

**Investigating Household Activities at Site 174 and the Nature of Social Hierarchy
in the Parita River Valley, Central Region of Panama**

by

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PREFACE

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ABSTRACT

The development of social inequality is the foremost major characteristic of chiefdoms and complex societies. In order for chiefdoms to be analyzed in a balanced and detailed fashion, more information on social hierarchy and inequality for peripheral segments of society, domestic contexts, and more daily activities is necessary.

Previous work in the Central Region of Panama which used regional surveys, excavations, and a site survey have produced dates as to when socioeconomic change occurred in the Parita river valley, in addition to determining why and how this chiefdom developed. The present study will focus on differences in household status and the role of the site through the investigation of household activities at Site 174 within the Parita river valley. Site 174 will provide more information on a smaller site in the valley, which exhibits socioeconomic interdependence and autonomy from the chiefly center. This analysis will contribute to broaden the general understanding of the emergence of social inequality and community organization, and will continue to illustrate the ritualistic and sociopolitical nature of the Parita chiefdom.

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1.0. INTRODUCTION

Determining the social organization of a society is often one of the most difficult aspects to study archaeologically (Renfrew and Bahn 2010:176). Social organization can be determined through the scale of the society, and determining whether it was a form of egalitarian society or one that had many differences in status, rank, and prestige. Economics, politics, and religious aspects are units of analysis to investigate the social organization of a society. Hereditary inequality and social status disparities within societies is thought to be adopted coinciding the inception of chiefdoms. A chiefdom rests on a scale of the differing types of social units, as one that is no longer a mobile hunter-gatherer or tribe but also not yet an early state. (Creamer and Haas 1985; Renfrew and Bahn 2010). Chiefdoms, among other characteristics is specifically dependent on kinship relations and thus, the lineage and an individual's rank and status is determined by how closely related one is to the chief of the society (Renfrew and Bahn 2010:179). This chief not only governs the senior lineage but also governs the society as a whole (Renfrew and Bahn 2010:179).

The definition of a chiefdom have their foundational roots in ancient Panama. Specialists' interpretations of chiefdoms have invariably been influenced by the "archetypes of ranked societies" that are the chiefdoms of Panama (Creamer and Haas 1985; Drennan 1991; Earle 1987, 1997; Helms 1979; Linares 1977). Until the Parita River Archaeological project (PARP), there was little information on the emergence of these ranked societies that are called chiefdoms except for the Spanish documents from the early sixteenth century and amateur archaeologist and the excavations conducted in the 1930s and 1940s (Haller 2008:2). Since the beginning of PARP, it has been attempted to establish more about how the chiefdoms in the Parita chiefdom developed and to investigate the nature of these complex societies before the Spanish arrived.

As PARP continues the research in Panama, the definition of a chiefdom is becoming more unclear in regards to the context of the Parita chiefdom. The definition of a chiefdom that emerged from Panama as specialists attempted to understand the social organization of the Central and South American societies is

not as applicable to the Parita river valley chiefdom as it once was. It is exemplifying a different version of a social hierarchy, as it challenges the aspect of dominance within the society. Rather than a large site, a chiefly center, subordinating smaller sites into a far-reaching system, small sites in the Parita river valley actually exhibited much independence and autonomy.

This study focuses on a site located within a survey that was conducted by Haller (2008) and colleagues in the Parita river valley. The project was established as a means to analyze the emergence of chiefly societies in this region and to reevaluate the methods of interpreting societies that are based on rank and complex social organization. Using the same definition of a complex society and applying it to many different regions, even within Panama, exposes the inabilities of an all-encompassing definition. The 'classic' chiefdom definition often claims smaller sites were integrated socioeconomically. Specifically, the Parita chiefdom does not fit in this definition and it includes unique characteristics which are relatively unknown to the classic chiefdom concept, such as smaller sites within a chiefdom being integrated for ritualistic purposes (Haller 2008). Site 174 from the Lower Survey Zone illustrates the question of dominance within the society of the Parita chiefdom as it is not a site that was subordinated to the chiefly center by means of socioeconomic power. Instead, it was largely autonomous in regards to its production, subsistence, economic needs, and social activities.

Site 174 was analyzed using households in order to investigate these units of production for evidence of domestic and or specialized activities. Domestic activities would represent normal households, households which utilize and produce resources for daily needs, thus making households and the site as a whole largely self-sufficient. Specialized activities would represent households that produce non-utilitarian activities such as craft production and other non-subsistence based activities. In addition, other material remains can be considered specialized if made by the form has been highly standardized. Investigating households at Site 174 and comparing this site to the large chiefly center of He-4 will illustrate the "disparities of wealth due to hereditary inequality and how the opulent, the middle tier, and the commoners associated with one another" (Menzies 2009).

Highly decorated and painted ceramics, serving vessels, specialized tools, and fauna and shell remains that do not indicate activities of simply subsistence, are examples of material remains that will indicate a high status or wealthy household. Individual households will be analyzed throughout different time periods, in addition to Site 174 as a whole, and what the general patterns are throughout it to compare with the rest of the Parita river valley.

1.1. HEREDITARY INEQUALITY IN ANTHROPOLOGICAL CONTEXT AND CHIEFDOM SOCIETIES

In order to classify what scale a society is, there must be a set classification of societies in order to rank it. Creating a scale of societies, which usually begin with mobile hunter-gatherers and 'culturally evolve' to fully formed states, is how many archaeologists began to identify and assume information about numerous societies. The classificatory-historical period is the root of the establishment of the description of the development of culture (Renfrew and Bahn 2010:32) and thus, evolutionary typologies began.

In regards to evolutionary typologies, mobile hunter-gatherer groups are one of the smallest-scale societies that usually operate with no marked economic differences or disparities. Tribes are another classification which consists of communities or kin units which again, are economically independent (Renfrew and Bahn 2010:178). These tribes may have a common political and ceremonial purpose, however, since the production of these societies is solely based on subsistence, there is no means of creating surplus in order to centralize it at a tribal level (Creamer and Haas 1985). Tribes are not hierarchical but they exhibit social ranking. Due to its characteristics as a decentralized system, social hierarchies cannot exist due to a lack of structural leadership (Creamer and Haas 1985). A 'chiefdom' would be the next stage in the cultural evolutionary line. The previous level of a society, one with no economic differences, a tribe, transforms into a society with many disparities in wealth between its inhabitants. This economic disparity results in the society becoming extremely complex as the leadership is centralized and decisions can be made on behalf of a group. These types of classifications, although

still useful, cannot be used to explain all aspects of a particular society. Instead, they must be used as a starting point, they must be used to compare and contrast against other societies, and they must be open to interpretation.

The way in which many societies develop inequality stems from the development of a sedentary society, agriculture and thus, the surplus which results from the stable availability of food (Dow and Reed 2013). With the creation of agriculture, the regional population would rise, creating more systematic means of inequality among different statuses of people (Dow and Reed 2013). In order for social inequality to be created, sedentism, agriculture and the surplus which results from agriculture are usually looked at as some of the main contributors. The emergence of hereditary inequality within a society is much less simple than the development of social inequalities in general as it is graded on a scale of prestige. Rather than examining who has more surplus, hereditary inequality is rooted in a lineage which claims descent from a common ancestor and thus, the prestige is determined by how closely related one is to the chief, who heads the society (Renfrew and Bahn 2010). Social status, then, is often very much unachievable for just anyone within the society; one must be born with the natural right to their prestige and rank within a hereditary system that makes a chiefdom.

As chiefdoms are often viewed as the next step in the socio-evolutionary process, the transition of societies from egalitarian to ascribed has been immensely studied. Hereditary inequality can result from a number of different reasons cross-culturally and is seen as a turning point for societies, or even as another stage in the evolution of culture. Chiefdoms are the classification of a society at an intermediate level and it “is used to characterize social complexity in stateless societies” (Earle 1987:279). Therefore, chiefdoms represent the beginnings of hereditary inequality while not yet exhibiting characteristics of a state society (Renfrew and Bahn 2010). Hereditary inequality in chiefdoms occurs through differences in statuses of higher up elites, all the way down to commoners and peasants. Hereditary inequality is best explained by ascribed status, when qualities beyond the individual’s control, such as race, sex, or class at birth determine the place the individual belongs within the stratification system. This kind of status is *given to*

the individual at birth. This is very different from achieved status where the individual must do something in their lifetime to achieve a certain degree of status. In chiefdoms which involve hereditary inequality, it is certain ascribed status is given to individuals. In addition, however, a chiefdom also operates with achieved status, as the chief often has to prove his worth, and must do much politicking, such as either establishing networking connections through trade and exchange or building armies for waging war (Haller 2008). Therefore, chiefs must maintain their hereditary position.

Some scholars argue that when societies are ranked and status is hereditary, control is often used over all aspects of society. Knowledge, resources, and wealth are commonly held under the power of the chief. Thus, the site center of power can control all aspects of society including economic, political, and religious. Prestige and rank is determined on their relationship to the leader of the group; depending on the society, this relationship may be hereditary, or a social relationship within the site. Hereditary and ascribed status are the characteristics which are most commonly associated with chiefdoms.

According to Colin Renfrew and Paul Bahn (2010), chiefdoms have the following characteristics: a population of about 5,000-20,000, a kinship-based ranking under hereditary leader, high-ranking warriors, central accumulation and redistribution, some craft specialization, fortified centers, ritual centers, hereditary chief with religious duties, and large scale monuments (Bahn and Renfrew 2010:144). Chiefs have been described by Mary Helms (1979; Earle 1987) as “sacred, intermediaries between the ordered (‘civilized, moral’) human society under their charge and the equally ordered cosmos”. Determining how chiefs in certain societies obtained this sort of power would help find some of the root causes of hereditary inequality. Although Bahn and Renfrew (2010) seemingly portray an ‘evolution’ of societies, each society develops differently throughout time. Scholars such as Creamer and Haas (1985) and Renfrew and Bahn (2010) place much emphasis on these typologies of societies and seemingly address each society as being one or another of the typologies. Therefore, evolutionary typologies need to be used as simple starting points as each society has a different historical context. Thus, they will not always fit

within a pre-determined definition and not every small-scale society will have historical characteristics that will be present in every small-scale society typology.

Often, the chiefdom abides by the characteristic of balancing the population and the aristocracy, in which the entire population of the region is dependent on or being affected by the chiefly center. In particular, much research on chiefdoms indicate that “the aristocracy manipulated the economic and political relationships so as to increase dependency and balance the favor of the interests towards elites” (Earle 1987). Settlement hierarchies within chiefdoms include smaller settlements that are subservient to the larger settlements. The highest of the settlement hierarchy, the chiefs, would display evidence of their prestige by economic differentiation through wealth and lifestyle evidence. Specific symbols of status are often used.

The stages of cultural evolution, in which a ‘chiefdom’ is included, “may be inadequately formulated by theorists and improperly applied to the archaeological record” (Creamer and Haas 1985). The definition of chiefdom and all characteristics that go along with it, are applied to the archaeological record all over the world in a rather comprehensive manner. Taking Creamer and Haas’s (1985) advice, using archaeology in a more extensive manner will allow for a better understanding for how social organization develops evolutionarily. In addition, hereditary inequality and its emergence in a variety of contexts can be better understood.

In the past when analyzing a society archaeologically to find evidence of a chiefdom and hereditary inequality, investigating the chiefly centers themselves in addition to ethnohistoric data is used (Helms 1979; Lothrop 1936, 1942). These dominating sites often illustrate differences in status based on surplus storage structures, ceremonial and ritual structures, communal labour projects, and lavish burials. When archaeologists look at hereditary inequality, they often focus on the obvious and the easily explainable sites and artifacts such as gold and burials of people with differing statuses. The scholars’ opinions on these complex societies has been based on these findings, however, the ethnohistoric accounts are marked with flaws and inaccuracies and the archaeology is producing imbalanced perspectives since it is only

illustrating the larger sites which often had a larger population of the elite. It has been difficult to come by research that explores the community-based setting, households and domestic contexts in regards to hereditary inequality and this presents a problem for the accuracy of research on this subject.

Large sites, settlement patterns, written records, oral traditions, and ethnoarchaeology can be used to evaluate the scale of society that may exist. Analyzing smaller sites and individual households, however, can verify the connection and validity of archaeological and ethnohistorical documents from the sixteenth century. Menzies (2009:11) explains that “discussions of the role of household economic organization, production, and specialization in the development of ranking remain hampered by a dearth of data on the subject.” It is possible that the ephemeral attributes of smaller sites might be the result of the missing information or why these kinds of analysis have been historically overlooked (Jessome 2012:1). The cultural processes that cultivate hereditary inequality and other socio-economic processes can be illustrated through the household level more accurately than a larger site. Households more precisely evidence status and ranking if, for example, households are more involved in craft production and others are not (Brumfiel and Earle 1987; Menzies 2009:18). The households reflect a local scale of production and therefore their role in economic organization, production, and specialization can illustrate the development of social ranking as the basic analytical social unit. This thesis contributes to information known on smaller sites, households, and the emergence of social inequality. By providing more data on households, peripheral sites, and daily activities, as opposed to sites with gold and high status mortuary remains, a more balanced and detailed analysis can be made.

1.2. CHIEFDOMS IN ANCIENT PANAMA

The change from a society that was once a tribe or segmentary society, who have a lack of economic power and not one part of the community dominates the other (Renfrew and Bahn 2010). The chiefdom that emerges on the cultural evolutionary scale of societies is one that invokes socioeconomic change with everyone within the society holding a specific social status. The amount of wealth and specialization of resources increases and people obtain status only through a hereditary line. In Panama, a variety of

different theories have argued for what caused socioeconomic change to occur. The chiefdoms in Ancient Panama are typified as “archetypes” of ranked societies as the archaeological material and ethnohistoric accounts so closely coincide with the definition of ranked societies cross- culturally (Haller 2008:1).

In order to better understand hereditary inequality, the archaeological record can illustrate the different stages and types of social organization (Creamer and Haas 1985:738). Specifically, archaeologists have been interested in the remains left behind by chiefdoms in Central America because they were the dominant form of political organization prior to Spanish contact. Chiefdoms are a type of social system where hereditary inequality exists. A chiefdom represents the emergence of political centralization and discrete social hierarchies within a culture. The definition of chiefdom was developed in Panama due to the vast quantities of gold and luxuriously decorated ritual centers and burials (Creamer and Haas 1985; Earle 1987; Haller 2008).

The definition of the word chiefdom originated in Panama and thus, it illustrates many of the classic attributes associated with it (Creamer and Haas 1985; Helms 1979; Earle 1987). In Panama, chiefdoms are prime examples of “early hierarchical societies that integrate many communities within a single political unit” (Menziés 2009:11). A politically and socially centralized community, the chiefly center of a chiefdom is the core of the surrounding interdependent communities. Panamanian chiefdoms in particular, are considered to be archetypes of ranked societies. In addition, the chief is thought to yield power through production and procurement of subsistence resources. Status competition, the display and exchange of prestige or exotic goods among emergent elites, feasting, and the creation of social debt are activities performed in order to assimilate these various communities under one centralized power. The centralized power would be regionally organized and would make decisions which affects several village communities (Creamer and Haas 1985). This sweeping universal definition of chiefdom has thus been the basis of the research of this region for many years (Creamer and Haas 1985).

Chiefdoms in Ancient Panama have long been associated with large sites with elaborate artifacts such as gold, and features like public spaces for ritual. In addition, mortuary activity is often used to

identify chiefdoms in Ancient Panama (Lothrop 1937, 1942). El Caño is the name of a site southwest of Panama City. Julia Mayo discovered how the chiefs at this particular site gained their power and prestige through her excavations funded by the National Geographic (Williams 2013). When Mayo found a very small gold disk that ended up belonging to an infant, she knew she had discovered a grave of an infant that had been given elaborate and rich grave goods. This implies his status was inherited rather than ascribed because this infant did not live long enough to earn his status. Mayo explains this impressive finding and says, “One of the characteristics of complex chiefdoms is that social status is passed down from father to son” (Williams 2013). Sites such as El Caño are extremely significant, however, they are not the only way in which hereditary inequality can be identified. In addition, they provide a perspective that places more emphasis on the elites, rather than attempting to decipher what the entire society was like, including the elite, middle class, commoners, and peasants.

Bahn and Renfrew’s (2010) definition of a chiefdom argues for the erection of large scale monuments as being a characteristic of this type of society and although the Maya to the north and the Inca to the south included public architecture as a part of their societies, the Parita river valley left no monumental stone architecture in order for archaeologists to analyze. Due to this major lack of evidence to contribute for the study of chiefdoms in the Parita river valley of the Central Region of Panama, households would have a variety of material remains such as “household inventories, furniture, and food” which would help provide evidence for chiefdoms (Menzies 2009:24).

Among the first excavations in Panama were conducted by Samuel L. Lothrop in the 1930s and 1940s at the site Sitio Conte and his work illustrates the field techniques used during this time (Lothrop 1937, 1942; Haller 2008). The only information available for ancient Panama at the time was early sixteenth-century documents that described the chiefdoms from the Spanish point of view. These documents combined with the amateur excavations by Lothrop and his team were certainly valuable, however, they also lead to inaccuracies. The Spanish were seemingly unclear of the political system of the indigenous of Panama, as they were distracted by accumulating wealth from the great deposits and materials made of

gold. In addition, these Spanish conquistadors were willing to do anything that would gain them approval from the Spanish crown overseas (Haller 2008:2). Although many of the documents do address the sociopolitical hierarchy, diversity, and fierce resistance of the Central Panamanian chiefdoms, much of their focus was fueling personal greed and opportunities for the Spanish crown, rather than correctly and intricately evaluating the indigenous of Panama. The Spanish often destroyed these initial settlements with disease and brutal military campaigns (Haller 2008:2). The Spanish documents must be combined with archaeology in order to produce the most accurate depiction of the pre-Colombian settlements.

The first excavations by Lothrop in the 1930s and 1940s are also riddled with inaccuracies. Using the direct historical approach, Lothrop attempted to link the indigenous of Central Panama, the Coclé, to other cultures that were previously studied, such as the Maya or other societies in nearby Peru (Renfrew and Bahn 2010; Lothrop 1937, 1942; Haller 2008). In addition, his excavation primarily focused on the cemeteries at Sitio Conte, which only focus on the mortuary remains and grave goods of gold and other precious materials of high status individuals (Lothrop 1937, 1942; Haller 2008). The two sources of information: the Spanish documents and the early Lothrop excavations in Central Panama provide the most information on this region regarding chiefdoms and system of sociopolitical organization. Studying the development of chiefdom societies in Panama has been researched since the conquistadors attempted to describe the well-organized societies that had hereditary leaders.

The theories surrounding the emergence of chiefdoms are numerous and varied. Some stress that the development could have been a result of mobilization of material items and resources or by displaying status competition (Menziés 2009:1). It has been argued that long distance contacts which provided esoteric knowledge for the chiefly society would allow them to increase their political power (Helms 1979, 1992, 1994). Controlling and exchanging resources locally, rather than using long distance, is a favoured theory by archaeologists (Cooke 1984; Cooke and Ranere 1984, 1992; Cooke and Sanchez 1997, 2000; Hansell 1987, 1988; Linares 1977). Lastly, the development of political power has been attributed to warfare and competition between chiefly societies and settlements (Carneiro 1970, 1981,

1990, 1998; Redmond 1994a, 1994b; Steward and Faron 1959). The gold adornment of Panamanian chiefs illustrates the control over the distribution of prestige good. “Such objects of wealth and prestige are found in acephalous societies as well as chiefdoms and state. They act in social exchanges, as stores of valuable convertible into food, and as symbols of prestige and authority” (Earle 1987:296).

The information known on the Central Region of Panama had been limited for many years due to the reliance on ethnohistoric accounts and amateur archaeologists, however research by Cooke, Hansell (1987), and Haller (2008) have shown that there was extreme differences in status and that the ranks of the population were divided. At the top of the chiefly hierarchy were the chiefs themselves. The paramount chief was at the top, then the lesser chief, and then the warriors. The general population consisted of the opulent, which were of very few numbers, a middle tier, and a rank of commoners which was the largest of the population and were considerably poorer than the other ranks (Haller 2008). In addition, the lowest of the social ranks was the war captives (Haller 2008:1; Helms 1979:12-14; Linares 1977:76-77; Lothrop 1937:22; Sauer 1966:239). Haller’s research (2004; 2008) has focused on the Parita river valley in the Central Region of Panama in order to determine how chiefdoms developed, and how large nucleated villages within this region came to be (Haller 2008:1).

11,000 years of occupation of Panama by indigenous peoples have certainly left behind many artifacts for archaeologists to analyze and date. A large master ceramic phase chronology has been created for the region and is based on stratigraphy, seriation, and ¹⁴C dating (Cooke and Sanchez 2000; Haller 2008: 33) which includes an Early Occupation Sequence (9,200- 200 B.C.) and a Late Occupation Sequence (200 B.C. – A.D. 1522). 9,000 years of human settlement formulate the Early Occupation Sequence. These two sequences illustrate the transition from lower population and short-lived occupation to increased population and a complex society that involved economics and permanent settlement.

From the Late Preceramic to the Early Ceramic B Period (5,000 – 200 B.C.), cultigens became a more prominent part of the diet of these societies and tool technologies transformed with an ever changing environment. Increased population and dependence on cultigens may explain the abundant plant-

processing tools. These people were still mobile groups as they attempted to sync their settlements with rainfall, fertile soils, and wild resources (Cooke 1995; Cooke and Ranere 1992; Ranere and Cooke 1991, 1996; Haller 2008:53). Ceramics were introduced in about 2,900 B.C., which is the Early Ceramic A Period (2,900 B.C. – 1,200 B.C.) and they were probably produced to carry liquids for drinking and eating. Much evidence points to towards the first use of ceramics were for boiling shrimp (Haller 2008). Although most societies have the introduction of pottery coincide with sedentism, the people of Panama were not sedentary for about 1,000 years after emergence of ceramics (Haller 2008).The Early Ceramic B (1,200 – 200 B.C.) societies rely on sea resources and thus, more permanent settlements are established near the coast. Varieties of decoration and increased standardization propose the new art form which expressed popular symbols of a certain time period (Cooke 1995; Cooke and Ranere 1992; Ranere and Cooke 1991, 1996; Haller 2008:53).

The Late Occupation Sequence (200 B.C. – A.D. 1522), however, is where the most amount of archaeological information originates. Large, permanent settlements form and produce lots of garbage for surveys (Haller 2008:57). This period of time includes the ceramic phases that will be the focus of this study. Settlement nucleation occurs in La Mula phase (200 B.C. – A.D. 250), and eight ceramic phases are each roughly 200 years in length (Haller 2008:57). Each ceramic phase exhibits specific style characteristics on pottery. However, the latest phase, El Hatillo, A.D. 1300- 1522, is reliant on colonial historical sources (Haller 2008:34).

The time period when substantial material that could be identified from the Parita valley survey was the La Mula Phase (200 B.C. – A.D. 250). In the valley, large formative villages begin to emerge, such as La Mula-Sarigua, which is where most of the information on this phase comes from. There are many changes in agricultural and subsistence practices with the appearance and abundance of manos and legless breadboard metates (Haller 2008: 67). Although La Mula- Sarigua placed more emphasis and importance on agricultural activity it is also important to note that La Mula-Sarigua was very much dependent on resources, labour, and skill from other communities (Hansell 1988; Haller 2008: 68).

