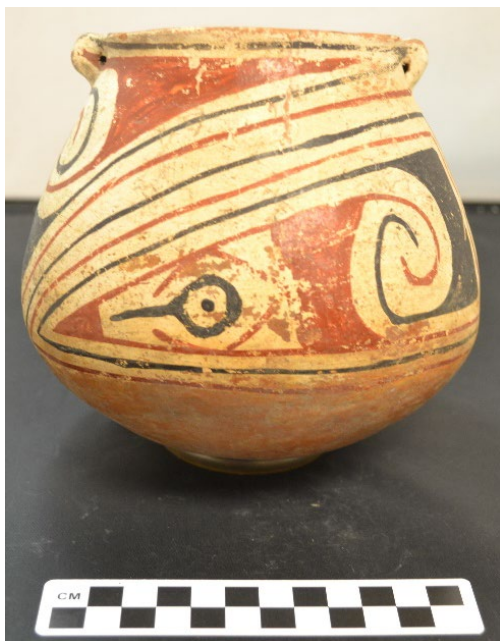


Figure D.44: Catalog Number A57372, Villa Ahumada Polychrome



Figure D.45: Catalog Number A57373, Villa Ahumada Polychrome



**Figure D.46: Catalog Number A57374, Casas Grandes Plainware**



Figure D.47: Catalog Number A57375, Ramos Polychrome



Figure D.48: Catalog Number A57376, Huerigos Polychrome

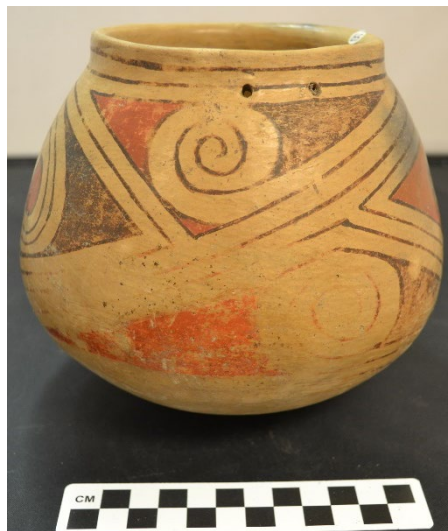
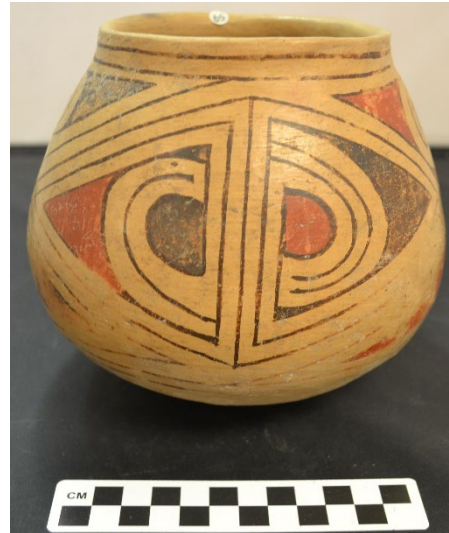


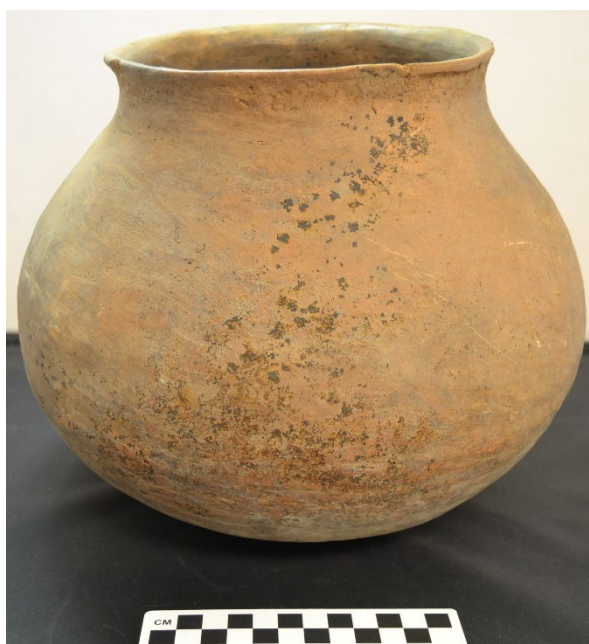
Figure D.49: Catalog Number A57378, Ramos Polychrome



