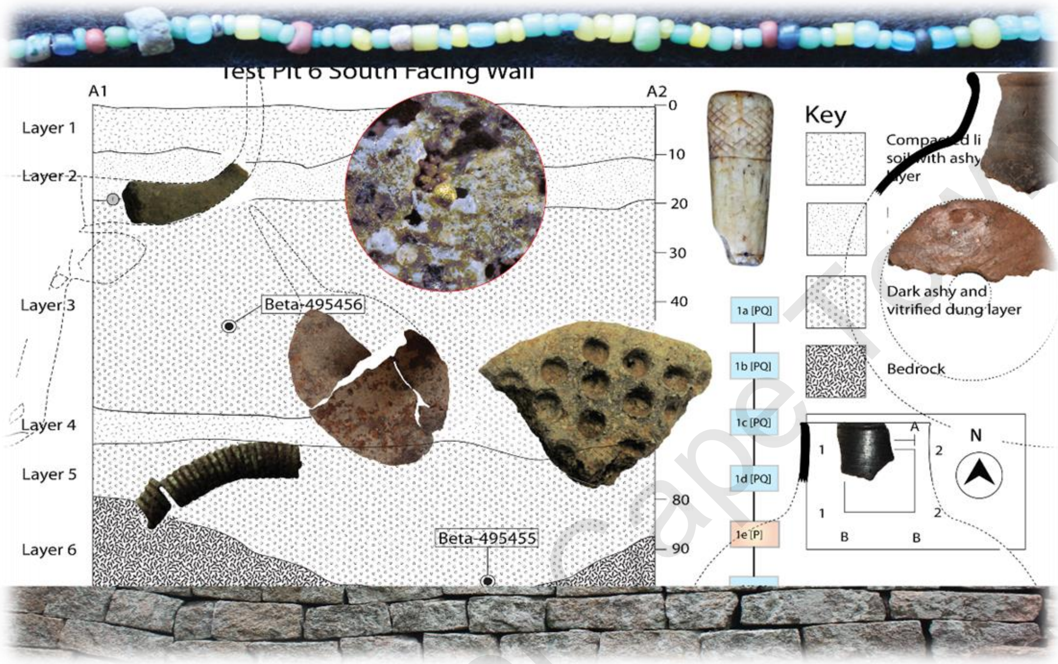
States, agency, and power on the ‘peripheries’:

Exploring the archaeology of the later Iron Age societies in precolonial Mberengwa, CE 1300-1600s



ROBERT TENDAI NYAMUSHOSHO

THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

IN THE DEPARTMENT OF ARCHAEOLOGY

UNIVERSITY OF CAPE TOWN

July 2020

ABSTRACT

In southern Africa, as elsewhere, the tendency of Iron Age (CE 200-1900) researchers has been to focus on the more prominent places on the landscape, especially those believed by pioneering archaeologists to have been centres of big states. Consequently, most research foci were accorded to Mapungubwe, Great Zimbabwe, Khami, Danamombe and many other places considered as centres *(mizinda)* of expansive territorial states. However, landscapes away from, and in-between these states and their centres are traditionally viewed as ‘peripheries’ where resources that made them prosperous were extracted. The inhabitants of such ‘peripheries’ are presented as if they possessed little or no agency. One such area is Mberengwa, a gold-rich area situated between the edges of Mapela, Mapungubwe, Great Zimbabwe, Danamombe, and Khami. This thesis explores the archaeology of Chumnungwa, a drystone-walled *muzinda* located in Mberengwa. Because of abundant gold, and a landscape optimal for cattle production and crop agriculture, Chumnungwa is often marginalised as a docile ‘periphery’ of the more powerful and territorial states that surrounded it. Stratigraphic excavations were performed in different parts of the site to recover artefactual and chronological evidence. Indications are that the inhabitants of Chumnungwa exploited locally acquired resources such as gold, iron, and soapstone, but mixed these with resources from distant areas. Cumulatively, this evidence, when assessed in relation to chronology, suggests that Chumnungwa flourished more or less at the same time as Mapela, and the later phases of Mapungubwe, Great Zimbabwe, Khami, and Danamombe. As a powerful actor in Mberengwa, Chumnungwa also networked and was therefore entangled not only with local, but also with regional, and inter-regional politico-economic processes. This suggests it is only a historical invention that can marginalise some landscapes as ‘peripheral’, especially in the absence of research, but once attention is directed to them, multiple layers of agency and entanglement emerge.

Keywords

Chumnungwa, Mberengwa, Iron Age, Zimbabwe culture, Peripheries, Margins, Adaptation, Entanglement, Shona.

DECLARATION

This is to certify that the work presented in this doctoral thesis is my own both in concept and execution. In cases where I have used the work of others, it has been properly referenced. This thesis has not been submitted for a degree at the University of Cape Town or any other institution of higher learning.