The settlement hierarchy used in Panama is used as an indicator of a chiefdom and illustrates the intense competition that takes place within them (Haller 2008:10). The theory behind a settlement hierarchy is that smaller settlements in a given region would be within the sphere of influence of larger settlements (Earle 1987:289). The settlement hierarchy consists of first-order sites, which were cultural centres and had ultimate control over political, economic, and religious functions. Second-order sites contributed to cultural activities in the region and often had evidence of craft specialization for high status elites and rituals, which would connect them to the chiefly center, a first-order site. A third-order site would be a tertiary or peripheral site. These sites were hamlets or farmsteads of about five to six people and their main focus would have been on agriculture (Haller 2008). The site of focus for this study is Site 174, which is a secondary site. The first order site in the Parita valley is Site He-4.

Archaeologists in the past focused on large sites such as Sitio Conte which had massive amounts of mortuary remains and grave goods (Briggs 1989; Hearne and Sharer 1992; Lothrop 1937, 1942; Mason 1941, 1942). The Parita river valley is the specific location of Haller (2008)'s work. A regional survey, and site specific excavations and survey have been completed in this area already. In addition, other archaeological work has found that the earliest ceramics in Panama come from this region and the earliest nucleated settlement in Panama. The site He-4 is the chiefly center in this region and Haller (2008) has found that the emergence of social ranking occurred during the Cubitá phase (A.D. 550 – 700) and again during the Macaracas phase (A.D. 900 – 1,100).

While larger sites have been studied immensely over the years, it is the smaller sites that have been relatively unstudied or overlooked as they were considered to be unimportant. Smaller sites within the Parita river valley, other than the chiefly center, are being studied more closely in order to more fully understand the Parita chiefdom prior to Spanish contact. It is important to study these smaller sites because one can more accurately evaluate their relationship with the cultural core, He-4. While many sites participated in local specialization and craft specialization in order to either trade with other societies or pay tribute as obligations to their chief, it is also possible that certain household activities were

concentrated at He-4 and were absent and restricted at smaller settlements as well. By studying social inequality, it is possible to decipher the nature of these Panamanian chiefdoms and how the opulent, the middle tier, and the commoners were associated with one another.

This thesis will contribute to the database on “addressing the rise and development of social complexity in the Parita river valley at several different scales of analysis (regional, community, household).” (Haller, 2008). Questioning the ubiquity of the Parita river valley chiefdom through a household analysis of a smaller site will reflect more on how the chiefdom operated throughout the pre-Hispanic period. Although many studies include analysis of burials for the identification of wealth differentiation, this study will investigate households, which I argue illustrate inequalities on a different scale of analysis – from a site that is not the chiefly center, from a location where seemingly less high status people were living.

1.3. PARITA ARCHAEOLOGICAL RESEARCH PROJECT (PARP)

The types of ceramics from each phase can each explain characteristics of each time in settlement as ways of life changed. The Proyecto Santa Maria survey collected immense information regarding the Early Occupation, particularly The Paleoindian/Early Preceramic Period (9,200 – 5,000 B.C.) and illustrated that societies were spread out over large geographical regions and used a variety of resources for a means of subsistence (Haller 2008:47).

Before the PARP project began, a reconnaissance project occurred in 2000 in order to obtain information and analyze on surface visibility, artifact densities, and if there was a possibility of a regional survey. From this reconnaissance project, a lot of quantitative data was collected. The area, identity, and location of every collection unit that was linked to its artifact data was electronically represented through a prepared data base.

The Parita Archaeological Research project (PARP) began for Dr. Haller’s doctoral research in order to discover the development of the chiefdom in this area. 104km² was surveyed which is the area of the Parita River Valley of Central Panama. The survey zone extracted 378 archaeological sites. The map below illustrates the Central Region of Panama, including the survey zone and some of the major sites discussed in this study (Figure 1.1.).

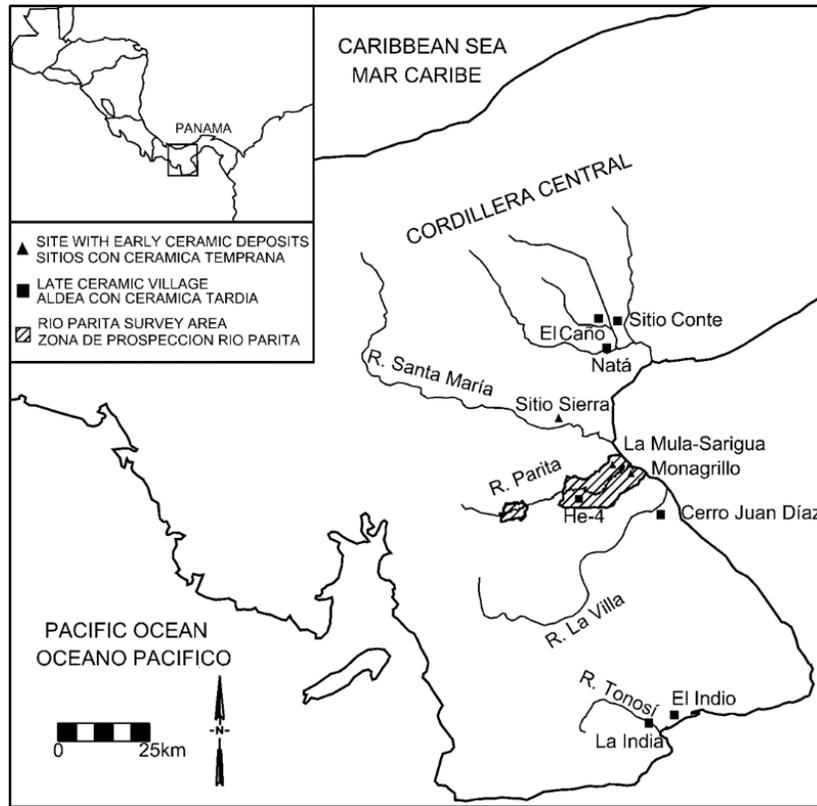


Figure 2.1. Central Region of Panama, including the survey zone (Haller 2008:4).

The survey took place in 2002 and focused on the Late Occupation Sequence (200 B.C. to A.D. 1522). The results of the survey were that there was two times which showed the spike in social complexity, one at the beginning of the Cubitá Phase (A.D. 550 – 700) and one during the Macaracas Phase (A.D. 900 – 1100) (Haller 2008). Population increase and the large cultural core, He-4 develop during Cubitá and a settlement system and high-status burials emerge during Macaracas. The survey illustrated the evidence for social ranking and a chiefdom that developed by the Macaracas phase.

Excavations were then performed at He-4 (Menziés 2009). These consisted of General Surveys and Systematic Surface Surveys. A General Survey would consist of artifact densities which were equal to or less than 1 artifact per m². 20 artifacts were necessary for a Collection Unit, plus 3 in order to make it a representative sample. A Systematic Surface Survey was simply 3m diameter circles to collect representative samples. When there was low visibility, shovel probes were used which were 20cm x 20cm x 20cm.

In summary, the data collection took place in three stages. The first stage was the Regional Survey. The second stage was the excavations at He-4 and the third stage were the excavations at smaller sites, such as Site 174. At Site 174, Shovel Test Pits (STP) were conducted to find middens. When a dense midden was found, a larger excavation units were then conducted, of which there were five in total. These larger excavation units were called Operations (Haller 2008:25-27).

A three tiered settlement hierarchy includes first order, second order, and third order sites. An example of the largest, most powerful site would be He-4 and it would have had ultimate control over a large geographic region. Its sheer size, around 10 times larger than the other sites in the valley, indicate its dominance (Haller 2008:44). It was central in that it controlled political, religious, and economic functions. Based off of Menziés (2009) investigation, He-4 seems to have been a non-economic model of a chiefdom. In this way, the “acquisition and display of prestige goods, or symbols of status, is an alternative means of establishing chiefly power and is based primarily on ideology or ‘social power’ that is expressed through a common ritual or religious system” (Menziés 2009:3). This social power could manipulate smaller sites into coming under its sphere of influence. This would allow the peripheral sites to have a connection with a larger more powerful center, which would increase participation in craft specialization, religious compliance, and pilgrimage to sacred sites located within He-4. The consensus for the emergence of social ranking in the Central Region of Panama is A.D. 700 and in addition to this, political centralization occurs in A.D. 550-700 in the Parita river valley (Haller 2008:11; Menziés 2009:10). These dates will specifically be investigated for Site 174 in the present study.

The sites that would be brought under control by the cultural core, He-4, would include second and third-order sites. These sites are hamlets or farmsteads of only 5-6 people (Haller 2008:62). These hamlets were focused primarily on agricultural subsistence. Although Site 054 was not a third order site, the agricultural practices would have been similar throughout the region. Jessome (2012) noted that people of 054 would have taken full advantage of the cycle of the rainy and dry seasons and predictable flooding that occurred in their area. Plant resources such as arrowroot, bottle gourd, maize, manioc, gourd/squash, and sweet potato were all cultigens that would have been harvested for subsistence. Animals such as deer, sloth, raccoons, rodents, snakes, and birds were exploited for protein (Jessome 2012:6). Although their agricultural methods were extensive, these communities also contributed to craft production and other specialized activities. In addition, they extensively participated in ritual. Since they were under the sphere of influence of He-4, these communities would travel to He-4, bring their specialized crafts, other rare goods, offerings, and their willingness to view or participate in a ritual that encompassed everyone that was a part of the chiefdom.

1.4. SITE 174

Site 174's artifacts such as lithics, shell, fauna, and ceramics can provide definite hints towards there being a central power which these households supplied, provided for, or received from. In addition, specialized activities could have been specific to Site 174, which would make it an extremely important site for production. By studying these artifacts, discovering how chiefdoms emerged and operated may be a result.

Secondary sites such as Sites 054 and 174 contributed to more cultural activities in the region compared to tertiary sites. It is possible that people in secondary sites were making use of collected shell and bone not just for subsistence, but for craft production (Lyll 2007). In addition, special lithics could be formulated into jewelry and special ceramics with designs could be painted and constitute as special serving dishes. This would make these sites largely more complex and unique from tertiary sites. With

three distinct ordered sites, high status elites in the cultural core of He-4 could draw independent sites into their sphere of influence and ultimately centralize large parts of the region.

The location of Site 174 was situated just south of the Parita river valley. The Parita river runs along the Upper Survey Zone and is about 70km long (Haller 2008:23). It overflows in the wet season with incisions of sand, silt, and clay and therefore creates extremely fertile land. In addition, the water from this river is the only dependable fresh water source and is therefore an essential factor for agriculture and settlements (Haller 2008:23). Site 174 will be more intensively analyzed during this project in order to find out questions regarding households with daily domestic activities, specialized activities, and its occupation among other sites in the region. In addition, more insight into the characteristics of a chiefdom will be examined. The map of the survey zone with the site size hierarchy is illustrated below (Figure 1.2.).

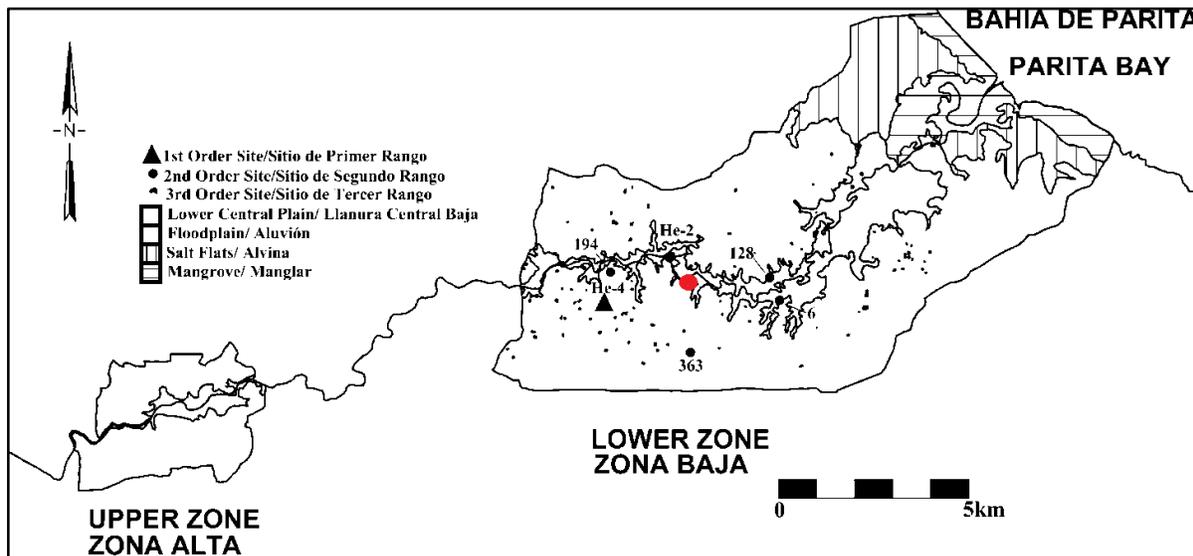


Figure 1.2. Map of the survey zone and examples of first, second, and third-order sites (Haller 2008:71). Site 174 is indicated by the red dot.

The chiefdoms in Ancient Panama included smaller communities, such as Site 174 which were “highly generalized and largely self-sufficient in staple goods” (Earle 1987:292). A community such as Site 174 is a generalized community and these types of economies characterize chiefdoms (Earle 1987:292). Site 174 is located on a series of low lying hills above the flood plain and is about 100m from

the current channel of the Parita river. He-4, the first-order site in the Parita river valley, is the only site in the survey zone with evidence of public architecture and is 2.2km away from Site 174. Site 054 is located in the Upper Survey Zone.

In order to study hereditary inequality in a more detailed manner throughout the Parita river valley, a second-order site, Site 174, and its associated households are the focus of this research as “a more reasonable differentiation of wealth and social inequality can be made with an analysis of energy invested in residential housing” (Earle 1987:291). In addition, as opposed to earlier research which focuses on large sites, public architecture, and mortuary remains, “housing involves a daily use and display function much [is] more likely to represent economic and political relationships than burials” (Earle 1987:291). Therefore, analyzing the households at Site 174 will determine Site 174s role in the chiefdom in the Parita river valley. The nature of these households will also be determined in order to specify how it was linked with He-4 and other smaller sites within the valley such as Site 054.

1.5. RESEARCH QUESTIONS

In small-scale societies, households are the basic units of production. If manufacturing was occurring at these households, was it a regular occurrence? Did these households take part in domestic tasks such as cooking, cleaning, or storage? If these households were “normal” or domestic units, these households would be largely self-sufficient, producing their own food, goods, and tools. Food production, preparation, and household maintenance should be evident in domestic tasks within the households. Were the households at Site 174 “normal” domestic unit? Utilitarian goods or technomic goods (Menzies 2009) such as cooking and storage vessels, stone axes, processing tools, cutting implements, and cloth would be found in this context (Menzies 2009:14). Manufactured or manufacturing lithics, animal bones of lower quality and of smaller size would be present in the households if they were to be considered domestic households.

Specialized activities are the kind of class of goods that are only produced by professionals, or people that specialize in that type of production. The “socio-technic goods” are objects related to the social realm, as opposed to utilitarian and functional objects. Menzies (2009:14) provides examples such as polychrome pottery, worked bone, shell pendants, and polished stone bars. These types of artifacts illustrate their aesthetics and appearance, rather than function. “Specialization can be inferred from the location of production debris degree of standardization in artifact assemblages, concentrations of manufacturing debris and ratios of finished tools to debitage, cortical flakes, unfinished or broken tools, ceramic wasters, by-products from shell manufacture, and metal slag” (Menzies 2009:15; Costin 1999:21-29). The differentiation in wealth is often reflected in the individual household. In addition, if there are rigid divisions between the high and low classes, the evidence will be at this level. If so, does this indicate social hierarchy within this site?

Due to the interconnectedness of chiefdoms in which the smaller, second or third order sites are subservient to the larger, first order site, it is necessary to analyze the relationship that exists between these sites. What is the relationship between the secondary site, 174, to other secondary sites in the valley including 054 in the upper survey zone? How did two secondary sites interact with one another? What are the similarities or differences in their modes of production? Specifically what are the differences in the lithic assemblages? This information will provide more context for the social hierarchy that existed among the sites in the valley. Lastly, what is the relationship between chiefly center Site He-4 and secondary Site 174? How did this relationship transpire and what did it consist of? How would a secondary site connect with a much larger, more powerful polity in this geographic region? These two sites may be connected demographically, and may be connected in a way in which He-4 was able to bring second and third order sites under its sphere of influence.

2.0. METHODOLOGY

In order to investigate social inequality within the site of 174 and to compare it across the other two sites, Site He-4 and Site 054, it is necessary to look at households as they represent day-to-day activities which make up societies as a whole (Menzies 2009). By looking at households, it is possible to discover how household units were organized, if these households participated in different activities or in activities that were exclusive to some households or if they were organized in different ways separately. Thoroughly examining households will illustrate the status differences between them through the similarities and differences of the artifacts found in each household. The activities that are indicative of social inequality will reveal how they are related to the chiefly center, He-4, how the activities were organized among the site, and how they changed throughout time. This chapter will describe how the data was originally collected in the Central Region of Panama, how the data was organized and how the artifacts were analyzed and dated.

2.1. DATA FIELD COLLECTION

Shovel Test Pits are usually used to obtain information on demographics and population estimates, which was done at Site 174 but these STPs were also used because they are a quick and easy way to obtain a lot of information on a given area. Specifically, the STPS were used to find middens. Data regarding craft specialization and artifact inventories can be obtained archaeologically by surface artifact concentrations and densities as well as eroded midden deposits (Menzies 2009:22). At Site 174, Shovel Test Pits (STP) were conducted all over the site which were 40cmx40cmx40cm which were dug to this level or was dug to this level or until bedrock or sterile soils. When high densities of artifacts were found through the STPs, larger excavation units were conducted; these larger excavation units were called Operations. In total there were five Operations at Site 174 (Op A, Op B, Op C, Op D, and Op E) and these excavation units were 1 m x 1 m large (Haller 2008:25-27).

2.2. DATA ORGANIZATION

There was 59 Shovel Test Pits (STPs) and 5 Operations in total at Site 174. Each of the operations were excavated using 10cm levels until reaching sterile soil or bedrock. Operations ranged from 5 levels to 12 levels. Ceramic artifacts were classified using 240 categories. They were divided into phases, polychrome, bichrome, plain, and different shapes such as pedestal or cup. There was only 78 fauna count remains found in total and they were found in various STPs and specifically Operation A. The lithics excel spreadsheet consisted of much more detailed information than all the other artifacts. The lithics were divided up into variables such as raw material, colour, condition, and measurements of thickness and length were also included. The shell assemblage was relatively small so the variables associated with it were limiting as well. Some of the variables were species, whether it was intact or broken, the number of fragments, and the height and length.

Organizing the data consisted of firstly finding the percentages of each type of ceramic and how much of each ceramic was associated with a particular phase in an associated STP or Operation level. This was used to date the ceramics and the rest of the artifacts in each STP or Operation level. The coordinates for each STP were found using AutoCAD so that the map could be transferred to Surfer©. That way, contour maps could be drawn up based on the coordinates of where and how much of the artifacts were found throughout the site. Households were drawn around the contours of highly dense ceramics. These households represent the majority of the analysis as the appearance of artifacts within these households can indicate the activities of the inhabitants of site 174.

2.3. INTRODUCTION TO METHODS OF ARTIFACT ANALYSIS

Analyzing the materials found at Site 174 will contribute to determining if there are any and the extent of the distinctions between the production of special materials that would be considered high value and the production of more utilitarian goods. These differences will reflect higher or lower status households within Site 174, and will help establish what kind of Site 174 was regarding its activities.

All the data from the Collection Units was organized on spreadsheets on Microsoft Excel©. Each type of artifact, ceramics, fauna, lithics, and shell have their own spreadsheet with all variables listed in the top columns such as type, colour, condition at the time of their collection, etc. In order to create maps of the site in order to find the location and density of each artifact, it was necessary to date the artifacts using the master chronology that is used for the Central Region of Panama (Cooke and Sanchez 2000; Haller 2008) and to begin using the ceramics for dating the rest of the artifact assemblage.

Due to the large span of the Central Region of Panama chronology spans, it is divided into two sections which are the *Early Occupation Sequence* (9200 – 200 B.C.) and the *Late Occupation Sequence* (200 B.C. – A.D. 1522) (Cooke and Sanchez 2000; Haller 2008). With the rise of the first village in the region, La Mula-Sarigua, Haller’s (2008) study focuses on the Late Occupation Sequence, beginning in 200 B.C. The chronology follows the vertical scale illustrated in Figure 2.1. Using this chronology, the ceramics were dated and using their location, the other artifacts in the assemblage could be dated accordingly to their corresponding location within each STP and Operation.

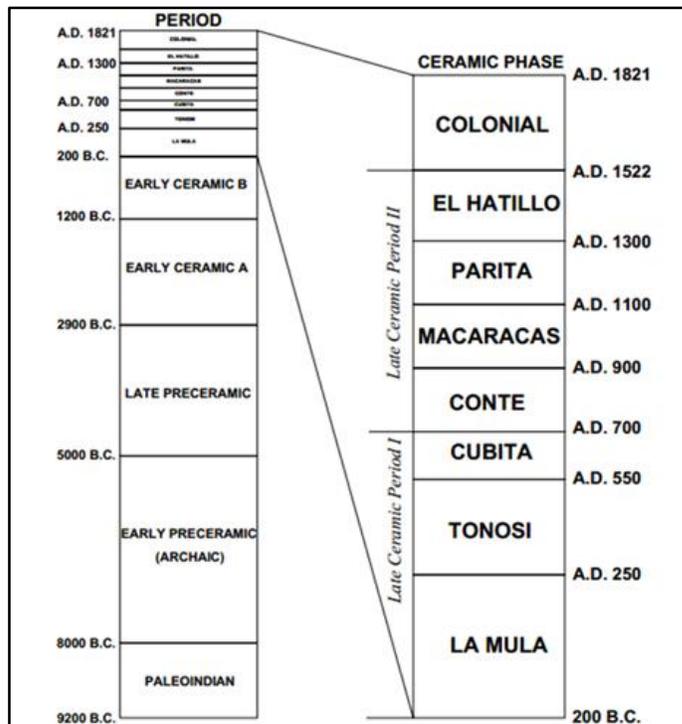


Figure 2.1. Early Occupation Sequence, Late Occupation Sequence, and the Colonial Period (Haller 2008:33). The present research focuses on the Late Occupation Sequence.

In order to determine the concentrations of each artifact in each STP or Operation over a specific amount of time, an Artifact Density Index (ADI) was created. This method was based off of Jessome (2012)'s Population Density Index (PDI) which was calculated by dividing the total number of artifacts deposited during each ceramic phase by the volume (m³) of the shovel tests (ST), and then divided by the number of centuries for a given phase. Since I am investigating households and the levels of production occurring between them, rather than specifically population, the ADI was more appropriate as it combined the coordinates of each STP and Operation and the densities of each artifact within Site 174.

In order to determine the ADI, which is specific to this project, the phase (Tonosí, Cubitá, Conte, Macaracas, Parita, or El Hatillo) of the artifact was listed beside the artifact, the raw count, or the amount of each artifact within each STP or Operation level was listed beside the phase. This number was then divided by the volume of the STP or the Operation level (the volume of the Operation levels were systematic, however, they were necessary to include in the calculation). Finally, it was divided by the phase length. Due to the lower amount of raw counts for some of the artifact assemblages, specifically shell and fauna, it was necessary to divide them by the groupings of phase lengths rather than individual phases. The group phase lengths were divided into early and late; the Early Phase Grouping (which consisted of Tonosí, Cubitá, and Conte) and the Late Phase Grouping (Macaracas, Parita, and El Hatillo). Since the Tonosí phase until the Conte phase lasts 650 years. In this sense, the number was then divided by 6.5. For the Late Phase Grouping, the number was divided by 6.2 because it lasted 620 years. Table 2.1. presents an example of determining the ADI of ceramics from STP 2 from the Macaracas phase (A.D. 900 – 1100) below. Since Macaracas is 200 years long, the density needed to be divided by 2.