Figure D.50: Catalog Number A57379, Unknown painted type



**Figure D.51: Catalog Number A57380, Ramos Black**



**Figure D.52: Catalog Number A57383, Casas Grandes Plainware**



Figure D.53: Catalog Number A57384, Ramos Polychrome



Figure D.54: Catalog Number A57385, Unknown painted type



Figure D.55: Catalog Number A57386, Playas Red



Figure D.56: Catalog Number A57387, Ramos Black



Figure D.57: Catalog Number A57388, Ramos Polychrome



Figure D.58: Catalog Number A57389, Villa Ahumada Polychrome

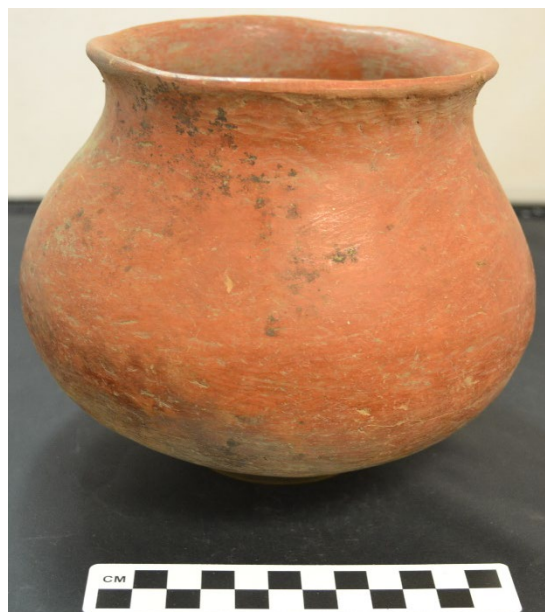


Figure D.59: Catalog Number A 57390, Playas Red

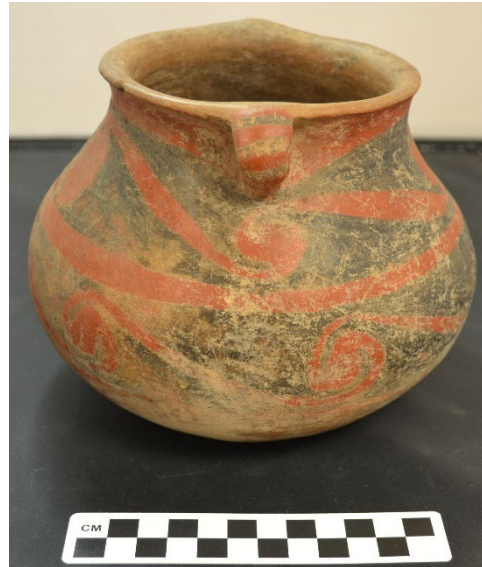


Figure D.60: Catalog Number A57391, Madera Black-on-Red