STP/Operation	CoordinateA (m)	CoordinateB (m)	Volume (m ³)	Raw Count	Density	Density Divided by Phase Length (Macaracas ÷ 2)
2	552767	882110	0.152	2	13.16	6.58
Calculated ADI						6.58

Table 2.1. Ceramic data collected from Site 174 and variables used in calculating the ADI.

In order to find the ADI for shell, the phase grouping technique is used. Often, the artifact assemblage simply was not large enough and phase groupings were used more in order to conduct analysis. The phase grouping technique is illustrated in the table below (Table 2.2.).

STP/Operation	CoordinateA (m)	CoordinateB (m)	Volume (m³)	Raw Count	Density	Density Divided by Phase Grouping (MacParHat ÷ 6.2)
6	552726	882109	0.064	1	0.064	0.01
Calculated ADI						0.01

Table 2.2. Shell data collected from Site 174 and variables used in calculating the ADI.

After the ADI was calculated, it was necessary to import the coordinates and the ADI density into Surfer© in order to create contour maps that illustrated the artifacts densities and locations throughout Site 174 using contour lines. The contour lines that were created for the ceramic assemblage were not only used to indicate higher amounts of ceramics over multiple time periods to illustrate population, but they were also used to create households. Contour lines that were very dense in an explicit location were labelled as a household through each phase. An example is shown in the map below (Figure 2.2.) of Site 174 with contour lines representing the ceramic data from that phase. The contour lines are densely clustered in 4 specific areas which is where the households, outlined in red, were drawn. In the map (Figure 3), this example presents the Cubitá households, Cu1, Cu2, Cu3, and Cu4. Using households for each phase, it was possible to begin creating contour maps for the densities of other artifacts such as fauna, lithics, and shell. It was also necessary to adjust the levels for the contours on each map. For example, due to the low Number of Individual Specimens (NISP) for shell, the Surfer© program automatically adjusted so that although the raw count was low, the contour lines made it look like there were dense amounts of shell within the map with dense contour lines. In order to compare shell contour maps against other contour maps, all of the contour levels needed to be the same. Within each section of this paper, the levels of the map will be indicated.

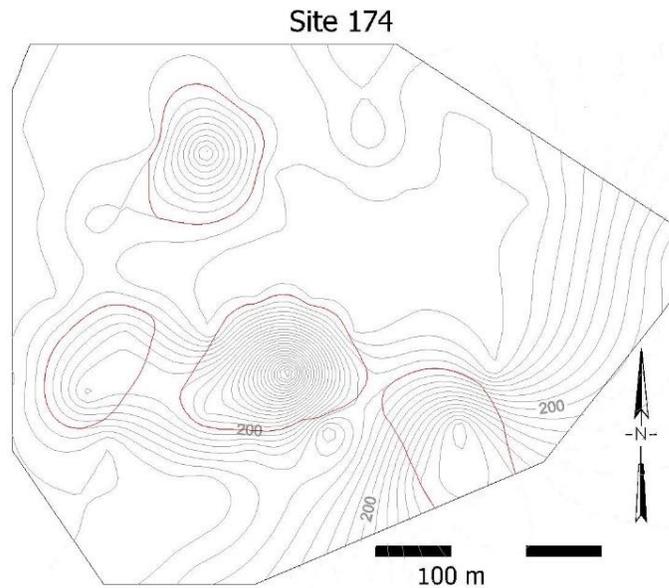


Figure 2.2. Map of Site 174 illustrating the Cubitá phase and the associated Cubitá households outlined in red (Levels: Increments of 25).

With the contour maps created, it was possible to see where dense contour lines were located throughout the site, and to see if they were located within any of the households that had been drawn for each phase. In addition to this level of analysis, simple percentages and tabulations were created in order to retrieve quick and easier results, especially when the NISP was low. Ceramics, however, were extremely abundant and provided the most information for population, households, and when comparing highly painted or serving ceramics against utilitarian or plain ceramics.

2.4. CERAMICS

Ceramics were organized by their ‘category’. These categories range from simple pots for cooking and plates for eating off of, to trichrome and incised serving vessels which are positioned on pedestals for serving to a group. Menzies (2009) provides the basis of the ceramic categories which are designated to be either cooking, serving, plain, or painted ceramics. These categories were not mutually exclusive, while one could be a cooking ceramic, it could also be painted with two or more colours. The

cooking and serving were compared against each other and the plain and painted ceramics were compared against each other in order to produce percentages of each.

The cooking category consists of *ollas* (a pot or saucepan), *tecomates* (liquid storage vessel), or an *asa* (handle). *Ollas* typically have a lip at the top of the pot in order to prevent spilling – this indicates food preparation as it was used often to prevent beans from spilling over when boiling. *Tecomates* are without a lip and this is how they are distinct from *ollas*. In addition, the cooking vessels are usually painted red or red-cream (Menziés 2009:63). The other category of ceramics is Serving Vessels, which consist of bowls, *plato* (plates), *vaso* (vases), etc, or pedestals which indicate a bowl or plate that was used to serve to a large group in an elaborate fashion. The plain ceramics do not have any paint on them at all but can also be used for serving or cooking purposes. The painted ceramics, on the other hand, can consist of bichrome, polychrome, or more assortments of colours that may be painted on the vessel or ceramic sherd.

Many ceramics were listed as *apéndice* (Appendix) which are handles, or an add-on to the main ceramic base. Sometimes, this appendix is designed in the shape of a small animal which was attached to bowls and serving jars to increase the decorativeness of the vessel. Ceramic vessels such as *vasos* or even *ollas* had *aplicado* which was another type of add-on, however, usually a bit less decorative than an *apéndice*. *Asa de tira* is a tube-shaped handle which is usually associated with the Cubitá and Conte phases. *Asa de cinta* is a tape-shaped handle, which is wide and thin and harder to hold. This shape is believed to be the handle for an incense burner and thus, would be placed under the serving category of ceramics (Menziés 2009).

The ceramics found from Site 174 have specific designs that are characteristic of each time period. For example, El Hatillo style pottery is not painted with as much detail as earlier phases, was more geometrical, was used “specially” by the elite, and has been more commonly destroyed by agriculture since this pottery is usually at the top of the soil (Haller 2008:105).

Ceramics needed to be standardized because the raw numbers cannot be compared against themselves due to the varying numbers of sherds. Creating a percentage is necessary in order to compare the ceramics. The total amount of each artifact was added up and then divided by the total amount of sherds and multiplied by 100 so that they are able to be compared. In this way, a percentage for the phase was calculated to assign to each STP and to each Operation level. Any percentage that exceeded 50% or more sherds of a particular phase (i.e. Tonosí) or a phase grouping (i.e. Tonosí, Cubitá, Conte) was officially assigned to that phase. For example, in STP 1, there were 30 ceramic sherds found in total. 29 of these sherds fell under the Early Phase Grouping and thus, the entirety of STP 1 was dated to the Early Phase Phase Grouping. An STP being assigned a temporal designation was used to also assign dates to the other artifacts shell, lithics, and fauna. For example, in STP 8 an indeterminate tool fragment and an ornament were found. Because the STP is dated to the Late Phase Grouping (Macaracas, Parita, El Hatillo), then the lithic artifacts, the indeterminate tool fragment and the ornament, would thus be dated to the Late Phase Grouping.

In order for any of the analysis for ceramics, the ceramics had to be dated. These ceramics were dated according to the chronology by Cooke and Sanchez (2000) and was previously used by Haller (2008:33). The ceramics were dated based on the highest percentage of sherds that was assigned to a particular phase or Phase Grouping. For example, if 90% of the ceramics found in STP 2 were Tonosí ceramics, then the STP would then be labelled as an STP associated with the phase Tonosí. In order to reveal larger patterns, the dating was produced using phase groupings. Therefore, instead of using individual phases, an Early Phase Grouping (Tonosí, Cubitá, and Conte) and a Late Phase Grouping (Macaracas, Parita, El Hatillo) were used. The dates established for each STP would be used for the other artifacts. Therefore, if a small mammal bone was found in STP 2, it would also be dated to the Tonosí phase.

In order to create calculations that reflected the density but also the volume of each STP or Operation and the amount of time each phase was, it was necessary to come up with a new type of

calculation that took the number of artifacts (or sherds), and divided it by the volume of the STP or Op level, and then that density divided by the number of years for the century. It was erroneous to compare two phases if you did not adjust for different phase lengths (Haller 2008:34). In other words, there might have been more artifacts from a certain phase, but it could be longer and, in essence, represent the same density. It was necessary to modify the densities by dividing them by how many centuries they cover. Tonosí is 300 years so it was necessary to divide the density values by three; Cubitá is 150 years so it was divided by 1.5; Conte, Macaracas and Parita are all 200 year periods so it was divided by two; and El Hatillo is 222 so it divided by 2.22. These new densities (#sherds/m³/Century) should be the basis for calculating population densities and they are termed the Artifact Density Index, or the ADI.

The ceramic contours which were made on Surfer© were used to illustrate the fluctuations of the population of Site 174. Once the levels were adjusted so each phase had the same levels, the contour lines which were denser, exemplified a larger population and the contour lines that were farther apart represented a lower population. Since a contour map was created for each individual phase, the population was presented in a manner in which the location of the population was visible and it was illustrated throughout time.

The ADI and the corresponding contour maps also created households. As described previously, the households were established based off of the contour lines that clustered together in denser areas. Explicit locations were labelled as a household through each phase. An example is shown in Figure 2.2. of Site 174 with contour lines representing the ceramic data from that phase. The contour lines are densely clustered in four specific areas which is where the households, outlined in red, were drawn.

2.5. FAUNA

The fauna is organized on excel spreadsheets and divided into columns which indicate the name of the mammal, the size, the element, the count, and any other additional comments. Another column was added in to decipher the quality of meat. Most of these categories were produced in order to decipher

what the bone element was, what the count was, and any other additional comments such as heat altering. The comment column was one of the most important columns in order to find specific details as many of the fauna elements were simply labelled as medium or large mammals. A large mammal would be something the size of a deer, a medium animal would be a dog, and a small mammal would be a bird. Depending on the element found, it is possible to decipher what it was used for. Some of the elements were astralagus, vertebrae, femur head, pelvis/cranial, long bone fragments (LBF), ribs, axial fragments, etc. Different types of comments were written upon data entry regarding whether the bone was heat altered, fractured, or worked. This all provides information regarding how and why the animal bone was used.

The quality of meat was analyzed which consisted of determining what element of the bone found would be considered low, medium, or high quality meat. Low quality meat such as antlers or teeth would either just be discarded fauna remains or remains from some sort of craft specialization. Antlers have been noted to be utilized as tools to make scrapers (Mason 2008). The medium quality meat would be elements such as LBFs, axial fragments, and ribs. Higher quality meat would be pelvis fragments or lumbar bones. In order to find larger patterns rather than looking at the minimum number of elements (MNE), the ADI was found for all fauna and then it was separately analyzed by size of mammal and the quality of meat of the mammal.

The ADI was found for both STP and Operations and the contours associated with fauna densities and the differences between the sizes of mammals and the quality of meat were drawn out. For fauna, since the raw counts were so low, it was necessary to divide the analysis up into the Early Ceramic Group and the Late Ceramic Group in order to discover larger patterns. This was done to illustrate the densities and locations of fauna remains throughout time. In addition, a second analysis was conducted which looked small, medium, and large sized mammal densities throughout the site across the phase groupings. In this analysis, during the Early Ceramic Group, small, medium, and large fauna remains were all separately examined and then they were again distinctly analyzed for the Late Ceramic Group. The last

piece of analysis was the quality of meat. Again, during the Early Ceramic Group, low, medium, and high quality meat were studied. In the Late Ceramic Group, low, medium, and high quality meat were analyzed again as well.

2.6. LITHICS

Lithics were also organized into spreadsheet columns that included the characteristics of each artifact such as raw material, colour, tool type, tool condition, cortex, debitage type, length, width, platform shape, platform dimensions, and any other comments. In order to conduct the ADI and contour maps to illustrate the locations of densities of lithics throughout Site 174, the lithics were split into Early and Late Ceramic Groups to see large patterns throughout the larger spans of time of A.D. 250 – 700 and then again from A.D. 700 – 1522.

Since the raw count of the lithics was high (126 in total), further investigation involving whether the lithics represented manufacturing debris or evidence of manufacturing, whether they were utilitarian tools, or whether they were specialized tools. All of the three categories: manufacturing, utilitarian, and specialized were analyzed using contour maps for each Early and Late Ceramic Group. Examples of manufacturing lithics were utilized and non-utilized flakes, exhausted cores, multidirectional core, axes, and unused raw materials. Utilitarian tools were lithics such as drills, utilized blade, manos and metates, multiple function grinding implements, and polishing stones. Specialized lithics were tools such as La Mula Points, and scrapers. Depending on the percentages of worked stone and lithics, it can be determined what kinds of tools these people were making, if there was mass manufacturing, if there were more artistic methods in making tools, etc.

In addition to calculating the ADI for these lithics and then subsequently making contour maps, simple percentage tabulations were conducted to find the most abundant raw material and tool type. Individual types of tools such as scrapers, axes, blades, and drills were all analyzed in order to determine more detailed information regarding these specific artifacts. Based on the contour maps and the household

locations, it was possible to determine where specifically a certain scraper came from and if it was within a household boundary. Scrapers were specifically analyzed because of their reputation as being a specialized type of tool for woodworking (Andrefsky 1998; Mason 2009). In addition, axes are hypothesized as being exports from outside of the Parita river valley and therefore may be indicative of specialized activities, especially those associated with woodworking such as canoes used in transporting warriors and resources) (Cooke and Ranere 1984:12; Haller 2008:153). The lithic assemblage was much more extensive than fauna and shell and thus, more information was extracted regarding stone tools, their production, and uses.

2.7. SHELL

The shell assemblage was organized onto an Excel© spreadsheet with columns that indicated the scientific species name, the natural habitat in which it was found, whether it was intact, broken, or a fragment, and other comments were also written down regarding its physical form (i.e. whether it fits together or not).

The ADI was found for the densities of the shell throughout the site for both STP and Operations and contour maps were made in for both the Early Ceramic Grouping and the Late Ceramic Group. Unfortunately, due to the low amount of shell fragments (only 37 in total), no other ADI analysis was conducted. The regional survey resulted in shell remains of varying species that were noted at 249 of the 348 collection units throughout the survey zone (Lyll 2007).

Instead of conducting more ADI analysis, percentage tabulations were calculated in order to find out the most common native habitat of total shell collected and the most common species during the Early Ceramic Group versus the Late Ceramic Group. These percentages were represented through bar graphs to more easily illustrate the findings. Although there was not much shell to investigate, the shell that was found and the native habitats of the species provided information for subsistence activities and even craft activities.

The materials, ceramics, fauna, lithics, and shell, should show differential distributions associated with production in order to determine the appearance and the extent of productive activities, whether they be domestic or specialized, at Site 174. Finding differences at different units of analysis such as households, the site, and the community over a period of time may illustrate the distinction between production of high-value materials and production of more utilitarian, domestic goods.

3.0. EARLY CERAMIC GROUP (LA MULA, TONOSÍ, CUBITÁ, CONTE)

Using the chronology from Cooke and Sanchez (2000) and Haller (2008), this research focuses on The Late Occupation Sequence. This sequence consists of the phases La Mula (200 B.C. – A.D. 250), Tonosí (A.D. 250 – A.D. 550), Cubitá (A.D. 550 – 700), Conte (A.D. 700 – 900), Macaracas (A.D. 900 – 1100), Parita (A.D. 1100 – 1300), and El Hatillo (A.D. 1300 – 1522) (Figure 2) (Haller 2008:33). Since there was no appreciable material from the La Mula phase at Site 174, the Late Ceramic Period I and Late Ceramic Period II, which are two periods that make up the Late Occupation Sequence, was modified so that comparisons could be made for the assemblages over time according to early and late dates. The Late Ceramic Period I consists of La Mula, Tonosí, and Cubitá and the Late Ceramic Period II consists of Conte, Macaracas, Parita, and El Hatillo. Since there is no La Mula phase materials at Site 174, and to make the time periods more even for comparisons, the Late Ceramic Period I and II are not being used. New names had to be created to make them unique from the Late Ceramic Periods. Thus, the Early Ceramic Group was created to accommodate the first three phases: Tonosí, Cubitá, and Conte. These three phases cover 650 years and includes the phases where there is the most information regarding demographics and artifacts. The Early Ceramic Group represents a period of time where large sedentary settlements form. The Early Ceramic Group is used to name the group of phases Tonosí, Cubitá, and Conte and to decipher from the Macaracas, Parita, and El Hatillo phases, which formulate the Late Ceramic Group.

3.1. POPULATION

La Mula is the first phase during the Late Occupation Sequence beginning in 200 B.C. This phase, although included in the time period of Haller's (2008) research, had no identifiable data associated with it at Site 174. The La Mula phase (200 B.C. – A.D. 250) is a time of population increase and settlement in the Parita river valley. The population nucleates towards the coast as evidenced by increased artifact

densities. Due to this, the population settlement up the Parita River is low and He-4 is a third order site. La Mula-Sarigua, on the other hand, is a first-order site during the La Mula phase.

The Parita river valley's settlement pattern switches from nucleation towards the coast during the La Mula phase, to increased population up the Parita river beginning during the Tonosí phase. The population explosion, however, occurs from the Tonosí phase to the Cubitá phase, with a seven time increase in the Parita river valley. There is a slight drop in population during the Macaracas phase, however, the settlement pattern remains the same until the El Hatillo phase, where the population drops by 50% (Haller 2008:106). At the site He-4, the population significantly increases during the Tonosí phase, making it a second-order site by this time. He-4 then reaches first-order site distinction by the Cubitá phase and maintains this position until the El Hatillo phase (Haller 2008:65).

At Site 174, however, the population begins and increases in Tonosí, peaks at Cubitá, and then drops directly after this (Figure 3.5.). The increase from Tonosí to Cubitá is a six times increase, quite similar to the regional trend, which is a seven times increase (Haller 2008:106). Site 174s dramatic population drop after from Cubitá, continues during Conte, and Macaracas, and then finally tapers off at El Hatillo. The 3D maps (Figures 3.1., 3.2., 3.3., and 3.4.) of Site 174 illustrate the fluctuation in population but also the change in location of the population throughout time.

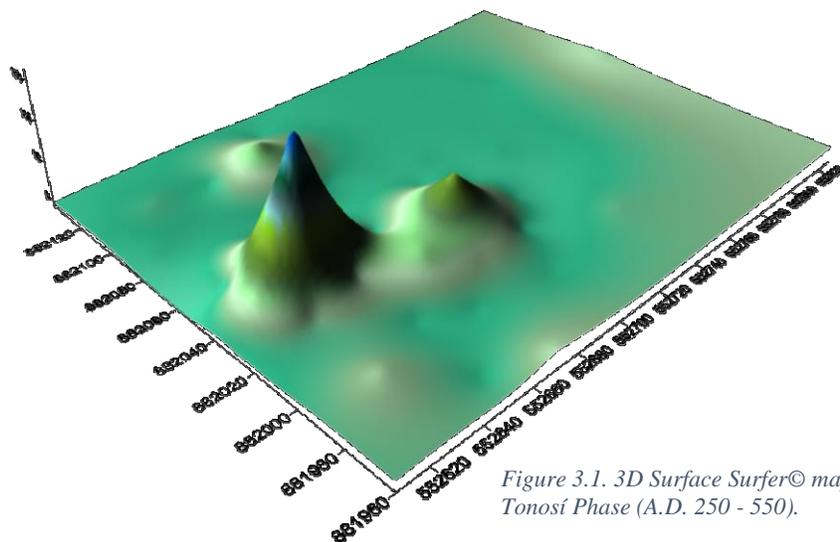


Figure 3.1. 3D Surface Surfer© map of Site 174 during the Tonosí Phase (A.D. 250 - 550).

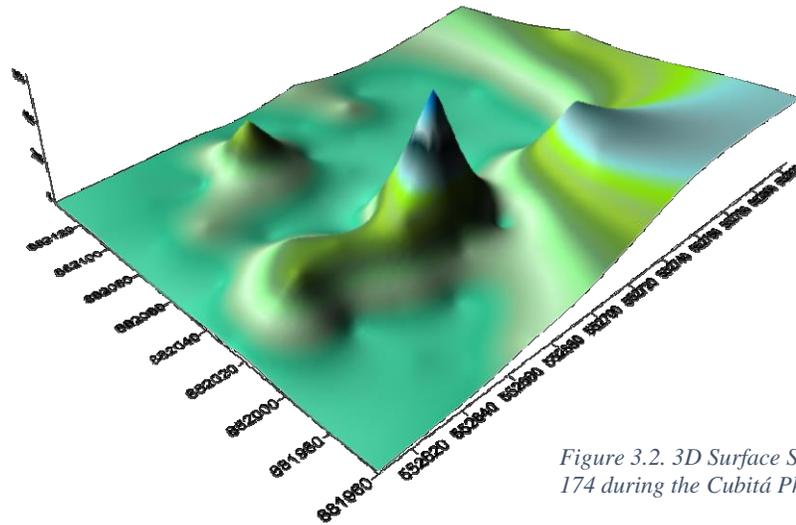


Figure 3.2. 3D Surface Surfer© map of Site 174 during the Cubitá Phase (A.D. 550 - 700).

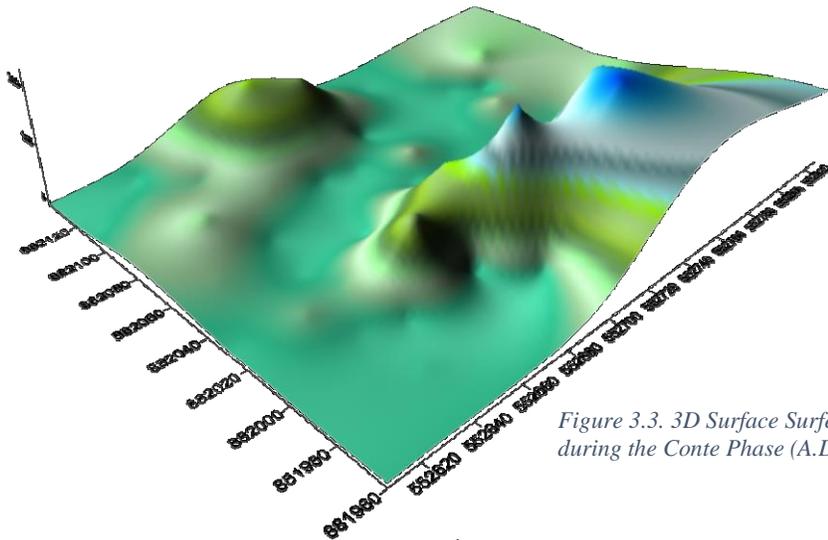


Figure 3.3. 3D Surface Surfer© map of Site 174 during the Conte Phase (A.D. 700 - 900).

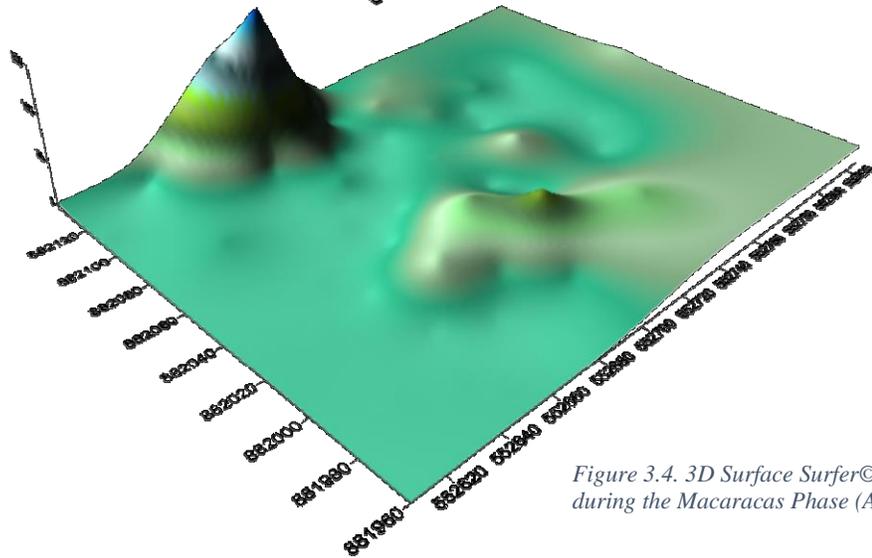


Figure 3.4. 3D Surface Surfer© map of Site 174 during the Macaracas Phase (A.D. 900 - 1100).

With 174's dramatic drop in population after its peak during Cubitá, it is possible that Site 174 experienced a strong demographic shift, and the population moved to He-4. Since He-4 held spiritual and ritualistic connections as a necropolis (Haller 2008:55) and it was only 2.2km away from Site 174, it is possible that Site 174 was one of many second-order sites that moved there. Although the population significantly decreased after the Cubitá phase, Site 174 maintains its position as a second-order site until the Conte phase. Therefore, Site 174 still shows signs of occupation, small as they are, up until the Macaracas phase. Thus, it is also noteworthy that Site 174 remained relatively independent of He-4's demographic pulls until at least A.D. 700.

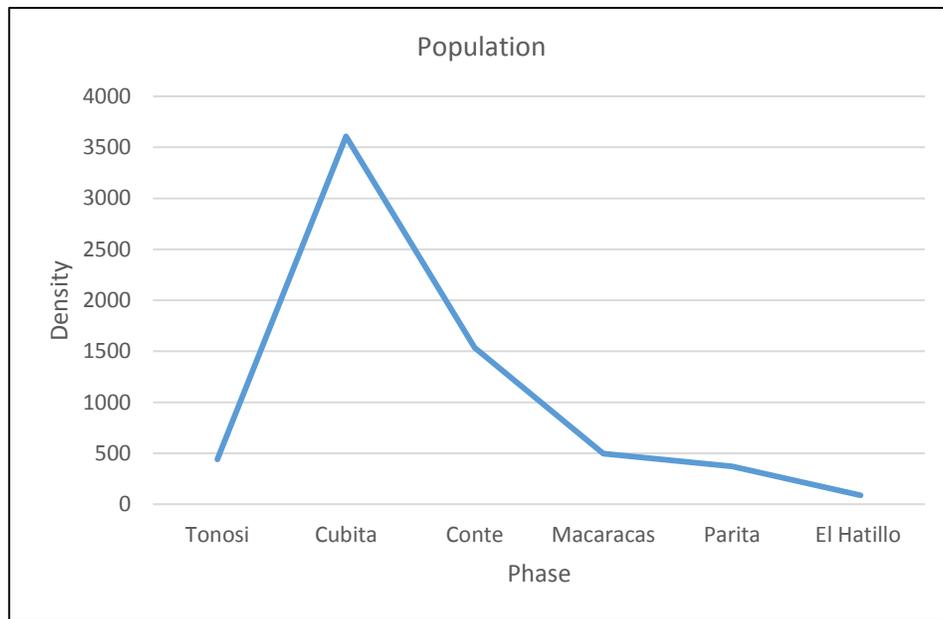


Figure 3.5. Graph illustrating the population densities at Site 174 throughout the phases Tonosí to El Hatillo.

The occupational history for the Parita river valley from Haller's (2008) research illustrates that Site 174 was dormant during La Mula but then quickly became a second-order site from Tonosí to Conte and then drops to a third-order site during Macaracas and Parita (Haller 2008:68). As 174 becomes a second-order site in Tonosí and maintains that position until the Conte phase, this pattern is similar at some other sites in the valley such as Site 048, Site 054, and Site 191 (Haller 2008:68). It is possible that some of these sites in the valley were abandoned after the Conte phase when Site He-4 became large and culturally encompassing first-order sites (Cooke et al. 2000:172, 2003:127; Haller 2008:55).

Similar to Jessome (2012)'s hypothesis, if Site 174 underwent population decline during the Cubitá phase, which is the phase associated with the emergence of social complexity in the region, then it could be argued that He-4, the chiefly center, may have exerted some dominance and "pull" over smaller sites such as Site 174. Since the emergence of socio-political complexity began during the Cubitá phase (Haller 2008), the rise in population at Site 174 is actually an illustrative example of socio-political independence. If there was a decline during the Cubitá phase, then there would seemingly be some influence from He-4 and its "pull" on smaller sites in the valley (Jessome 2012:21). The demographic patterns that have been discovered for Site 174, however, indicate that during the Cubitá phase, the developing chiefly center of He-4 exerted significant influence over the surrounding area, including the smaller sites such as 174.

Site 174's close location to He-4 might illustrate its relationship with the chiefdom centralized at He-4. This would fit in the classic definition of a chiefdom as Earle (1987:289) explains, "[f]or purposes of administration, tribute collection and control, settlements can be expected to cluster towards the centers". The demographics analysis is solely based on densities of ceramics using the ADI; however - there are other materials such as lithics, fauna remains, and shell which appear during the Late Ceramic Grouping. Therefore, it is difficult to say whether this site was abandoned due to appreciable materials occurring within the Late Ceramic Group. The graph below illustrates the rise and sequential fall of population after the Cubitá and Conte phases.

The 3D surface maps on Surfer© in Figures 5-8 illustrate the population in different locations, indicating where the people were living within Site 174. There are three households during the Tonosí phase, four households during the Cubitá phase, three households during the Conte phases, and one household during the Macaracas phase. By the time of the Parita and El Hatillo phases, there is no identifiable households, due to the significant decrease in population. These households illustrate another rise and fall of population, and another confirmation of the Early Ceramic Group having the highest population during Site 174's existence.

3.1.1. HOUSEHOLDS

At Site 174, there is no ceramic evidence from the La Mula Phase. La Mula Unifacial Points are lithics used as scrapers, knives, perforators, and graters. They are unifacially removed from prepared cores and are considered to be diagnostic of the La Mula phase (Menzies 2009:51; Ranere and Cooke 1996:67). Nine La Mula Points were found in the survey zone (Haller 2008:139) and at Site 174, there were two La Mula Points found in Op A and Op D, with respective households T3, Cu3, and Co3. It is possible that these La Mula Points are the only reflection of activity during the time period between 200 B.C. to A.D. 250 at Site 174.

It has been speculated that narrower La Mula Points (less than 2.2cm wide) could be associated with the later phase, Tonosí (Menzies 2009:51). One of the La Mula Points is, in fact, less than 2.2cm wide and is 2.1cm wide. Since there is no real ceramic evidence at Site 174, it is possible this La Mula point is actually characteristic of the Tonosí phase, despite its name and reputation as being diagnostic of the La Mula phase. The other La Mula Point at Site 174, however, is 3.1cm. It is important to address the appearance of La Mula Points during this phase, as Site 174 has virtually no other information regarding this phase. Thus, the Early Ceramic Group begins with the phase Tonosí.

During the Tonosí phase, the settlements are nucleated in the floodplain and again, remain near the coast. All over the Parita river valley the sites grew in size compared to La Mula, but still remained relatively small. Sites during this time were self-sufficient settlements that were not dependent on any other sites in the valley. In other words, they were autonomous (Haller 2008:75). The opposite settlement pattern from the La Mula phase is seen as a reversal as settlements occupy up the Parita river. It is speculated that environmental changes insinuated this reversal of the settlement pattern (Haller 2008:70).

Site 174 is considered to be a second order site during the Tonosí phase (Haller 2008:68) and it is at the beginning of this phase when the first households emerge at Site 174. The households are named T1, T2 and, and T3 and are based on the Artifact Density Index (ADI). T1 is located in the southwest area

of the site, T2 is located in the north area of the site, and T3 is located south of T2 and to the east of T1. The map below (Figure 3.6.) illustrates Site 174, its ceramic contours and its three households that are present during the Tonosí phase.

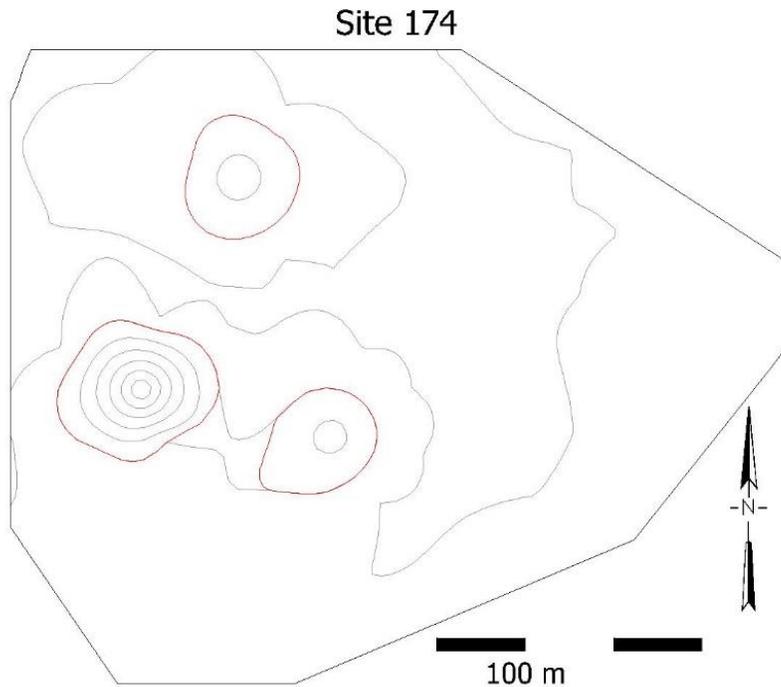


Figure 3.6. Tonosí phase households: T1, T2, and T3, outlined in red. Levels at increments of 25.

The Cubitá phase (A.D. 550 – 700) is characterized as “the dawn of the chiefdom era” (Cooke and Sanchez 2000:7; Haller 2008:77). Twelve more sites emerge in the Parita river valley as populations explode during this time. He-4 becomes the first-order site of the region and is actually eight times larger than any other site during this time. He-4’s emergence as a formal cemetery could potentially be the reason for its growth (Haller 2008:78).

Site 174, on the other hand, remains a second-order site and the households transformed from T1, T2, and T3 into Cu1, Cu2, and Cu3. The households Cu1, Cu2, and Cu3 are households which have continued since the Tonosí phase and would most likely have the same family lineage living within these succession households. An additional household emerges, Cu4, and this results in second-order sites, such

as Site 174, growing four times larger in area and five times larger in population than Cubitá third order sites (Haller 2008:73).

The map of Site 174 below (Figure 3.7.) illustrates the ceramic ADI contours and the households that were created for the Cubitá phase. Cu1 is located in the same area as T1, the southwest area of the site. Cu2 is in the central north area of the site, as was T2 and Cu3 is located just below Cu2, in the central region of the site. Cu4 is in the bottom right corner of Site 174, making it the newest household.

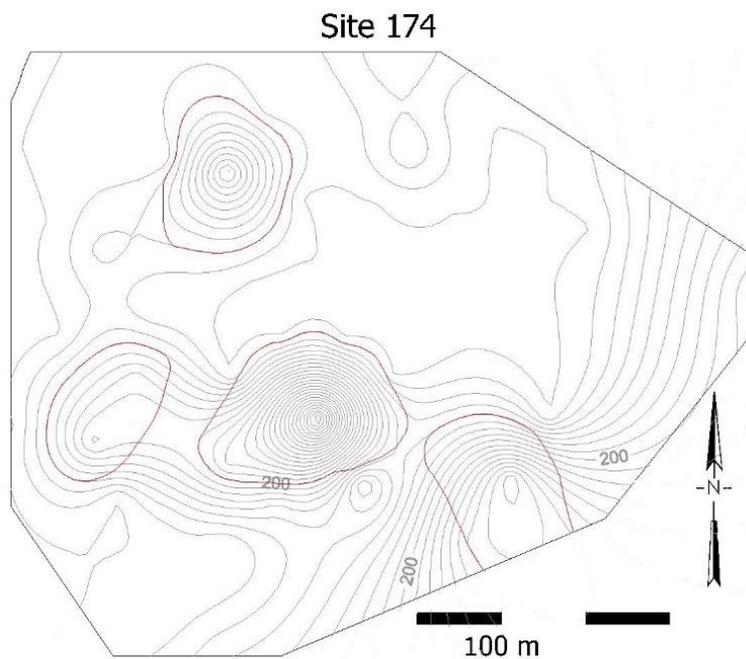


Figure 3.7. Cubitá phase households: Cu1, Cu2, Cu3, and Cu4 outlined in red. Levels at increments of 25.

The trend in the valley during the Conte phase (A.D. 700 – 900), the population settles in large villages near the floodplain (Haller 2008:86). He-4 continues to attract more population as it is the biggest site in the Río Parita River Valley. Therefore, the Conte phase is a continuation of the Cubitá phase as the population rises at He-4 (Haller 2008:82).

There are only five Conte second-order sites and this would have included Site 174 as it maintained its position as a second-order site. At this time, like other second-order sites, it was roughly

2.1ha in size (Haller 2008:82) Site 174 had a continuation of the households T2, T3, Cu2, Cu3, and Cu4 as the Conte phase households were Co2, Co3, and Co4. During the Conte phase, the total number of households reduces to three from the previous four. Cu1 is no longer a household during the Conte phase, which is slightly expected as the Parita river valley experiences “more of a reduction in population density than a settlement re-arrangement” (Haller 2008:85). Thus, the overall river valley decreases demographically and the sites decrease in size due to this. The reduction in households during the Conte phase demonstrate the beginning of decline in population for Site 174. The map of Site 174 below (Figure 3.8.) illustrates the households that are apparent during the Conte phase.

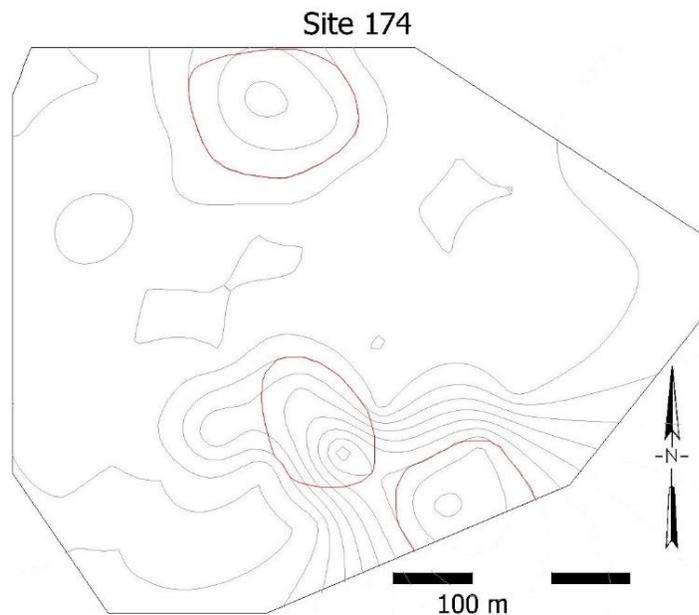


Figure 3.8. Conte phase households: Co2, Co3, and Co4 outlined in red. Levels at increments of 25.

With the loss of Cu1, Site 174 drops from having four households to only three. The pattern at Site 174 follows the same pattern that is occurring within the rest of the valley. The Parita river valley settlement patterns and the households that were created on the contour lines of these maps will provide the basis of analysis for finding the activities which each household conducted. The households were created to see if any differentiation in activities took place between them as households are considered the

basic units of production at small sites. The households at Site 174, therefore, may have performed different activities during different times, performed the same sorts of activities during the existence of its household over hundreds of years, or they may have performed all of the same activities.

3.2. DOMESTIC ACTIVITIES

Domestic activities consist of anything that would be a daily household task. Artifacts such as these represent basic activities of food production and preparation and ordinary household maintenance, such as jars, bowls, grinding stones, and chipped stone from local resources. This section directly addresses my first research question, “Were the households at Site 174 ‘normal’, domestic units?” In small-scale societies, households are the basic units of production. If these households were ‘normal’ domestic units, these households would be largely self-sufficient, producing their own food, goods, and tools. Food production, preparation, and household maintenance should be evident in domestic tasks within the households. Manufacturing would also be a large part of these ‘basic units of production’. Different categories of ceramics indicate domestic activities as opposed to specialized activities. In addition, lithics and stone tools were divided into those used for domestic versus specialized activities.

The ceramics were divided into a group first that designated their aesthetic value and then divided again based on their function. The first group, based on aesthetics included: 1) painted vessels and 2) plain vessels. The second group, based on function divided the ceramics into: 1) cooking vessels and 2) serving vessels. Since the categories, painted, plain, cooking and serving, were not mutually exclusive categories, the plain category of ceramics consisted of anything that was unpainted including cooking and serving and also incised ceramic sherds. Painted ceramics were sherds that had bichrome or polychrome paint on them and were divided into chronological periods based on their iconographic motifs (Cooke and Sanchez 2000). In this way, the ceramics were already labelled what phase they represented and dividing them into painted ceramics and plain was completed quite easily. The cooking category mostly consisted of *ollas* (pots), *tazas* (cups), *platos* (plates), and *tecomates* (liquid storage vessels), however, these could also be pots and cups and plates that were plain or painted. These cooking ceramics all indicate the

domestic activities outline above, such as cooking, cleaning, food preparation, and ordinary household maintenance. The ceramics were calculated into percentages based on painted and unpainted sherds and then again based on cooking or serving sherds.

During the Tonosí phase, the household T1, in comparison to the other households during this time, had the most plain ceramics (60%) and the most cooking ceramics (78%). The highest amount of serving ceramics occurs in household T1 out of all three households. Again, T2 had more plain (67%) over painted ceramics (33%) and had more cooking ceramics (100%) over serving (0%). T3, however, had slightly more painted ceramics (52%) than plain (48%). The overall average for the Tonosí phase, is quite even for painted and plain. Plain ceramics represent 53% of the total ceramics for this phase and painted ceramics were 47%. Ceramics were intensely painted during this time, and it is not uncommon to see many painted ceramics, even if they were used for very utilitarian tasks such as cooking and storage. Although the ceramics were divided into either plain or painted, the painted was distinctly divided even further into Tonosí Trichrome (TTC), Bichrome associated with Tonosí (BAT), Giron Banded Lip (GBL), Espabe, and Rare Vessels. Tonosí Trichrome meant that there were three different colour paints on the vessel and the bichrome meant that there were two different colours on the vessel. Giron Banded Lip is a type of lip on the vessel that is distinct to the Tonosí phase. Table 3.1. below illustrates the Tonosí ceramic data for Site 174.

Household	%TTC	%BAT	%GBL	%Espabe	%Plain	%Rare Vessels	%Cooking	%Serving
T1	4	23	5	8	60	0	78	22
T2	0	0	33	0	67	0	100	0
T3	13	18	13	7	48	1	83	17
Tonosí Phase Total (%)	8	21	10	8	53	0	84	16

Table 3.1. Percentages of categories of ceramics for the Tonosí phase and for the overall site during the Tonosí phase.

The amount of plain (53%) and the amount of painted (47%) are very close, and thus express little differences; there were almost the same amount of painted as there were plain ceramics all together throughout the Tonosí phase. Cooking ceramics (84%) far out-numbered the serving category (16%), indicating more self-sufficient cooking activities, as opposed to serving and providing activities.

During the Cubitá phase, almost every household had more plain ceramics than painted ceramics. Table 3.2. illustrates the ceramic data for the Cubitá phase. The lowest amount of plain ceramics throughout Cu1, Cu2, Cu3, and Cu4 is 75%. Therefore, the average total for the Cubitá phase is 90% plain ceramics. Again, cooking ceramics often outweigh the serving ceramics. Cu4 actually had 100% of its ceramics associated with cooking, rather than serving. The highest amount of serving ceramics occurs in Cu1, which is the same result from Tonosí. Overall, there were 71% of the ceramics associated with cooking and 29% of the ceramics associated with serving during the Cubitá phase. The painted category was divided up into Cubita Polychrome (CPC), Cubita Bichrome (CBC), Espabe, and Rare Vessels. Polychrome means a multitude of colours, and bichrome means two colours.

Households	%CPC	%CBC	%Espabe	%Plain	%Rare Vessels	%Cooking	%Serving
Cu1	5	9	4	82	0	71	29
Cu2	0	6	0	75	0	78	22
Cu3	5	3	1	90	1	78	22
Cu4	0	0	0	100	0	100	0
Cubitá Phase Total	4	4	2	90	1	71	29

Table 3.2. Percentages of categories of ceramics during the Cubitá phase for households and for the overall site during the Cubitá phase.

Cubitá had significantly more plain during this phase as opposed to Tonosí. During the Tonosí phase, there was only 53% plain. During Cubitá, 90% of the ceramics were plain. Only 10% of the ceramics were painted. Thus, the Cubitá phase presents itself as a phase dedicated to utilitarian and quickly made pottery in order to get the most important activity completed within the households: cooking. Cooking ceramics made 71% of them and although there was less cooking ceramics than during

the Tonosí phase (84%), it is still significantly more cooking ceramics than serving, indicating specific domestic cooking preparation and consumption activities.

During the Conte phase, most households have an abundance of plain ceramics. Table 3.3. presents the Conte ceramic data for Site 174. The total amount of Conte phase plain ceramics is 96%. The lowest percentage in any household of plain is 95%. Cu4 has 100% of its ceramics plain, being the household with the most amount of plain sherds. Co4, however, has a large amount of serving vessels (44%) as opposed to cooking vessels (56%). The house with the most cooking ceramics is household Co3 as it had 79% of its ceramics associated with cooking activities. The painted category consists of Conte Polychrome (CPC), Conte Beige (which is specific to the Conte phase), and Rare Vessels. 96% of the ceramics were plain, making it the biggest category of ceramics. The amount of painted ceramics (4%) reduced in size significantly since the Tonosí phase (47%). The amount of cooking ceramics stayed relatively the same from the Cubitá phase as well at 76%.

Household	%CPC	%Conte Beige	%Plain	%Rare Vessels	%Cooking	%Serving
Co1	3	1	95	1	70	30
Co2	0	1	99	0	72	28
Co3	2	3	95	0	79	21
Co4	0	0	100	0	56	44
Conte Phase Total	2	2	96	1	76	24

Table 3.3. Percentages of categories of ceramics during the Conte phase for households and for the overall site during the Conte phase.

In order to see larger patterns at the site level, rather than at the household level, a chart has been made (Table 3.4.) identifying painted, plain, cooking, and serving ceramics for the entire length of the Early Ceramic Group for the entire Site 174. Thus, it combines Tonosí (A.D. 250 – 550), Cubitá (A.D.

550 – 700), and Conte (A.D. 700 – 900) phases and includes ceramics that were even not associated with a household, making the raw counts larger. The patterns remain relatively the same as during the Cubitá and the Conte phases, however, and roughly 89% of the ceramics were plain and 74% of them were associated with cooking.

Site 174 Total	%Painted	%Plain	%Cooking	%Serving
Early Ceramic Group	10.74	89.26	74.19	25.89

Table 3.4. Percentages of categories of ceramics during the Early Ceramic Group: Tonosí, Cubitá, Conte (A.D.250 - 900).

The ceramic analysis indicates that these households were largely using ceramics in order cook and use during daily life activities. In other words, these ceramics were only using ceramics for ‘mundane’ or utilitarian tasks, indicating these households as being domestic. Due to these findings, it is very clear that during the Early Ceramic Group, from Tonosí until Conte (A.D. 250 – 900), the households at Site 174 were largely using utilitarian ceramic wares for the purposes of cooking, storage and eating, rather than serving, feasting, and other specialized activities.