Figure D.61: Catalog Number A57392, Babícora Polychrome



Figure D.62: Catalog Number A57393, Playas Red Incised



Figure D.63: Catalog Number A57394, Ramos Polychrome

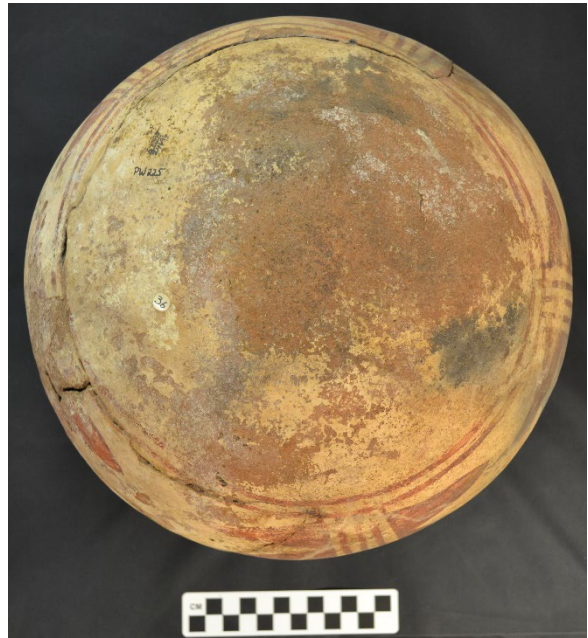


Figure D.64: Catalog Number A57395, Mata Red-on-Brown Textured

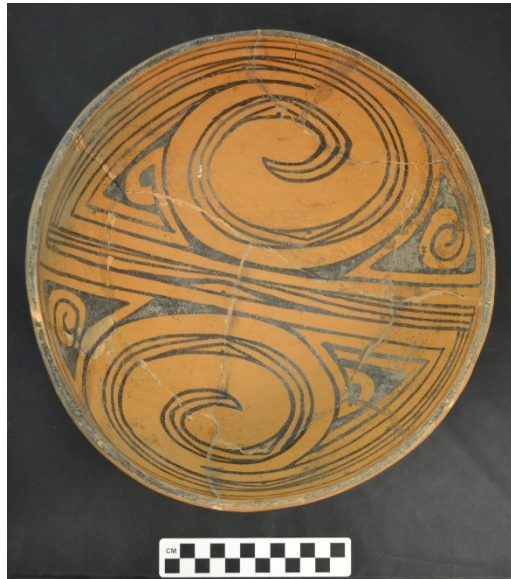


Figure D.65: Catalog Number A57396, Carretas Polychrome



Figure D.66: Catalog Number A57398, Ramos Polychrome

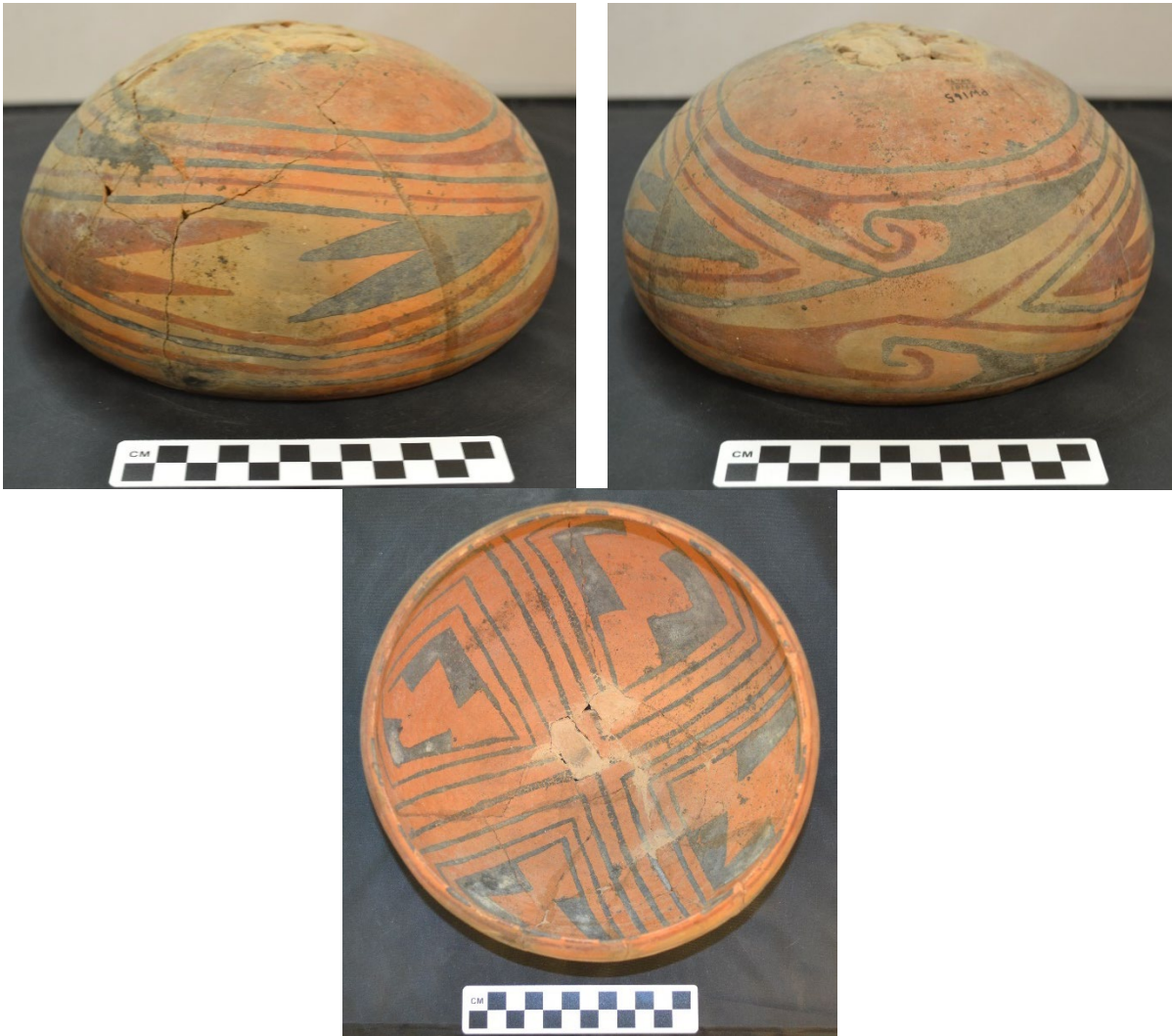


Figure D.67: Catalog Number A57401, Carretas Polychrome



Figure D.68: Catalog Number A57402, Ramos Polychrome



Figure D.69: Catalog Number A57403, Corralitos Polychrome



Figure D.70: Catalog Number A57404, Ramos Polychrome



Figure D.71: Catalog Number A57405, Villa Ahumada Polychrome (Ramos Variant)