The highly acidic soils in the Parita river valley may have had led to the lack of fauna and shell remains. The fauna and shell remains that are a part of the artifact assemblage, however, do indicate a reliable picture of the subsistence practices that were once used during the Preconquest populations. During the Early Ceramic Grouping, there was only 18 counts of fauna that could be attributed to this period of time and therefore the analysis is somewhat limited. The densest ADI contour lines that presented the location and accumulation of fauna remains during the Early Ceramic Group occurred in the northwest area of the site, which was not near or within a household (Figure 3.5.). The other dense accumulation of fauna during the Early Ceramic Group was at households T3, Cu3, and Co3 (Figure 3.5.). It is possible the accumulation of the fauna remains at this particular household meant that they were hunters, or it might have been designated as a food preparation household.

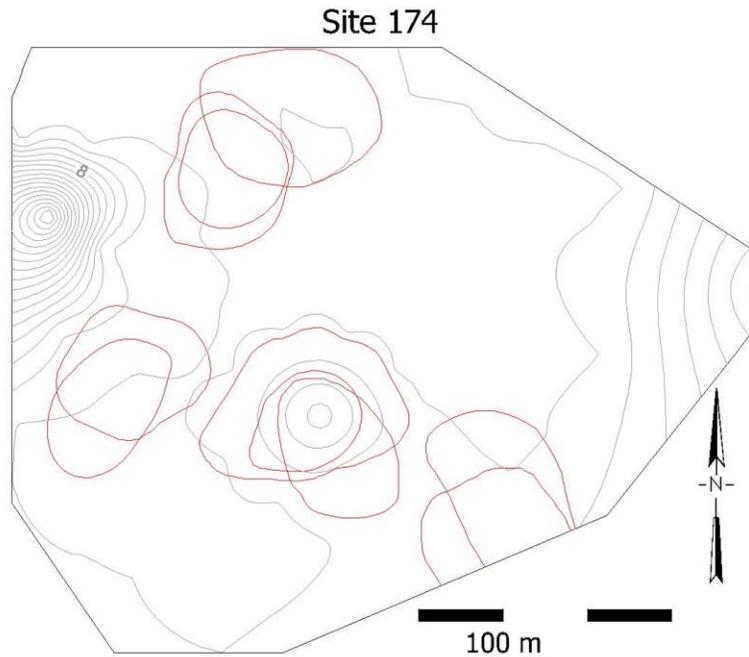


Figure 3.9. Early Ceramic Group fauna and Early Ceramic Group households, which are outlined in red. Levels in increments of 2.

An ADI and contour map analysis was conducted in order to determine if low, medium, or high quality meat was discovered at certain households. The quality of meat, however, was not divided into Early Ceramic Group or Late Ceramic Group because there simply was not enough of it to divide it into those two groups while still illustrating significant results. Although each quality of meat appeared at each household, no significant contours landed within household boundaries. The medium quality of meat would be associated with domestic activities since it can be assumed it would be the type of meat used for daily consumption. This medium quality of meat consisted of elements such as vertebrae, long bone fragments, and axial fragments. High quality fragments were also used for consumption, however, it is possible these would be used for special events, rather than daily or domestic subsistence activities. Low quality meat would be fragments like ear bones, astragalus, and antler. These bones were most likely leftover from the meat that would have been consumed and they were otherwise, unusable fragments. Medium quality meat appeared throughout the site more often and denser than the low quality and the

high quality meat. The dense contours (Figure 3.6.) and the scattered pattern of the contours indicate that medium quality meat was consumed and discarded throughout Site 174, making it a resource which was accessible and used daily.

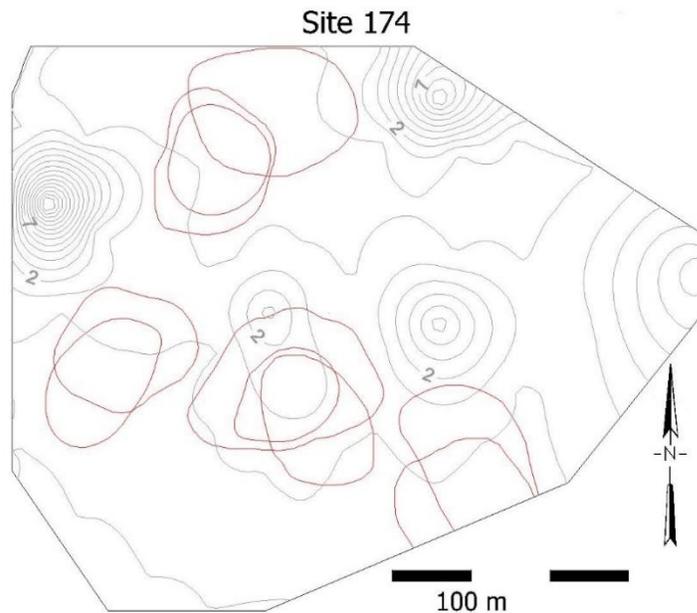


Figure 3.10. Medium quality meat and Early Ceramic Group households outlined in red. Levels at increments of 1.

The fauna remains were also divided into small, medium, or large sized mammals. Large mammals would be white tailed deer, jaguar or sloth. Medium sized mammals would be about the size of a dog. The smaller mammals would be peccary, coati, armadillo, raccoon, rodents, and a variety of species of birds (Jessome 2012:6). As these kinds of mammals are common discoveries in archaeological middens, it is possible these mammals were a means of subsistence for the Preconquest peoples. The highest amount of fauna remains was for the Medium Mammal category. Although white tailed deer are common throughout Panama, it is hypothesized that they were only consumed by higher status peoples (Jessome 2012:6; Menzies 2009:151). Therefore, the abundance of medium sized mammals at Site 174 illustrates the lack of higher status households as there were little fauna remains reflecting large sized mammals, such as white tailed deer.

An analysis conducted at Sitio Conte by Moore (Moore 2015) illustrated that dogs were present during the Late Occupation Sequence and specifically, they were used for hunting or guarding settlements, as there is no substantial evidence to prove they were used for consumption. The teeth and other bone remains associated with dogs at sites like Sitio Conte and El Cano were numerous, and this suggests it is possible Site 174 was also using dogs for guarding, hunting, and companionship. Although caring for dogs took a lot of work and used up a lot of resources, the ADI contour analysis indicates Site 174 may have been able to sustain these types of animals.

Small mammals were also a source of protein and sustenance. These small mammals would include rodent like mammals or fish. It is possible this category of mammals was underrepresented due to the small fragile bones getting more easily broken or eroded more quickly. There were so few small mammals (3 MNE) that there was no ADI contour analysis conducted of these size of mammals.

The word Panama derives from the meaning ‘place of many fish’ from an extinct indigenous language. Not only do the rivers have large quantities of fish but the open ocean was much exploited for subsistence resources. The Parita River, in particular, held hundreds of different species of fresh water and shell fish (Jessome 2012:6). Although the fish may not be represented well in this artifact assemblage, it is important to note the importance of this resource as a means of subsistence for the indigenous peoples of Panama. He-4 had many lower status households consuming fish (Menzies 2009:151) and it was a high source of protein for those living at this site. Therefore, Site 174 probably consumed more fish than is being illustrated in the raw data (only 5%) that has been collected for the site. The graph below (Figure 3.7.) illustrates the different percentages of each size of mammal, including the fish. It demonstrates that medium sized mammal made up most of the fauna assemblage, and the small mammals made up the least. Figure 3.8. presents Site 174, the medium sized mammal contours and the Early Ceramic Group households outlined in red.

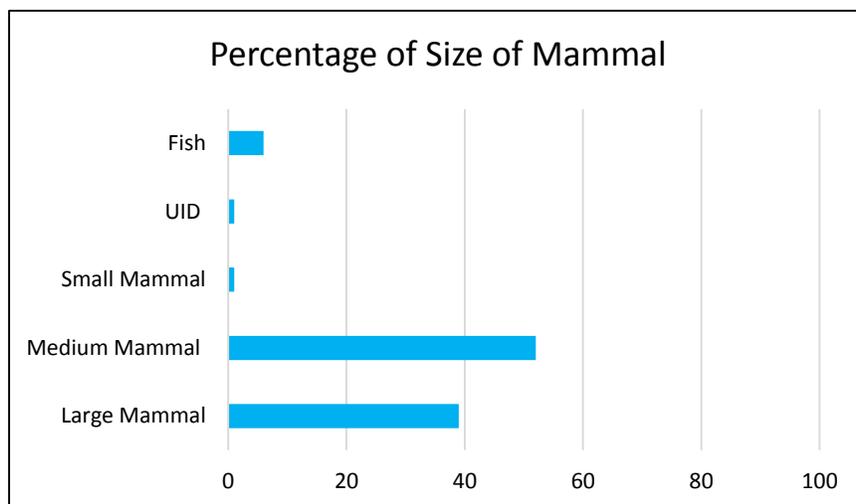


Figure 3.11. Percentages of size of mammal for the Late Occupation Sequence.

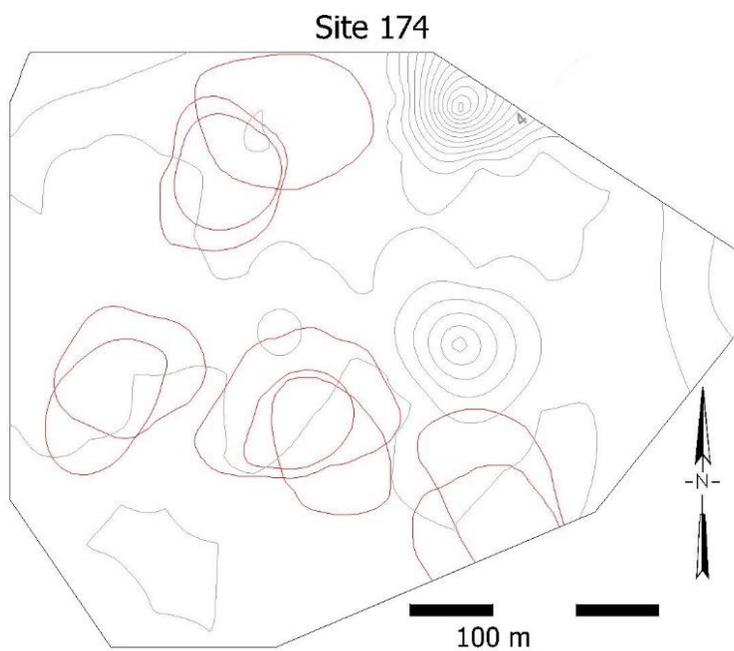


Figure 3.12. Medium sized fauna and Early Ceramic Group households outlined in red. Levels at increments of 1.

The shell that was collected at Site 174 was not abundant. However, analysis such as this graph can quite easily illustrate where the shell was coming from during each Early Ceramic Phase and Late Ceramic Phase. Since there was not a lot of shell fragments found all together (37 in total) there was still

a variety of species of shell that was found at Site 174. The species found were *Anadara (Grandiarca) grandis*, *Pitar (Lamelliconcha) paytensis*, *Ostrea cochapila*, *Prothotaca (Leukoma) asperrima*, and *Anadara similis* (Lyll 2007: 39). The most common species found at Site 174 was the, *Anadara similis*, which was 54.10% of the shell assemblage. The graph in Figure 3.10. illustrates the differences in amounts of shell during the Early Ceramic Group. Although Caylenne was able to illustrate consumption using shell, it is difficult to tell whether these were a source of protein for the people of Site 174. There was certainly more shell belonging to the Late Ceramic Phase.

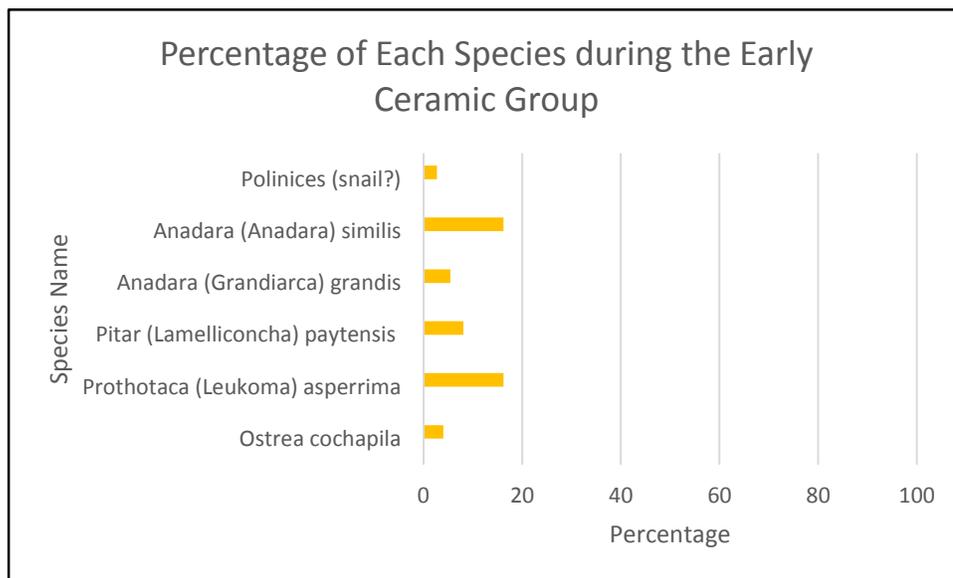


Figure 3.13. Percentages of species at Site 174 during the Early Ceramic Group.

Lyll (2007) analyzed the shell remains from the assemblage that was collected from the survey in which observations about shell subsistence and collection were made. Shellfish were most commonly found in and around mudflats and shallow waters, middens, and rock shelters. Site 174 had species that were native to estuary/mangroves, mudflats, and even open ocean (Lyll 2007:39). The open ocean requires the shellfish collectors to have a boat and much experience. This would indicate the people collecting the fish would be hunting for these fish for a specific purpose and they would need a lot of skill in water travel in order to venture out into the open ocean to obtain these shells.

There is significant information on the use of shells as subsistence and therefore this activity would have been one that took place on a regular basis, especially if some of those native habitats were nearby

(Lyall 2007). Site 174 was close to all of the native habitats of the shell species found including the mudflats, the open ocean, and the estuary mangroves. Site 174 was 9.7km away from the mudflats and from there, only another kilometer to the open ocean. Thus, shell collection, consumption, and manufacture might have been a very common activity for the people that lived there.

The mudflats are easily the most popular location in which the shell was found. Site 174 is about 9.7km away from the mudflats which makes it an easily accessible spot for collecting shellfish as a daily activity. The fact that the mudflats make it easy and convenient for the people of Site 174 to collect shell fish, it is possible that this sort of activity could even be classified as a domestic, subsistence based activity. In addition, it is only 1km extra from the mudflats to the ocean. When the tide goes out in this area, the water gives way to mud rather than sand. In this case, it is possible that the people of Site 174 were using watercraft to collect open ocean shells. Figure 3.9. presents the native habitats of the shellfish collected at Site 174.

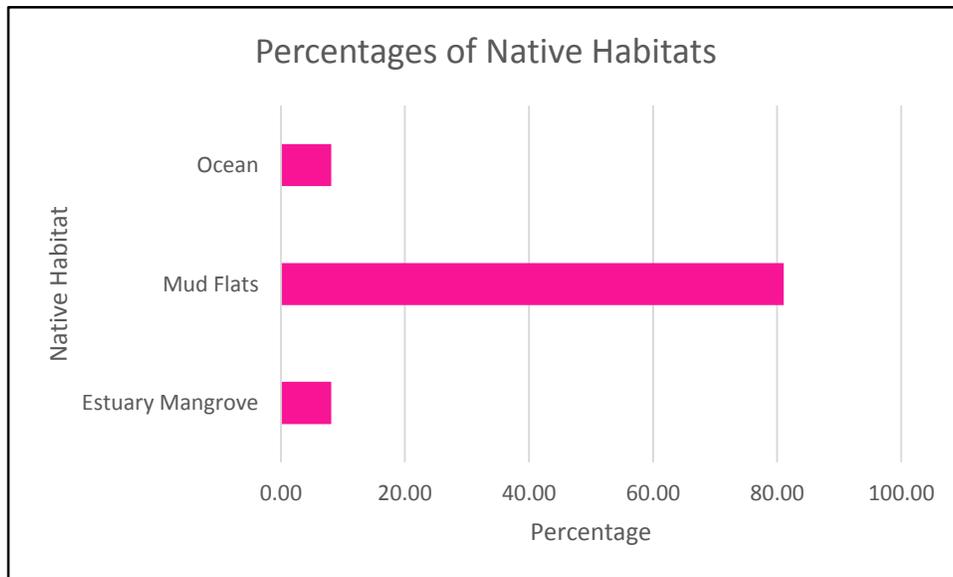


Figure 3.14. Percentages of the natural habitat of the shell species found at Site 174.

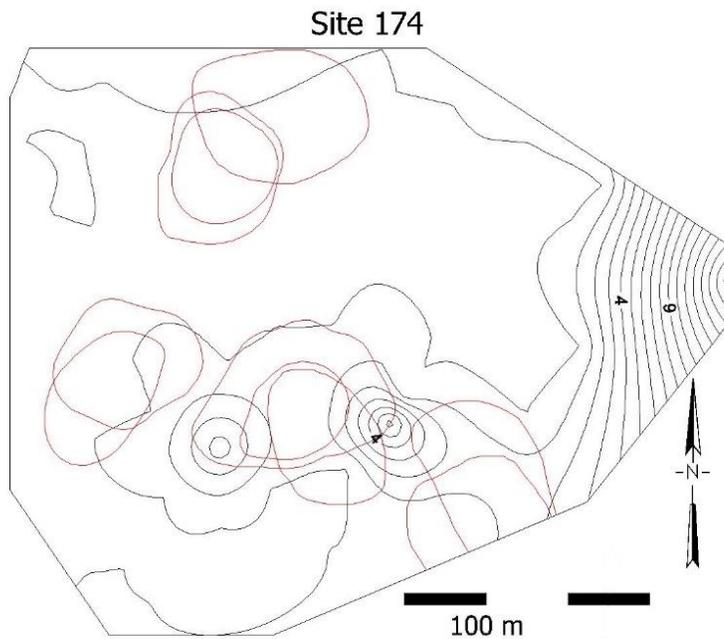


Figure 3.15. Early Ceramic Group shell data and households. Levels at increments of 1.

The fauna and shell assemblage, although small, still indicate that Site 174 was actively participating in activities that allowed it to be self-sufficient. The inhabitants were able to cook their own meals, and collect their own subsistence resources. This indicates that this site was largely domestic, taking part in utilitarian activities rather than specialized ones.

The lithic assemblage illustrated much evidence of domestic activities. One of the first lines of evidence was the numerous amount of lithics at Site 174. In addition, using the ADI contour analysis, the lithics all specifically accumulated in densities within each household boundary. This does not happen with the fauna and shell assemblages, so it illustrates the reliance and use of lithics as a household activity, and an activity that took place very often. The map of Site 174 below (Figure 3.11.) illustrates the lithic contours and how they appear under each household during the Early Ceramic Group.

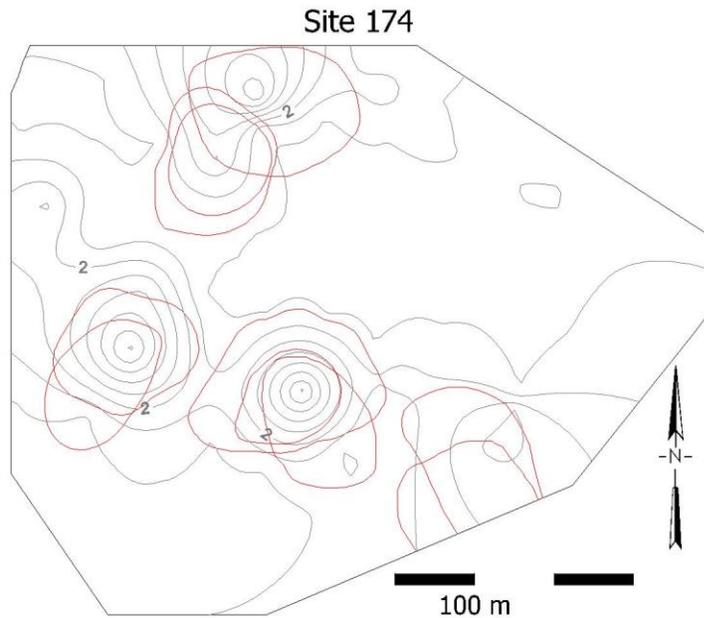


Figure 3.16. Early Ceramic Group lithics and Early Ceramic Group households, outlined in red. Levels at increments of 1.

The raw materials are listed in Table 3.5. and the percentages present the most common raw material, chert. The most common raw material for lithics is chert, which is a “compact cryptocrystalline or microcrystalline variety of quartz originating from a sedimentary context” (Andrefsky 1998:xxii). With 73% of the raw material being chert, it would be assumed the raw material would be relatively close by for ease of access. A 10ha chert outcrop in La Mula-Sarigua, only 5.6km away from Site 174, is the location of this plentiful raw resource. Due to its close proximity to Site 174, it would have been routine for the inhabitants of Site 174 to canoe down the Parita River, hike into La Mula-Sarigua, and obtain all of the chert they needed, as it was free access to anyone and everyone (Haller 2008; Mason 2008). It is feasible the inhabitants of Site 174 would travel only 5.6km to obtain the high quality chert, bring it back to Site 174, and manufacture products from there. The plentiful chert outcrop also indicates that this raw material was exploited and not conserved in the slightest.

Raw Material	Percentage
Chert	73.68
Chalcedony	0.88
Quartzite	4.39
Andesite	7.02
Petrified Wood	2.63
Unknown	3.51
Basalt Andesite	0.88
Granite	4.39
Misc. Sedimentary	2.63

Table 3.5. The percentage of each raw material out of the total amount of lithics at Site 174.

The exploitation of this resource would result in the production of stone tools that would have specific and situational tasks that they were designed for and would be “manufactured, used, and discarded within a relatively short period of time” (Mason 2008:15). Thus, the tools from Site 174 were most likely expedient tools and were less formally created. These expedient tools had an unstandardized form and the amount of time to create them was minimal. These informal tools are reflective of the close, available, and large chert outcrop, which was only 5.6km away. Inhabitants of the valley, including Site 174, most definitely took advantage of this abundant resource and did not bother with trying to save precious quality stone, because they had so much of it.

The lithics assemblage was much more numerous and varied than the fauna and shell assemblage at Site 174. There was 127 lithics found all together and 13 of these could not be used in the analysis because they were identified as surface finds or they were found in wash, which meant there could not be specific dates or locations assigned to these artifacts. For the ADI analysis then, there was 114

identifiable, located, and dated lithics. The lithics included many flakes (mostly not utilized) which made up about 45% of the total assemblage. Indeterminate tool fragments was the next most common tool type, making up about 13% of the total lithics (Table 3.6.). Other Early Ceramic Group dated lithics found include blades, drills, La Mula Points, manos, axes, grinding implements, ornaments, metate, trapezoidal shaped axe, and scrapers. The non-utilized flakes and indeterminate tool fragments, the most commonly found lithics at Site 174, indicate manufacturing. Table 3.6. below illustrates the tool type on the right, with the corresponding percentage of that tool type.

Tool Type	Percentage out of Total Lithics (%)
Utilized Flake	3.51
Utilized and Retouched Flake	4.39
Flake (no utilization)	44.74
Utilized Blade	0.88
Drill	1.75
Exhausted Core	0.88
La Mula Point	1.75
Small wedge	0.88
Burnishing/Polishing Stone	0.88
Mano	1.75
Axe/adze	0.88
Indeterminate Tool Fragment	13.16
Multiple Function Grinding Implement	7.02
Ornament	0.88
Indeterminate Tool	0.88
Unifacially Worked Scraping/Chopping Tool	1.75
Multidirectional Core	2.63
Slab Metate	0.88
Trapezoidal Shaped Axe	0.88
Unused Raw Material	1.75
Scraper	2.63
Microlithic	4.39

Table 3.6. The percentage of each tool type out of the total amount of lithics at Site 174.

Manufacturing debitage was found all over Site 174 and is presented in Figure # with a map of Site 174 and the density contours of evidence of manufacturing lithic tools. Most of the sites in the Parita river valley were making their own tools (Mason 2008) and therefore, the strong density contour lines in the map below follow the pattern with the rest of the valley. Other direct evidence of manufacturing is the fact that two preforms were found in each Op B and Op D. Preforms are described to look like “large flat flake scars [and have a] flat cross section” (Andrefsky 1998:181) and are evidence of the preparing of the shape the user may desire, prior to it being fully shaped (Haller 2008). Preforms are not considered the raw material untouched, but they show that the stone has been reduced to a certain point, possibly so that it was lighter to carry from the chert outcrop in La Mula- Sarigua, and be manufactured back at Site 174. The map in Figure 3.12. shows the manufacturing lithics data and the Early Ceramic Group households outlined in red.

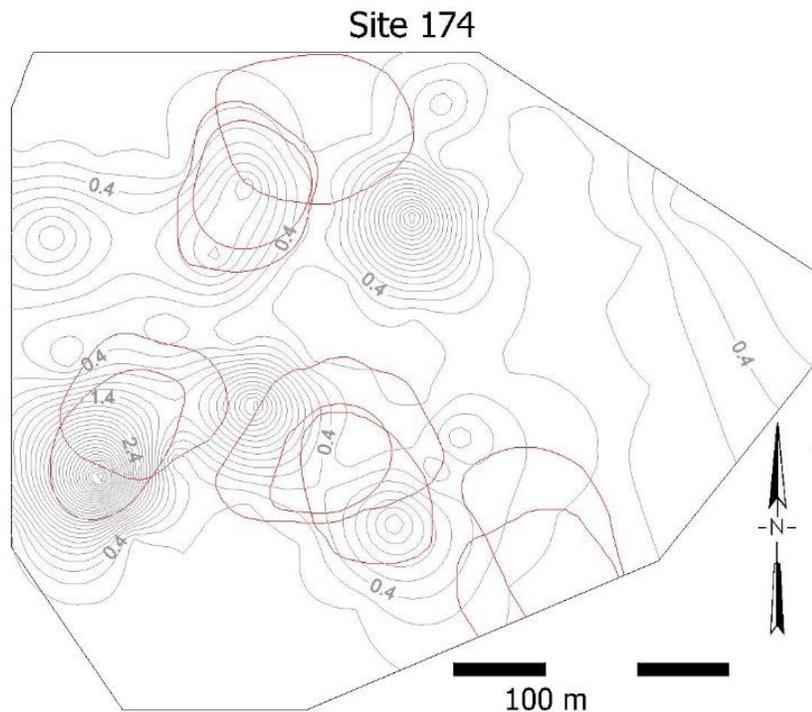


Figure 3.17. Manufacturing lithics data with Early Ceramic Group households, outlined in red. Levels at increments of 0.2.

Since every single household, during the Early Ceramic Group had access to or utilized lithics. It was necessary to further analyze the type of lithics (utilitarian, manufacturing, or specialized) that were being used at Site 174. Out of these lithics, most were utilitarian tools used for domestic purposes. Examples of these tools are: utilized blades, drills, small wedges, polishing stones, manos and metates, and unifacially worked scraping/chopping tool. These tools were often used for domestic tasks or agricultural activities. The utilitarian lithics were further analyzed in an attempt to see if they could illustrate any differentiation across households (Figure 3.13.).

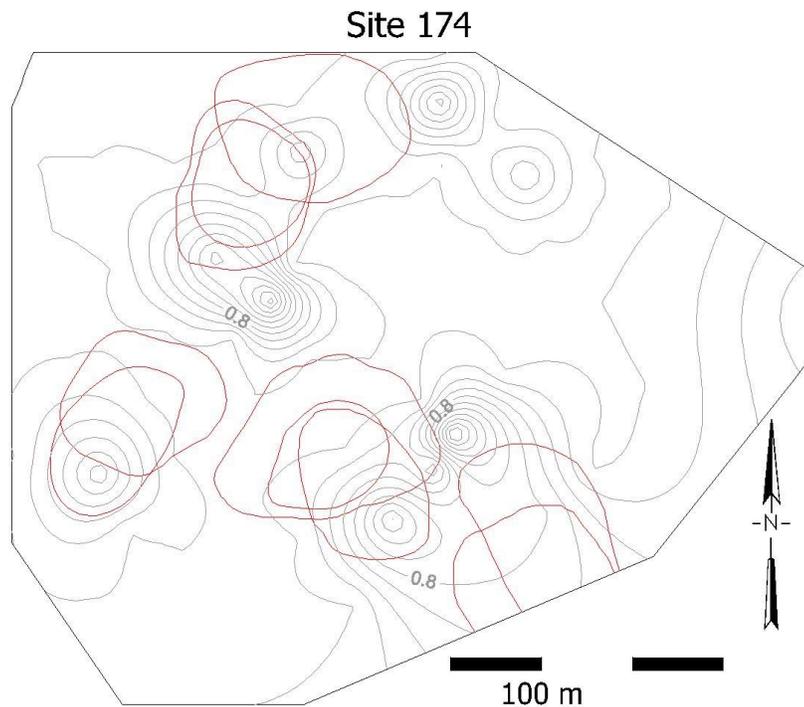


Figure 3.18. Utilitarian lithics data and Early Ceramic Group households, which are outlined in red. Levels at increments of 0.2.

The ADI contour analysis showed that the utilitarian lithics were apparent all over the site, specifically within households. This means Site 174 was manufacturing and using utilized blades, drills, small wedges, polishing stones, manos and metates, and unifacially worked scraping/chopping tool for domestic and daily household tasks more often than any other types of tools.

The analysis conducted for the artifacts which best exemplified domestic activities at Site 174 illustrated that this site was taking part in domestic activities, proving itself to largely consist of 'normal' households. These activities ranged from cooking and storage illustrated by the abundance of plain and cooking ceramic vessels. The fauna remains, although few, corresponded with what others have found for the Parita river valley (Haller 2008; Menzies 2009), which indicates the fauna was utilized for hunting purposes and as subsistence resources. The shell assemblage also presented itself as a means of protein and subsistence for the Site 174 because the native habitats in which to collect the shellfish were fairly close to the site. The lithics, were indicative of domestic activities as well due to the large chert outcrop located in the Parita river valley. Site 174 therefore, took on producing tools as a daily activity, with most of these tools being tools used for agriculture and other mundane utilitarian tasks.

3.3. SPECIALIZED ACTIVITIES

Specialized activities are those which are done by professionals or people that specialize in that type of production. These types of artifacts illustrate their aesthetics and appearance, rather than function. Menzies cites these type of artifacts as "socio-technic goods", as they are related to the social realm, rather than to the functional realm. Artifacts that would appear as a result of specialized activities would be polychrome pottery, worked bone, shell pendants, and polished stone bars. Site 174's participation in specialized activities would be seen in these above mentioned artifact types.

The ceramics at Site 174 during the Early Ceramic Group were mostly plain, however, the Tonosí phase is when the most amount of polychrome pottery is seen. Table 3.7. from illustrates the high amount of painted ceramics (47%) in comparison to the plain (53%). The high amount of painted ceramics only occurs during the Tonosí phase throughout the Early Ceramic Group. Household T3, in particular, has the most amount of painted ceramics, in comparison to the other three households. At 52%, T3's painted ceramics make up half of the ceramic record. T3 is also one of the longest lasting households throughout the Late Occupation Sequence; it begins as T3, and then transforms into Cu3 and Co3. This household, with the large amount of polychrome pottery, may be considered a specialized household.

Household	%TTC	%BAT	%GBL	%Espabe	%Plain	%Rare Vessels	%Cooking	%Serving
T1	4	23	5	8	60	0	78	22
T2	0	0	33	0	67	0	100	0
T3	13	18	13	7	48	1	83	17
Tonosí Phase Total (%)	8	21	10	8	53	0	84	16

Table 3.7. Percentages of categories of ceramics during the Tonosí phase for households and the overall site during the Tonosí phase.

The other type of specialized pottery would be serving ceramics. Table 3.8. includes the ceramic data from the Cubitá phase. The phase which had the most amount of serving ceramics was the Cubitá phase, with 29% of its overall ceramics being used for serving activities. Cu1 in particular had the most amount of serving ceramics, having 29% of its overall ceramics being serving vessels. Serving vessels indicate feasting activities therefore, impressing a large group with fancy ceramics. Overall, the Tonosí phase illustrates the most evidence of specialized use of ceramics, including polychrome painted ceramics and serving vessels.

Households	%CPC	%CBC	%Espabe	%Plain	%Rare Vessels	%Cooking	%Serving
Cu1	5	9	4	82	0	71	29
Cu2	0	6	0	75	0	78	22
Cu3	5	3	1	90	1	78	22
Cu4	0	0	0	100	0	100	0
Cubitá Phase Total	4	4	2	90	1	71	29

Table 3.8. Percentages of categories of ceramics during the Cubitá phase for households and for the overall site during the Cubitá phase.

The fauna remains did not illustrate much evidence of worked bone as would be seen in specialized activities. The hypothesis regarding the some of the medium sized mammals being dogs could represent specialized activities, however, as the teeth of dogs were utilized for funeral regalia and other specialized purposes. In addition, the creation of all the dog bone materials evidenced the experience of a specialized craftsperson (Moore 2015). In addition, having dogs for hunting and guarding settlements illustrates more of a specialized site overall, only a very sustainable and stable settlement could afford to care for dogs.

One of the fauna remains did indicate that it was worked – this element was an antler, and associated with the Early Ceramic Group. It was burnt and it was probably a tool for making other tools. Andrefsky (2005:12) explains how hammers were often made of bone and antler and pressure flaking any stone tools is usually done using the tip of an antler or sharpened bone (Mason 2008:10). Thus, the worked antler was a specialized tool to manufacture other tools within Site 174. This antler was found within the households T3, Cu3, and Co3, indicating that these households held some sort of specialized status as they had more than average painted and serving ceramics and also had this worked antler.

Although the open ocean only applied to a small percentage of the shell species found (8%), the open ocean requires the shellfish collectors to have a boat and much experience (Lyll 2007:39). This would indicate the people collecting the fish would not only be doing this often, but much skill would be involved in water travel in order to venture out into the open ocean to obtain these shells. Many of the

sites that Lyall (2007) analyzed showed shellfish remains from the survey zone which were worked, indicating they were used for more than just subsistence. Pendants and beads were some of the results of craft production (Lyall 2007:57).

During the Parita valley survey, Haller (2008) and colleagues discovered a spondylus shell pendant shaped into a frog (Figure 3.14.). This pendant was discovered in one of the systematic collection units, Operation C. This pendant had a perforation through the neck and was used as jewelry. Whether this pendant was manufactured at Site 174 or brought to Site 174 from another site, it clearly illustrates the craft specialization and a specialized activity that was taking place in this region.



Figure 3.19. Spondylus shell pendant shaped into a frog (Haller 2008:156).

The ADI contour analysis resulted in a lack of associated households for the shell artifacts of the Early Ceramic Group. With the evidence of the frog pendant, however, it is possible that specialized activities, including creating jewelry out of certain species of shell, was present. Although the shell pendant was found during the survey at Site 174, it is highly doubtful it was crafted there. Rather, the shells appearance at the site indicates Site 174's involvement and desire for highly specialized items and for the trade in these luxurious items.

The lithics assemblage, although strongly illustrating the utilitarian and manufacturing purposes, also had some tools which would be considered specialized and even results of craft production. Out of the indeterminate tool fragment category (13.16% of total lithic assemblage), a single bifacial thinning flake was found in Op A and was associated with the Early Ceramic Group. These were used to make other materials thin, as evidenced by the name. Often, bifacial thinning flakes were used to cut stone spears in half (Haller 2008). It is described to be a flake that is removed during biface trimming and often contains a striking platform that is rounded or ground, indicating preparation. It is usually thin relative to width, with a feathered termination. This indicates that bifacial thinning flakes were associated with specialized activities and also represent manufacturing as they were used to create other tools (Andrefsky 1998:172).

There were four scrapers found at Site 174. These types of tools are indicative of specialized activities as they were most likely used for woodworking (Hansell 1988; Mason 2008:46). In addition, it is generally agreed upon that scrapers would not be agricultural tools and therefore, would have some other sort of specialized function (Mason 2008:46). Out of the four scrapers that were found, one was found in the wash, two were found in Op A, and one was found in Op B. The scrapers found in the Operations did not have their angles specified. Only one, which was associated with STP 51 had a scraper angle of 50 degrees which meant it was not used for intricate detailed work, but heavier duty specialized activities due to its more obtuse scraper plane angle. Although these were ideal for strenuous activities, they were not used for agriculture most of the time (Mason 2008). This indicates that other activities were being performed at Site 174, rather than just agriculture related activities, as would be expected of smaller sites. Regardless, scrapers are indicative of manufacturing and specialized work, as opposed to agricultural work. Scrapers have the logical function of woodworking and it is possible the inhabitants of Site 174 were using scrapers for woodworking like constructing canoes which were used as a form of transportation for the Parita river or even for the open ocean when collecting other shellfish (Haller 2008:151).

Finally, two axes were found at Site 174. Unfortunately, one was found in the wash and the inability of dating it and knowing where it came from made it excluded from the analysis. The other axe, however, was dated to the Early Ceramic Group and was associated with the households T1 and Cu1. It is hypothesized that the stone for axes was imported as preforms into the region because of the little evidence of axe production at any of the sites within the Central Region (Cooke 1977; Cooke, et al. 2003a:115; Hansell 1988:207). The Cordillera Central is predicted to be the main quarry for production of these axes and their high degree of standardization indicates direct trade between two different groups (Cooke, et al. 2003a:115; Haller 2008). Earle (1987) even makes mention of this hypothesis of the “importation of stone and its manufacture into working axes needed for land clearance” (Earle 1987: 295). Specifically, the polished stone axes were indicative of a specialized activity due to the extensive amount of skills and labour needed to create this tool. The appearance of just a single polished axe within T1 and Cu1 indicates specialized activities within this household as these axes were used for clearing forests for cultivation and for woodworking. Haller (2008:149) provides an example of the woodworking: the construction of canoes used in trading and transporting warriors.

3.4. SUMMARY OF EARLY CERAMIC GROUP

The Early Ceramic Group is characterized by a high population and it was vital for finding patterns within the artifact assemblage. During the Early Ceramic Group, the settlement at Site 174 begins during the Tonosí and flourishes during Cubitá. Most households participated in domestic, daily activities, and thus, were largely self-sufficient due to the plain ceramics, the abundance of cooking vessels, the subsistence value for fauna and shellfish, and the expedient nature of the lithic artifacts which were produced, used, and discarded on a daily basis within each household. This time period illustrates Site 174 at its peak, with the highest population, but also with the most abundant amount of artifacts. Although there is some evidence of specialized activities at Site 174, and possibly at T1, Cu1, T3, Cu3, and Co3, it is also evident that this settlement was autonomous, was able to produce everything it needed itself, and did not rely on any outside communities for necessary resources.

4.0. LATE CERAMIC GROUP (MACARACAS, PARITA, EL HATILLO)

During this phase, the Parita river valley experiences another period of socioeconomic growth and change. The Macaracas phase is when high-status graves appear in the Parita river valley at the chiefly center, He-4 (Haller 2008:182). The population increases during the Parita phase, however, the settlement pattern remains the same as in the Macaracas phase. The El Hatillo phase marks the period of time when the population begins to significantly reduce, although the settlement pattern continues.

Using the chronology from Cooke and Sanchez (2000) and Haller (2008), this research focuses on The Late Occupation Sequence. This sequence consists of the phases La Mula (200 B.C. – A.D. 250), Tonosí (A.D. 250 – A.D. 550), Cubitá (A.D. 550 – 700), Conte (A.D. 700 – 900), Macaracas (A.D. 900 – 1100), Parita (A.D. 1100 – 1300), and El Hatillo (A.D. 1300 – 1522) (Figure 2) (Haller 2008:33). The Late Ceramic Group consists of the phases Macaracas (A.D. 900 – 1100), Parita (A.D. 1100 – 1300), and El Hatillo (A.D. 1300 – 1522). These are the last three phases of the Late Occupation Sequence and are reflective of the Site 174 after its population explosion during the Cubitá phase. The amount of ceramic remains is considerably lower than the Early Ceramic Group as the number of households drops to only one throughout the entire Late Ceramic Group. The Late Ceramic Group for this study, is 622 years long and ends in 1522, which corresponds with the founding of a Spanish Colonial town of Natá (Haller 2008:32).

During the Late Ceramic Group, the low population density at Site 174, provides much less raw numbers of ceramics, lithics, fauna, and shell. Although households are no longer present after the Macaracas phase, ADI totals of artifacts still can be made in order to examine patterns at Site 174. Much of the same activities occur from the Early Ceramic Group into the Late Ceramic Group, just on a lower scale.

4.1. POPULATION

In the rest of the valley, He-4 maintains its position at the top of the site hierarchy as a first-order site. During this phase, there is population nucleation in the river valley towards He-4, however, the population decreases at He-4 during this time. Therefore, while still demographically pulling sites into this chiefly center, He-4, it is done on a much smaller scale in the Late Ceramic Group than it did during the Early Ceramic Group. The general trend of the Parita river valley settlement is that many of the second-order and third-order sites increase in size and He-4 reduces in size, while still maintaining first-order site status.

After its significant drop after the Cubitá phase, Site 174 becomes a third-order site. Within the Parita river valley, there are 60 third-order sites during the Macaracas phase. As Site 174 was a second-order site during the Conte phase, it is one of the three that reduce in population to become a third-order site (Haller 2008:91). Although He-4 decreases in its population, the area around it continues to be quite dense. It is possible that this nucleation towards He-4 is a type of ritualistic integration as He-4 becomes a necropolis for high-status individuals in the Central Region of Panama (Haller 2008:97). Since the population decrease at Site 174 occurred from the end of the Cubitá phase until the Macaracas phase, Site 174's inhabitants could have moved during this time. He-4's close location to Site 174, only 2.2km away also exemplifies the ease of relocation.

A 3D Surface Surfer© map (Figure 4.1.) illustrates Site 174 during the Macaracas phase. After this phase, the population becomes extremely low and the peak that is shown in the map at the northwest of the site completely disappears.

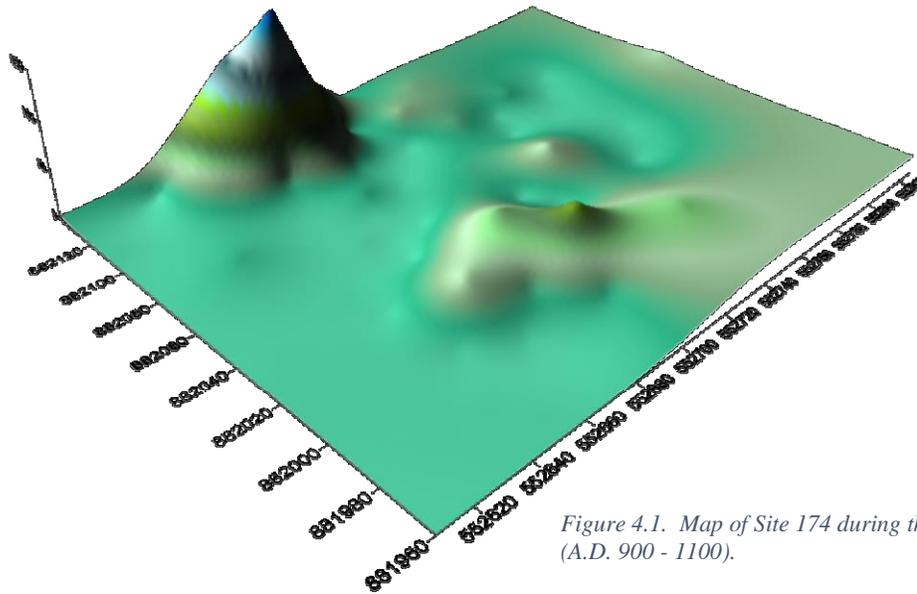


Figure 4.1. Map of Site 174 during the Macaracas Phase (A.D. 900 - 1100).

During the Parita phase in the Parita river valley, the population in the survey zone increases and is the second highest population density that occurs during the Late Occupation Sequence. The first highest is during the Cubitá phase (Haller 2008:97). The population increases at He-4 during the Parita phase and reaches its highest population density. There are 89 third-order sites during the Parita phase and Site 174 is one of them. It is one of 18 third-order Macaracas sites that continue to be occupied throughout the Parita phase. He-4 maintains its domination of the site size hierarchy and the settlement pattern does not change drastically from the Macaracas phase, other than the increase in population at He-4. During the El Hatillo phase, the overall population in the Parita river valley decreases. The settlement pattern does not change from the Parita phase and Site 174 is one of the 64 third-ordered sites which all remain in the same locations. He-4's population decreases by almost half but still remains at the top of the settlement hierarchy (Haller 2008:105).

At Site 174, the population during the Early Ceramic Group experiences a dramatic drop. Immediately after the Cubitá phase the population begins to decline (Figure 3.5.), however, Site 174 still

maintains occupation, although quite small, until the Macaracas phase. After the Macaracas phase, there is no appreciable ceramic artifacts for the Late Ceramic Group. Due to this, there is only one apparent household during the Macaracas phase for the entire Late Ceramic Group. The extreme decrease in ceramic sherds and other artifacts and remains from Site 174 indicated this decrease in population. This shift in population possibly implies the authority, power, and domination that the chiefly center, He-4 had on Site 174.

Similar to Jessome's (2012) hypothesis, if Site 174 underwent population decline during the Cubitá phase, which is the phase associated with the emergence of social complexity in the region, then it could be argued that He-4, the chiefly center, may have exerted some dominance and "pull" over smaller sites such as Site 174. Since the emergence of socio-political complexity began during the Cubitá phase (Haller 2008), the rise in population at Site 174 is an illustrative example of socio-political independence. If there was a decline during the Cubitá phase, then there would seemingly be some influence from He-4 and its "pull" on smaller sites in the valley (Jessome 2012:21). The demographic patterns that have been discovered for Site 174, however, indicate that during the Cubitá phase, the developing chiefly center of He-4 exerted significant influence over the surrounding area, including the smaller sites such as 174. Site 174 is only 2.2km away from He-4 and thus, moving to He-4 would have been a relatively easy and fast transition. He-4 must have gained a widely accepted reputation by this time and it is possible the inhabitants of Site 174 wished to be a part of the ritualistic community at He-4 rather than being secluded from the activities that may have taken place there.

During the Macaracas phase, when we see a greater integration of settlements in the region, the population at Site 174 does significantly decrease as there are no households after the Macaracas phase with little to no indications of serious occupation at Site 174. This site transformed from a second-order site to a third-order site after the Conte phase and remained a third-order site until the end of the Late Occupation Sequence (A.D. 1522) (Haller 2008:65).

4.1.1. HOUSEHOLDS

He-4 continues to dominate the site size hierarchy during the Macaracas phase. As it remains quite large, however, the previous second-order sites from the Conte phase diminish in size and reduce to third order sites by the Macaracas. The Macaracas phase is illustrative of the emergence of social ranking in the Parita river valley based on site size, settlement hierarchies, site functions, site location in relation to resource areas, and burial data (Haller 2008; Lothrop 1936, 1942). The chiefly center by this time, He-4, exemplifies many characteristics as being a location in which hereditary inequality exists at this time, including it being a high-status necropolis. Thus, the decline in population at second-order sites may be attributed to this as He-4 begins to pull smaller, more peripheral sites into its sphere of influence (Jessome 2012:21).