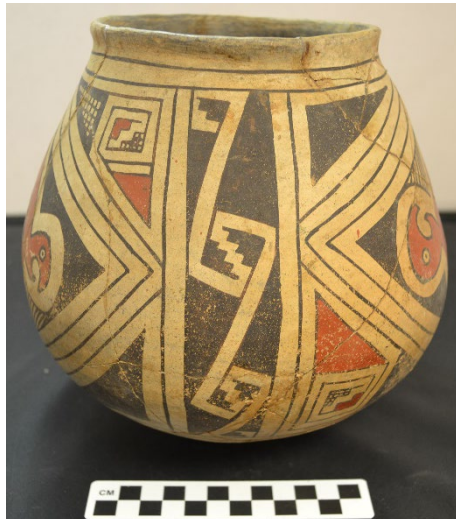


Figure D.72: Catalog Number A57406, Ramos Polychrome



Figure D.73: Catalog Number A57407, Carretas Polychrome



Figure D.74: Catalog Number A57408, Leal Red-on-Brown



**Figure D.75: Catalog Number A57409, Ramos Black**



**Figure D.76: Catalog Number A57410, Ramos Black**



Figure D.77: Catalog Number A57411, Ramos Polychrome



Figure D.78: Catalog Number A57412, Ramos Black



Figure D.79: Catalog Number A57413, Babícora Polychrome

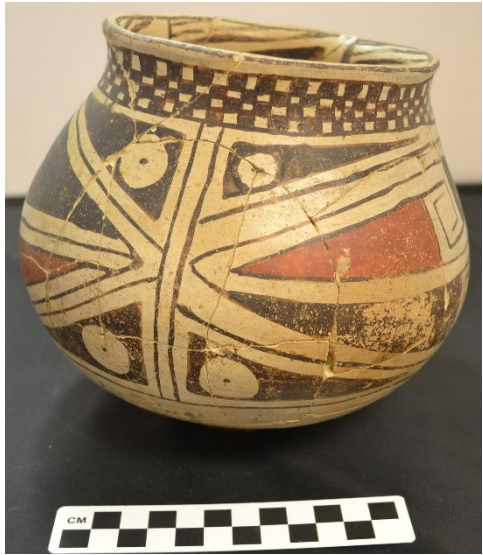


Figure D.80: Catalog Number A57414, Ramos Polychrome

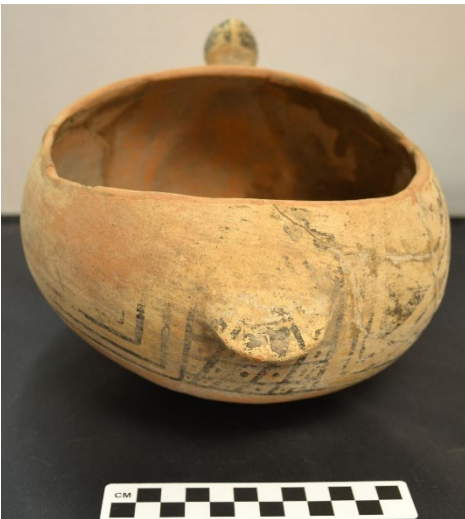


Figure D.81: Catalog Number A57415, Villa Ahumada Black-on-White