The limited data there is on the Macaracas Phase (A.D. 900- 1100) at Site 174 is due to the lack of households after the Conte phase. Only one household, M2, was identified, which was a continuation of T2, Cu2, and Co2 from the previous Early Ceramic Group, and therefore, this group of households is the longest lasting throughout the Late Occupation Sequence. It is clear by this time that Site 174 has reduced to a third-order site, as opposed to its previous standing as a second-order site, as M2 is the only household that existed for the Late Ceramic Group. From the contour maps, one can easily see the significant reduction in population. This reduction began after the Cubitá phase, continued in the Conte phase and thus, the Macaracas phase was left with only one household. The map below illustrates Site 174 during the Macaracas phase with only one household in the north area of the site (Figure 4.2.).

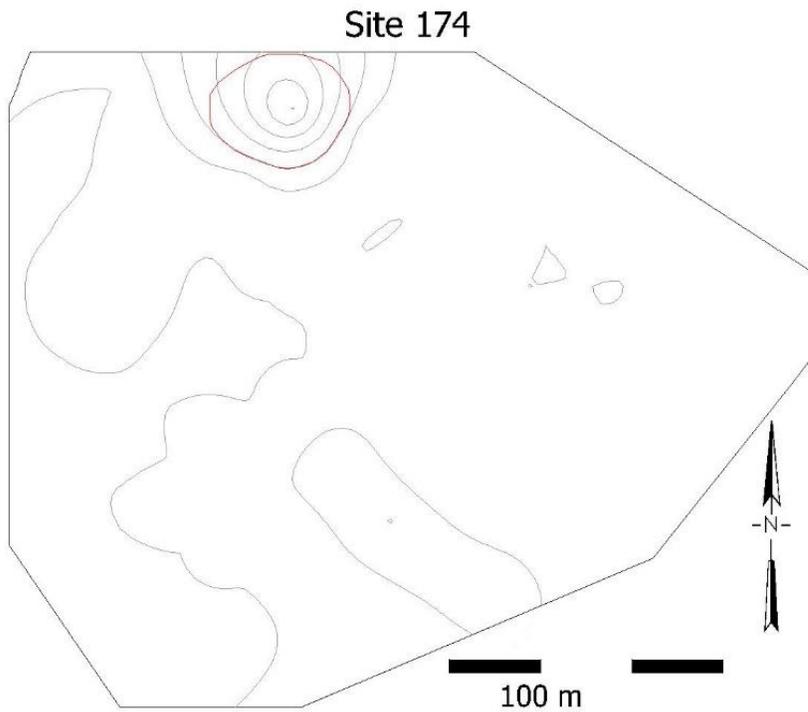


Figure 4.2. Macaracas Household (M2), outlined in red. Levels at increments of 25.

The lack of ADI density contours for households is also attributed to the lack of ceramics attributed to the Late Ceramic Group phases. It is possible that later phase pottery, which would be at the top of the soil, has been destroyed by modern agriculture (Haller 2008:105), and thus, the population would not be as strongly reflected during this time.

M2 has the longest sequence of occupation, as it lasted through Tonosí, Cubitá, Conte, and Macaracas. In comparison, most households only lasted through three phases. It is possible that since this household lasted the longest, it might have been considered the founding household, and therefore, may have had access to more resources than the other households. By evaluating some of the specialized artifacts, it is possible to determine if they were located in household M2, which would confirm this hypothesis.

4.2. DOMESTIC ACTIVITIES

The domestic activities illustrated in the Late Ceramic Group, would illustrate daily household tasks, any sort of artifact representing food production and preparation and ordinary household maintenance. This section directly addresses my first research question, “Were the households at Site 174 ‘normal’, domestic units?” There is only one household during the Late Ceramic Group, M2, and therefore, larger patterns will be extracted from the Late Ceramic Group as the emphasis will be placed on the individual phase, Macaracas, Parita, or El Hatillo, and for the entire Site 174, as opposed to only looking at an individual household. In addition, larger patterns are analyzed to compare the Early Ceramic Group to the Late Ceramic Group. In order to determine domestic activities, analyzing the entirety of Site 174 would result in having activities such as production, preparation, and maintenance, making it a self-sufficient community.

The ceramic assemblage at Site 174 during the Late Ceramic Phase indicated much more utilitarian tasks and daily activities. The single household, which appears during the Macaracas phase (A.D. 900 – 1100), is M2 and has mostly plain ceramics (98%), which follows the same trend that occurred during the Early Phase Grouping. M2 also had an abundance of cooking ceramics (71%), although this is not as an extreme disparity as the painted versus plain categories. The Macaracas phase overall, maintained the same pattern that was seen during the Early Phase Grouping with 94% of the ceramics being plain and 64% of the ceramics associated with cooking. The table below (Table 4.1.) illustrates the household M2 and its percentages of each category of ceramic. The difference between the Early Ceramic Group and the Macaracas phase are seen in the ratios of cooking and serving ceramics. Looking at the Macaracas Total for the entirety of Site 174, the serving ceramics make up a large portion (36%) as opposed to the Early Ceramic Group phases such as Tonosí (16%; Table 3.1.), Cubitá (29%; Table 3.2.), and Conte (24%; Table 3.3.).

Household	%MPC	%Plain	%Cooking	%Serving
M2	2	98	71	29
Macaracas Total	6	94	64	36

Table 4.1. Table illustrating the percentages of each category of ceramic for Macaracas phase, including the household M2.

There were no households during the Parita phase so the analysis was done solely on the phase itself for the entire boundary of Site 174, without dividing the ceramics into any locations. Again, the plain ceramics make up 85% and the painted ceramics make up 15% of ceramics. Cooking sherds represent 80% of the ceramics and serving sherds only 20%. The table below (Table 4.2.) presents the percentages for all of Site 174, and the percentages of each category of ceramic sherd. The Parita phase reflects more of the same patterns from the Early Ceramic group phases, Cubitá and Conte, exemplifying Site 174 as participating in much more domestic activities like cooking. In addition, there is more emphasis on ceramics that are needed to perform utilitarian tasks as they are unpainted.

Phase Total	%PPC	%Plain	%Rare Vessels	%Cooking	%Serving
Parita Phase Total	15	85	0	80	20

Table 4.2. Table illustrating the percentages of each category during the Parita phase.

There were no households during the El Hatillo phase and the analysis was done on the total artifacts itself of Site 174. The plain ceramics make up a staggering 97% of the ceramic assemblage during this phase and cooking makes up 89% of the ceramic assemblage. These categories both illustrate El Hatillo's use of ceramics and what kinds of activities are placed as most important during this phase, cooking and utilitarian tasks.

Phase Total	%HPC	%Plain	%Cooking	%Serving
El Hatillo Phase Total	3	97	89	11

Table 4.3. Table illustrating the percentages of each ceramic category during the El Hatillo phase.

Overall, the Late Ceramic Group follows the same general pattern that occurred during the Early Ceramic Grouping: more plain than painted ceramics and more cooking than serving ceramics. The only change is the slight reduction in the amount of painted ceramics (8% during the Late Ceramic Group and 11% in the Early Ceramic Group) and slightly more plain ceramics (92% during the Late Ceramic Group and 89% during the Early Ceramic Group). The last table for ceramic analysis, Table 4.4. included all of Site 174 and all of the phases to find a larger pattern that may exist between Early Ceramic Group and Late Ceramic Group.

Late Ceramic Group	%Painted	%Plain	%Cooking	%Serving
Late Ceramic Group	7.85	92.15	73.99	26.01

Table 4.4.3 Table illustrating the percentages of each ceramic category during the Late Ceramic Group.

The ceramics throughout the Late Ceramic Grouping exemplify the degree of daily tasks performed within the household, M2 and the site as a whole. Since plain ceramics were more abundant, painting was not seen as necessary when making simple “kitchen” utensils such as pots and plates. The painting on the ceramics was not needed when most of the activities performed in this site were independent food preparation and cooking. If more painted ceramics were apparent, it would indicate the likelihood of ‘showing off’ wealth or the ability to produce crafts. In addition, it is more directly evident that the ceramics indicate “normal” domestic activities because more of the ceramics are associated with cooking rather than serving. Thus, less effort and detail was put into these ceramics from the Late Ceramic Group because they were used for day to day tasks and not for impressing others. Most of the ceramics found were sherds associated with cooking, rather than serving, indicating the domestic activity

of preparing meals. 74% of the ceramics (Table 4.4.) were used for cooking purposes as opposed to serving, providing evidence for the importance of cooking and subsistence like activities.

Lithics also indicate daily domestic tasks due to their formation as tools. The abundance of lithics located near the household, M2, indicates the common occurrence of having stone tools or making stone tools. Based on the table discussed in chapter 3 (the majority of the lithics are made from chert (73.68%) and the type of was “flake (no utilization)”). This indicates the presence of manufacturing at the site, and again, this is not surprising with the 10ha chert outcrop only 5.6km away from Site 174. The resource was available and exploited by the people who lived close enough, like the inhabitants of M2 who clearly utilized the resource, even once the population declined after the Cubitá phase. The manufacturing the utilitarian lithics ADI contours are shown below (Figure 4.4. and 4.5.). In addition, the lithics ADI contours for the entire Late Ceramic Group are shown in the map below (Figure 4.3.). This map indicates that most of the lithics are found within or near the household M2.

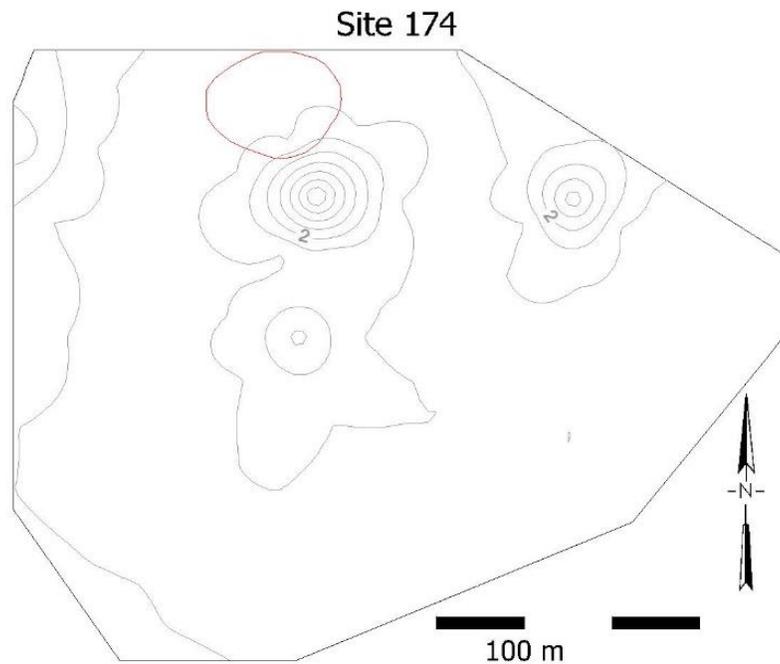


Figure 4.3. Late Ceramic Group lithics data and household M2, outlined in red. Levels at increments of 1.

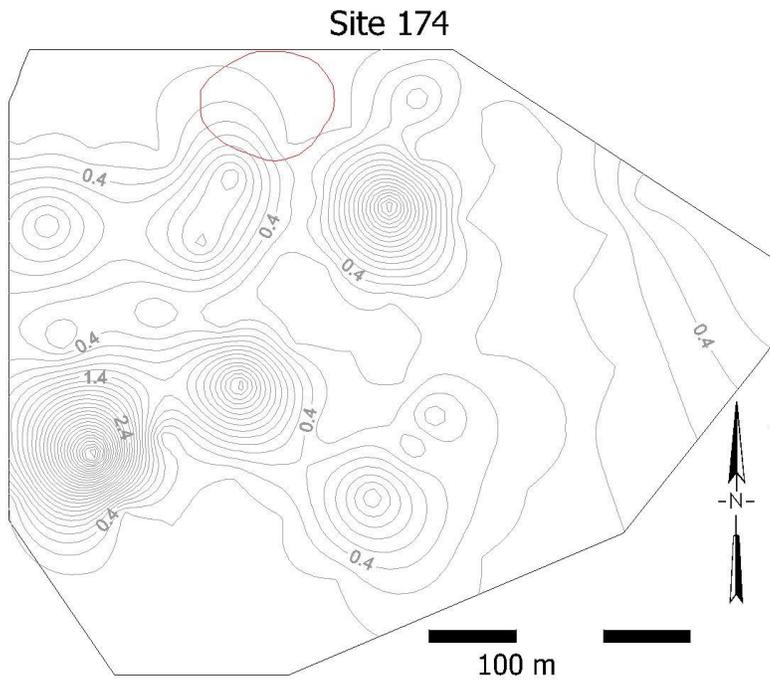


Figure 4.4. Manufacturing lithics data and household M2 outlined in red. Levels at increments of 0.2.

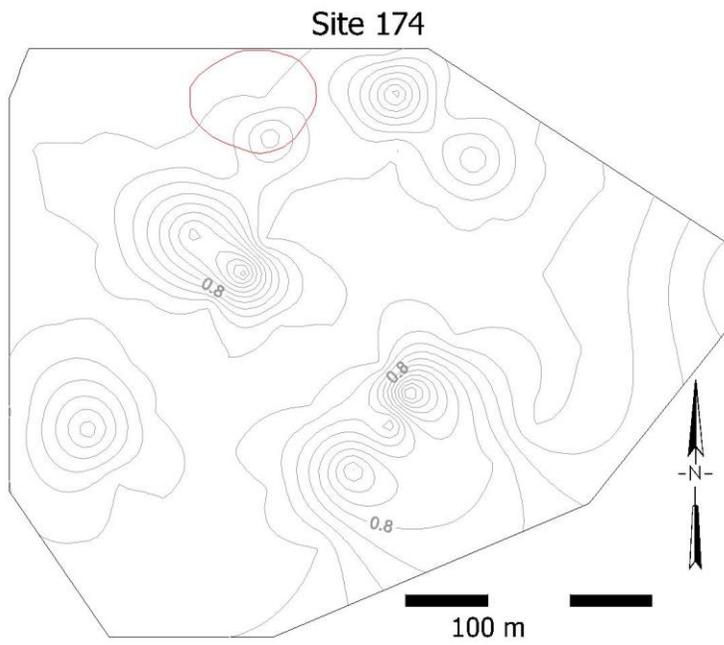


Figure 4.5. Utilitarian lithics data and household M2 outlined in red. Levels at increments of 0.2.

The individual lithics found during the Late Ceramic Group, most of them were the most common tool type, “flake (no utilization)”, in addition to utilized flakes and blades, and unused raw material, evidencing manufacturing during this time period. In addition, a slab metate was found indicating agricultural activities, which would be considered a common domestic task for subsistence. Otherwise, there were not very many lithics remains from the Late Ceramic Group.

The fauna ADI contour map illustrated not many remains within M2 over the Late Ceramic Period. Instead, the contours become dense in the northeast corner of the site and again, just south of that (Figure 4.4). As was with the Early Ceramic Group, it is quite possible and likely the inhabitants of Site 174 would not leave rotting animal bones within the confines of their households and instead would have a sort of ‘butcher site’ where the majority of these bones would go. It is interesting how the density of fauna in the Early Ceramic Group was located in the central west of the site and then in the Late Ceramic Group it moved to the complete opposite direction, to the east. This may have simply due to the location of the households over the course of time.

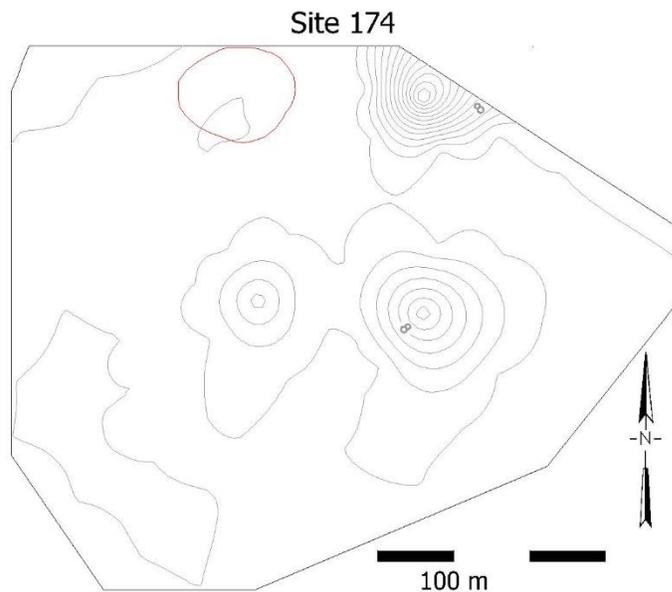


Figure 4.6. Late Ceramic Group fauna data and household M2 outlined in red. Levels at increments of 2.

The most abundant quality of meat at Site 174 was the medium quality. This is discussed in chapter 3 in regards to the Early Ceramic Group households. The household M2, does not land on any of the density contours (Figure 4.5.), however, the location of medium quality meat follows the same idea of having a particular ‘butcher site’ where all the animal remains would go. The medium quality meat would indicate animals which were used for consumption and were most likely hunted by the inhabitants of Site 174. The most abundant sized mammal, the medium sized, also presents the same patterns which are shown with the Late Ceramic Group fauna.

The medium sized mammals would offer quality meat and would be much easier to hunt than larger mammals, while the medium mammal would still provide plenty of protein. The majority of the fauna remains associated with the Late Ceramic Group were elements which provide much meat – and therefore medium quality meat. Only one element was not considered medium, instead, it was considered high quality as a pelvis fragment. The many long bone fragments (LBF) and axial fragments indicate that during this time, the use of fauna was primarily for the need of protein and subsistence.

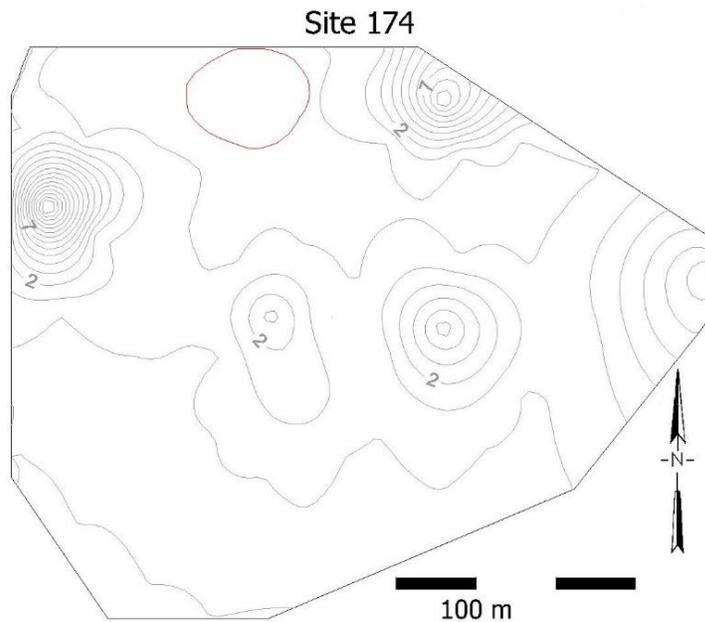


Figure 4.7. Medium quality meat fauna data and household M2. Levels at increments of 1.

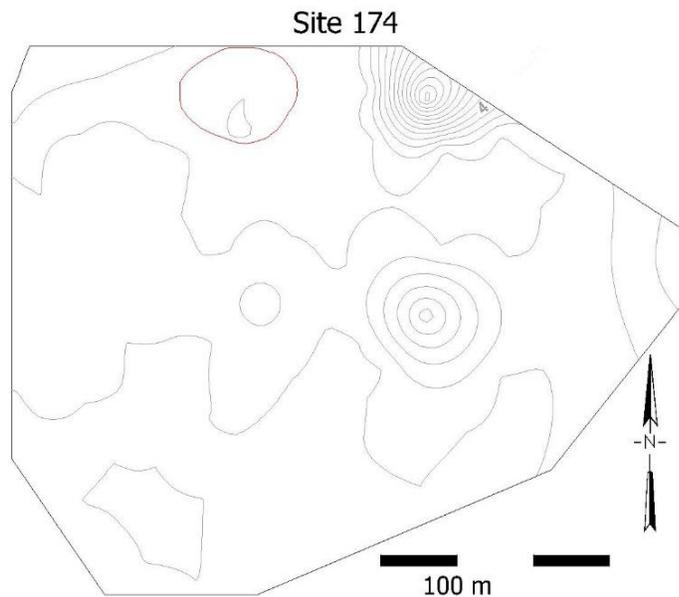


Figure 4.8. ADI contour map of medium sized fauna and household, M2, outlined in red. Levels at increments of 1.

One of the lithics from the Late Ceramic Group which indicate agricultural activities is a slab metate. Found in Operation B and is made from granite. Since it is only a piece of a shaped metate, it could have been a table or legged version of a metate. It was after the beginning of settlement nucleation during the La Mula phase when metates first begin to be used. The most common type of metate in the Parita river valley is the slab metate and they suggest the “primary, and redundant, function” activity of agriculture, which was performed at every single site in the Parita river valley (Haller 2008:144). The one found in Operation B has a comment included in the data sheet that says “shaped metate; possibly legged or table”. A legged metate would be a grinding platform which had legs to support it upright. The legged metates from the survey zone are very standardized and their raw material seems to come from outside the survey zone since there is a lack of manufacturing remains found. If this metate is legged, the hypothesis for these type of metates in the region is that it was manufactured outside of the survey zone as this type of ground stone, the granite, was not locally available (Haller 2008:136). Therefore, it is hypothesized that legged metates were used by specialists or even for fertility rituals (Haller 2008:145), rather than simple agricultural activities for everyday life.

The shell from Site 174 was created into an ADI contour map for the Later Ceramic Period, and it too, follows the same pattern as the fauna contours. Most of the shell remains were found in the northeast of the site, specifically creating a contour in almost the same location as the fauna, this is shown in Figure 4.7. It is possible this is where the subsistence garbage refuse pile was as the remains from all the food consumption activities were found there. It is logical for the refuse pile to be located away from the household as it would have smelt rotten and attracted other wild animals.

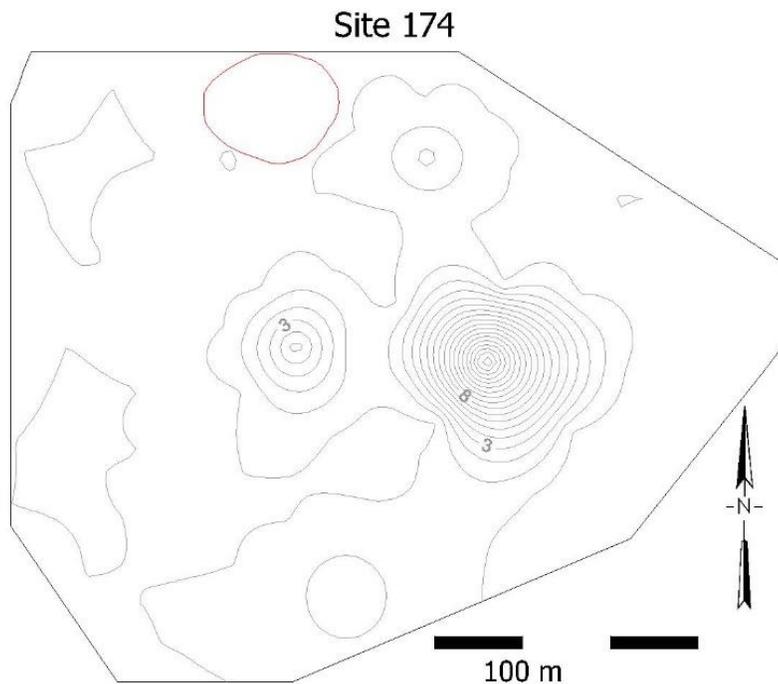


Figure 4.9. Late Ceramic Period shell data and household, M2. Levels at increments of 1.

The most common shell species from Site 174 is the *Anadara Similis*. This species of shell must have been collected from the mudflats and used as a means of subsistence. The mudflats are only 9.7km away from Site 174 and would have been worth the trip to go and collect these shells as a means of protein. Since there is not much information on the shellfish collected from the survey at Site 174, it is necessary to look at general information regarding shellfish. According to Lyall's (2007) findings, the size of the shell did not influence the distance travelled to obtain the shell and therefore, the selection

process was most likely based on high demand for shellfish for either subsistence or craft activities. The species that is mostly associated with craft production in the Parita river valley is the *Anadara grandis* (Lyall 2007; Haller 2008). The other shells that are most common in the assemblage from Site 174, therefore, are not as associated with craft production and most likely were used as a means of subsistence.

The ceramics and the lithics, thus, illustrate Site 174 as being one that participates in many domestic activities. Although there are no specific households to assign many of the artifacts to, the overall trend for the Late Ceramic Group follows the same general pattern as the Early Ceramic Group. Most of the activities being performed at Site 174 are domestic due to the high uses of plain ceramic ware, lithics which represented manufacturing and agriculture based tools, and fauna and shell remains which indicate simple needs for subsistence resources.

4.3. SPECIALIZED ACTIVITIES

The specialized activities at Site 174 were not plentiful and hardly any ADI contour analysis could be completed. There were, isolated finds throughout Site 174 that date to the Late Ceramic phase, such as serving ceramics, scrapers, legged metates, and the shell species, *Anadara grandis*.

The painted ceramics were highly standardized throughout the Late Occupation Sequence (200 B.C. – A.D. 1522) and were “diagnostic for chronological periods and have associated radiocarbon dates” (Menzies 2009:33). Since the ceramics throughout this region were all standardized, it is difficult to say whether the production of these ceramics can be considered a specialized activity. Instead, the specific use of these ceramics is what makes them specialized, such as feasting. There were serving ceramics, however, but they constituted about 26% of the total ceramics for the Late Ceramic Group. The Macaracas phase illustrates the phase that best exemplifies specialized activities in regards to ceramics due to the 38% of the total ceramics of that phase being associated with serving (Table 4.5.). This corresponds with Haller (2008)’s findings on how social ranking occurred during the Macaracas phase for

the second time in the Parita river valley. During the Macaracas phase, He-4 develops the high-status graves and burial mounds. The sequential phases, Parita and El Hatillo have little ceramic evidence of specific specialized activities as most ceramics were plain and associated with cooking during these phases.

Household	%MPC	%Plain	%Cooking	%Serving
M2	2	98	71	29
Macaracas Total	6	94	64	36

Table 4.5. Table illustrating the percentages of each category of ceramic for Macaracas phase, including the household M2.

Specifically, two of the three scrapers found at Site 174 were associated with the Late Phase Grouping. Although they were surface finds, these scrapers were found very close to STP 51 and thus can be assigned the date of Macaracas. A scraper is a flake tool that has a retouched angle of approximately 1-90 degrees. The lower the angle of a scraper, the more often the tool is associated with being able to conduct detailed work. One of the scraper angles was 50° and the other angles were not listed. Scrapers are not known to be used for agricultural activities and instead are to be recognized as tools associated with intensive specialized activities (Mason 2008:46-47) because of their standardized form and were usually specialized in craft production. They were also used for woodworking, which indicates their ability to be used for detailed work in craft production, rather than agricultural activities.

The only other ground stone that can be assigned to the Later Ceramic Group is the legged metate. It was discussed in the previous chapter in regards to its use in agriculture. Other information provides evidence that legged metates, in particular are not just used for agriculture, but were products of specialists and used for ritualistic purposes (Haller 2008:145). Since legged metates are standardized in form, have a lack of manufacturing debris in the Parita river valley, and the raw material needed to make these ground stone tools is not a local resource. Due to the high amount of labour needed to construct legged metates, it is possible specialists were involved in their creation. Legged metates are associated with second and first-order sites and seem to hold a ritualistic association between agriculture and

fertility. The appearance of a single legged metates indicates Site 174 was possibly holding ritualistic activities at the site even after the pull of Site 174's population to He-4 during the Late Ceramic Group. Even if the legged metate was not used for ritual activities, it was an item that was produced by specialists and imported into Site 174 for a specific purpose, indicating an activity that is more than just a mundane, agricultural, domestic activity. The ADI contours for specialized lithics can be seen in Figure 4.8. of the map of Site 174.

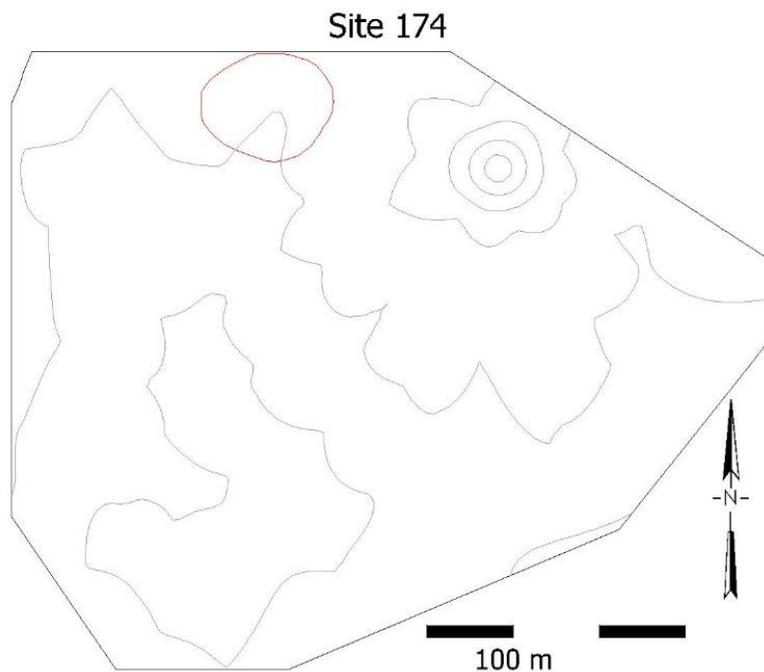


Figure 4.10. Specialized lithics data and the household, M2, outlined in red. Levels at increments of 0.2

The shell collected from Site 174 appears to have been primarily used for subsistence purposes only. The species, *Anadara grandis*, is used in craft production throughout the Parita river valley (Haller 2008; Lyall 2007). Although they were definitely used as a source of protein, the large shell is detached into smaller pieces for pendants and as a floor covering (Haller 2008:155). Fragmented shells can be used as a floor drainage system and intact shells can be used as a path which would be beneficial for traction and drainage (Lyall 2007:41). This sort of craft production was occurring at third, second, and first-order

sites which indicates the availability of the raw material, from the estuary and mangroves (Lyall 2007:39). Since the meat within the *Anadara grandis* did not provide much protein, it is possible that the shell was collected primarily for its use as a pendant or other craft activities rather than as specifically for subsistence (Haller 2008:156). Although only one *Anadara grandis* was located at Site 174 during the Late Ceramic Group, this species is very indicative of craft activities and specialization.

The artifacts which are specialized, although there are not many for the Later Ceramic Group, are extremely indicative of specialized activities. This is because these artifacts are standardized, and made into objects which are not used for daily activities such as agricultural tools or bone remains from hunting. The specialized activities illustrate a “differentiated, regularized, permanent, and perhaps institutionalized production system” (Costin 1991:4).

4.4. SUMMARY OF LATE CERAMIC GROUP

During the late ceramic phase, the low population density reflects in the entire artifact assemblage, however, the analysis of the ceramics, provides an accurate depiction of the domestic activities that are taking place at Site 174. Although ceramic sherds cannot be assigned to specific households, the pattern of high amounts of plain and cooking ceramics and low amounts of painted and serving ceramics that appears during the Early Ceramic Group continues into the Late Ceramic Group. These ceramics illustrate regular and daily household tasks. Most of the lithics also illustrate the typical activity of manufacturing tools and using stone technology as tools for agriculture. The fauna represent regular subsistence patterns, with high amounts of medium sized mammals and the bones of the mammals being located outside of household boundaries. The shell assemblage, although small, indicates shell used as subsistence as well.

Although some specialized activities may have been taking place at Site 174, such as using scrapers for woodworking, the evidence for such activity is quite limited. The possible legged metate would most definitely indicate a specialized activity as it is such a standardized stone tool. In addition, its

potential use in fertility rituals adds to its special qualities. The species *Anadara grandis* is also a specific artifact that is associated with craft production and specialized activities, as opposed to just consumption needs.

5.0. SOCIOECONOMIC CHANGE IN ANCIENT PANAMA

Panama has been intensely studied by ethnohistorians and archaeologists alike due to the ‘characteristic’ chiefdoms that are found there. A few of the studies conducted in Panama regarding chiefdom societies include Natá, surveyed by Cooke (1972), the survey at the Río Santa María by Cooke and Ranere (1984, 1992), and the investigation of the Río Tonosí by Ichon (1980). Helms (1979) describes how the chiefdoms were ranked socially and that sociopolitical relations were established through dominance, alliance, and tribute. These studies are examples of archaeological investigations from all over Panama. For the present study, the Central Region is the location of focus. One of the most well-known sites in the Central Region and Panama which illustrates socioeconomic change is Sitio Conte. The graves there held items such as gold, precious stones, textiles, tools, weapons, jewelry, decorated ceramics, metal helmets, greaves, and plaques and these were indicative of high socioeconomic status and wealth (Haller 2008). This is considered to be an “archetypal” site due to its cemeteries (Cooke 1984:301).

Socioeconomic change in Ancient Panama is evidenced through ethnohistoric accounts which directly describe the social ranks and the sociopolitical relations that existed. The ways in which leaders would stay connected within the Panamanian chiefdoms was based on dominance, alliance, and tribute. The funerals of high status individuals, such as Chief Parita, illustrate the elaborate dress, armour, and ornaments which would accompany the deceased. Mortuary objects and grave goods specifically from the site, Sitio Conte have been exemplary in socioeconomic status for those who had a higher rank in Ancient Panama. Higher rank would be exercised through more extravagant grave goods, but also through the access to rituals, resources, and labour (Haller 2008:3).

The development of socioeconomic change in Ancient Panama have been researched by ethnohistorians and archaeologists. Long-distance trade, and thus esoteric knowledge, is argued by the ethnohistorian, Mary Helms (1979). Material wealth combined with a strong and large network would allow the development of chiefly societies as emerging chiefs would not only have access to luxury items

but knowledge as well (Helms 1979; Haller 2008). Archaeologists, on the other hand, place more emphasis on the control and access to resources, whether local or regional, and the inequalities that may arise in situations where population pressure and dramatic changes in the environment may alter this accessibility (Cooke 1984; Cooke and Ranere 1984, 1992; Cooke and Sanchez 1997, 2000; Cooke et al. 2003; Hansell 1987, 1988; Linares 1977). Regional and local exchange would create differentiations between status and feasting and *balseria* are examples of the results from these kinds of changes. There is also much evidence for warfare in Panama, specifically in the Central Region. Constructing alliances and having the resources and power in order to wage war illustrated the ability to develop socioeconomic complexity.

The various theories surrounding the development of chiefly societies in Panama have been debated based on ethnohistoric accounts and archaeology alike. These theories imply the “classic” definition of a chiefdom which implies the chiefly center has differential access to trade networks, resources, and labour. In other areas in Panama, these theories hold merit such as the modern day Kuna, an indigenous group in Panama who claim their knowledge came from long-distance travelling (Helms 1979). The Parita river valley, after intense archaeological research, proves to be straying away from these main models of the development of chiefly societies and socioeconomic wealth.

5.1. PARITA RIVER VALLEY

The complex societies in the Parita river valley are thought to have been chiefdoms based on larger sites, such as He-4, their dominance over the rest of the settlement, public spaces which imply the practice of ritual, and elaborate mortuary remains, including grave goods and human remains (Haller 2008:55). These lines of evidence, although useful, can be limiting as they only focus on the chiefly center, rather than the surrounding area.

The emergence of socioeconomic ranking occurred at two periods of time in the Parita river valley, during the Cubitá phase and Macaracas phase. The emergence of chiefly societies coincides with

the beginning of the three tiered settlement hierarchy in the Parita river valley, and specifically this begins in the Cubitá phase (A.D. 550 – 700) with the chiefly center, the first-order site, He-4 at the top of the hierarchy. Haller (2008) argues for the Control of Local Resources Model which involves increased local and regional exchange which resulted from external stresses and as this trade increased, so did the networks. Ritual and exchange ceremonies were utilized for the development of political power. Therefore, the elites ability and yielding of control was rooted in “manipulating local and regional exchange and subsistence production” (Cooke and Ranere 2002; Cooke and Sanchez 2004; Haller 2008). Previous ideas of chiefdoms hypothesized that smaller sites were constantly and directly controlled by chiefly centers, ones such as He-4 through political and economic ties. If this were true, the peripheral sites such as Site 174 in the Lower Survey Zone and Site 054 in the Upper Survey Zone would be pulled in to He-4’s sphere of influence and would be relentlessly controlled by it as it was the nucleated core site in the Parita river valley.

Site 054 and the evidence from Jessome’s (2012) analysis illustrated that Site 054 in the Upper Survey Zone was socio politically influenced by other communities, especially Site He-4. He-4 has directly affected communities demographically in the Lower Survey Zone and the Upper Survey Zone during the Cubitá phase (Menzies 2009; Jessome 2012). The magnitude of this influence, however, is questioned in the Upper Survey Zone with the exemplary Site 054. Site 054 seems to have remained relatively independent from He-4 until A.D. 700. (Jessome 2012:37). Although Site 174 is considerably closer to He-4 than Site 054, Site 174 experienced very similar autonomous characteristics. The evidence from this study for Site 174 suggests that this Lower Survey Zone community may have not been drawn into the nucleated core of He-4 initially, and still remained very much independent.

Jessome’s (2012) hypothesis claims that “socio-political authority seems to have been limited to within the confines of the Lower Survey Zone and did not extend upriver to the Upper Survey Zone” (Jessome 2012:37) does not apply to the Lower Survey Zone as a result of the present study. Site 174’s population does not fully decline and dissipate until after the Macaracas phase (A.D. 900 – 1100). In

addition, the domestic and specialized activities taking place at Site 174 illustrate its ability to produce and manufacture much of its necessities on its own, without the interference from any other sites in the region. This is a large implication for the Parita chiefdom as He-4's surrounding communities were largely autonomous virtually unaffected by the rising first-order site until about A.D. 700. This illustrates that He-4 may have become first-order site by the Cubitá phase and established a position at the apex of the settlement hierarchy, but was only nucleating the population at a macro-regional level, or even a smaller level, since 174 was only 2.2km away. He-4 was unable to fully centralize the peripheral sites which illustrates the relative power and independence peripheral sites have, even within a chiefdom society.

The household data that was analyzed from Site 174 was important to studying socioeconomic change as it was able to illustrate the more domestic and mundane activities that took place within chiefly societies. The regional political integration within the Parita river valley illustrates the involvement of three different ranks of sites and also shows how second and third-order sites need to be addressed, just as much as the first-order sites (Menziés 2009:9). Site 174's households were able to illustrate their ability to sustain themselves, independent from the first-order sites. With this distinction, Site 174 presents itself as being attracted to He-4 in non-economic forms. Therefore, its socioeconomic level is slightly unique, compared to the regular ideas of classic chiefdoms. Site 174's economy was independent, self-sufficient, and an efficient unit of production.

Menziés (2009) and Jessome (2012) exemplified that the household perspective on the development of chiefdom communities provides a unique and new view regarding the emergence of social hierarchy. Menziés is able to establish that households emerged as higher status engaging in "socially competitive activities" or ritual ceremonies that would establish their connection to the previous inhabitants of households or ancestors. Jessome (2012) was able to determine when the emerging chieftainship began to influence smaller sites, such as 054, and begin to relocate them into He-4's centralized village.

5.2. CONCLUSIONS AND IMPLICATIONS

The definition of chiefdom in the Parita river valley is thus, called into question due to its ubiquity. Previous researchers believed and accepted the fact that chiefs control over production and procurement of subsistence resources alone was what gained them power. What is being represented in this region however, is that the power of the chief was not being obtained in this manner. Haller (2008) has argued that the emergence of social ranking in the Parita river valley chiefdom was due to increasing socio-economic interaction macro-regionally. Since there was extensive local trade occurring, the chiefly center did not need to force its surrounding communities into being dominated. He-4's role was largely one of a ritualistic nature in that it was a high-status necropolis (Haller 2008:187). The results from the analysis and the investigation conducted in this study has exhibited the same trend; that the smaller sites were not subjugated to the chiefly center He-4 and was actually largely independent because of its ability to use local resources and be its own basic unit of production.

The chiefdom definition of "Chiefdoms are hierarchical societies that integrate many communities under a single political unit. Status competition, the display and exchange of prestige or exotic goods among emergent elites, feasting, and the creation of social debt are activities performed in order to assimilate these various communities under one central, chiefly power" (Menzies 2009:22) must be reanalyzed based on the research conducted from this study. The results from Site 174 coincides with what PARP has been finding for the past ten years. The small sites in the Parita river valley suggest that elite activities at first order sites do not affect the majority of the population, contrary to the definition of a chiefdom. This does not mean hereditary inequality does not exist in Parita river valley. The smaller sites within this region, and even at the household level, exhibit self-sufficient characteristics and autonomous rule. Therefore, the existence of hereditary inequality in the Parita chiefdom challenges the concept of the "classic chiefdom" definition and the idea of extent of hereditary inequality.

The ceramics collected from Site 174 indicate domestic activities as they are largely ceramics used for cooking purposes. In addition, the majority of the ceramics are plain and not painted. This is true

for the Early Ceramic Group and the Late Ceramic Group. The fauna and shell assemblage illustrates the subsistence activities among the inhabitants of Site 174. The lithics present the expediency of the stone tools manufactured at Site 174 and thus, the use and production of stone tools as a part of everyday life. The households at Site 174 were normal, domestic units as they represented basic units of production. These households did take part in domestic tasks such as cooking, cleaning, and storage. These “normal” households are self-sufficient, producing their own food, goods, and tools. Utilitarian goods or technomic goods (Menzies 2009) such as cooking and storage vessels, stone axes, processing tools, cutting implements, and cloth would be found in this context (Menzies 2009:14). Manufactured or manufacturing lithics, animal bones of lower quality and of smaller size are present in the domestic households. Food production, preparation, and household maintenance are also evident.

Specialized activities are the kind of class of goods that are only produced by professionals, or people that specialize in that type of production. The “socio-technic goods” are objects related to the social realm, as opposed to utilitarian and functional objects. Menzies (2009:14) provides examples such as polychrome pottery, worked bone, shell pendants, and polished stone bars. These types of artifacts illustrate their aesthetics and appearance, rather than function. “Specialization can be inferred from the location of production debris degree of standardization in artifact assemblages, concentrations of manufacturing debris and ratios of finished tools to debitage, cortical flakes, unfinished or broken tools, ceramic wasters, by-products from shell manufacture, and metal slag” (Menzies 2009:15; Costin 1999:21-29). Although there are a few materials at Site 174 that represent specialized production, most of the artifacts are unable to be traced to specialized activities. Therefore, the majority of activities being performed at Site 174 were domestic and utilitarian.

Due to the interconnectedness of chiefdoms in which the smaller, second or third order sites are subservient to the larger, first order site, it was necessary to analyze the relationship that seemingly exists between these sites. After analyzing the demographics of Site 174 and comparing them to He-4 and 054, it is evident that although social ranking emerged during two critical times during the Late Occupation

Sequence, once during the Cubitá phase, and the second time during the Macaracas phase. The Cubitá phase begins He-4's journey as a first-order site, seemingly controlling the Parita river valley. It would be assumed, then, that He-4 would immediately have significant influence on the surrounding communities. At 054, however, He-4's dominance in the valley is not felt until at least A.D. 700, which during the beginning of the Conte phase. What is found at Site 174, is that it also remains quite independent until the Conte phase, and even illustrates minimal, but still apparent, habitation until the Macaracas phase (A.D. 900). Thus, the idea of an all-encompassing chiefdom, directly controlling the communities around it, is an inaccurate definition and description for this region. Instead, hereditary inequality and socioeconomic change did not reach the egalitarian communities on the outskirts of the chiefly society. They were autonomous and independent for hundreds of years after the chiefly center emerged.

5.3. FUTURE RESEARCH

Most of the research questions have been answered throughout the analysis of this study, however, for future studies it would be beneficial to have more data. The ceramic analysis was quite successful due to the high amount of ceramic sherds found at Site 174. The fauna and shell analysis, however, was not as thorough as it could have been simply due to a lack of raw numbers. As not having collected the data myself, this was out of my control when the survey and the excavations took place over ten years ago.

The fauna and shell remains were mostly found in other areas throughout the site, rather than at the operations that were systematically excavated. It would be beneficial to excavate more in the areas where it seems more of the fauna and shell contours reach higher densities. Not only would this provide more information on subsistence activities, but of craft production and other specialized activities as well. Shells such as the *Anadara grandis* were first used for consumption and then broken into slender pieces to make for pendants. In this sense, it is possible that the remaining parts of shells such as *Anadara grandis* may be located in the midden deposits that seem to be appearing on the ADI contour analysis. These further excavations will provide more data on craft production and on the potential tools that were used

from the bones of the fauna. The shell, in particular would be most interesting to investigate due to the spondylus shell shaped into a frog pendant that was found at Site 174. Although the shell may not have been made at Site 174, it would be worth to excavate in the shell midden area.

Although the lithic assemblage was quite large compared to the fauna and shell, a lot of the lithics that were associated with specialized activities, such as axes and a single ornament were not found within households and in particular for the axes, they were unable to be associated with an STP or an Operation because they were surface finds, or moved due to the wash. Doing more excavations in the areas where more of the lithics were found to find more raw counts will provide better results for the tools that were created, and specifically, more information may be obtained regarding the axe preforms that were discovered.

Although the households at Site 174 were created through the ADI contour maps, it would also be beneficial to revisit Site 174, and excavate more in these areas to discover house size and composition. This information will illustrate more on status differentiation between the households and how it developed and changed throughout time.

For PARP as a whole, further household archaeology is needed in well-known sites such as Sitio Conte. With so much research having been done on Sitio Conte's elaborate burials and its status as a high-status and ritualistic necropolis, having a regional survey performed in order to identify and investigate households will provide the same benefits as did the Parita river valley. The households within the Central Region of Panama seem to be largely autonomous and independent and it would be necessary to test this theory in the area surrounding such a luxurious chiefly center.

Due to the inaccuracy of the definition of the chiefdom for the Parita river valley, much of the research using this model has been relying on information that may or may not be true of this region. A single term to explain an 'evolutionary stage' of society is not useful because of the differences in the emergence of social ranking around the world. The ethnohistoric accounts and the broad blanket

statements from past archaeologists and historians that have claimed that a chiefly center ruled over all of the region, including 2nd and 3rd order sites, and that these smaller sites were subservient to the chiefly center is not what is being displayed here at Site 174. These statements are not useful and a long-term, in-depth examination is needed. More archaeological data on sites in the survey zone is needed in order to find out more about the “chiefdom” of the Parita river valley. In addition, the definition itself should be analyzed so that an all-encompassing term cannot be used to explain the emergence of social ranking and hereditary inequality everywhere.

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