Signature

Signed by candidate

DEDICATION

…to my mother Cecilia

who taught me to seek knowledge,

and instilled in me an interest in 'things of the past'…

ACKNOWLEDGMENTS

This research project would not have come to fruition without the invaluable support from numerous individuals and institutions. Many thanks go to Professor Shadreck Chirikure, my supervisor and mentor who intellectually and morally guided me throughout the years I embarked on this research journey. Professor Chirikure facilitated a National Research Foundation Grant-Holder-linked bursary that enabled my studies and research cost at the University of Cape Town. I am indebted to his efforts and that of Professor Ari Sitas in facilitating the Re-Centring Afro-Asia: Musical and Human Migrations in the Pre-Colonial Period 700-1500 AD doctoral scholarship which enabled me to complete my research project in financial stability. My appreciation also goes to Tinashe Kushata and Rhodha Isaacs for the logistical support, and the rest of the Afro-Asia fellows with whom I constantly engaged during our seminars and conferences.

To Professors Munyaradzi Manyanga, Shahid Vawda, Simon Hall, and Martin Hall, I am humbled by your resolute support and willingness to engage with me whenever I needed your input. I received equal support from Drs Foreman Bandama, Tawanda Mukwende, Abigail Moffett, Njabulo Chipangura, and Ezekiel Mtetwa. Your contributions were academically and morally uplifting.

At the National Museums and Monuments of Zimbabwe, I am deeply indebted to the staff who contributed to the success of my fieldwork. Dr Godfrey Mahachi and Mr. Kundishora Chipunza granted me the excavation permit to work at Chumnungwa. Dr Tawanda Mukwende and Dr Moira Fitzpatrick facilitated the commencement of my fieldwork at Chumnungwa and Laboratory work at the Natural History Museum in Bulawayo. To my field mates, *Baba* Lonke Nyoni, Todini Runganga, Obert Mangwana, and Siphelani Mangena, I am forever indebted to your logistical and technical support in making sure that we carried out a splendid job at Chumnungwa, *mugare kure nemoto*. Many thanks to Farai Musiyandaka who was always there when I needed his logistical support. To *Mhamha* Kith Mkwananzi, I am truly grateful for sharing your expertise in identifying the fauna we recovered from Chumnungwa. My gratitude also goes to Phephile Tshabangu for generously attending to my numerous requests for the Library material from the Museum.

At the University of Cape Town, I would like to thank members of the Archaeology Department who made this academic journey enjoyable and endurable. Many thanks go to Lynn Cable, Bedone Mugabe, Genius Tevera, Cornelius Mushangwe, Jordan Scholfield, Nandi

Masemula, Michelle House, Robyn Humphreys, Nomawethu Hlazo, Louisa Hutten, Vuyiswa Lupuwana, Banele Dosi, Mervin Kanye, and all the students I lectured and tutored from the First Year, Third Year and Honours classes.

My deepest appreciation goes to the communities of Mberengwa. I am grateful for your willingness to embrace me as a son. I acknowledge the generosity of Headman Felix Ncube and Headman Mabhunu who allowed me to freely work in their villages. Tavonga Ndlovhu and Lovemore Zhou made a sterling contribution during fieldwork at Chumnungwa. *Baba* Hambani Jiri, Maxwell Gambwa, Elisha Jiti, and many other villagers contributed immensely to the history and anthropology of Mberengwa. To the teaching staff and students at Musiningira Primary School, I am thankful for your hospitality in accommodating our research team throughout the fieldwork.

To my parents, family, and friends, I want to thank you for your immeasurable support and endurance you underwent during my absence when l was busy with this project. I hope that the completion of this project and the fruits that it will produce, will bless us all. I am indebted to *Baba* & *Mai* Lol, *Baba* & *Mai* Devine, *Baba* & *Mai* Tore, the Chirikures, Bandamas, the Mandoros, Bryan Nyamushosho, Duncan Marange, the Malulekes, Mlambos, Musiyandakas, Chinakes, and the Yobes. Your generosity has always gone a long way. To my wife, and best friend Percia, you deserve a special thank you. You tirelessly stood by me during the highs and lows of this project. Lastly, it would be expedient for me to render a big thank you to Yahweh the Almighty who enabled me to go this far. Nonetheless, all the shortcomings exhibited in this project are entirely my responsibility.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION: SETTING THE STAGE

"…"taking out" the centre and "sharpening the focus" on the peripheral territory will reveal what has been obscured and help identify the processes that take place, …" (Grigoryan 2014:13).

1.1. INTRODUCTION

In southern Africa, as elsewhere, Iron Age[1] studies have had the tendency to be dominated by archaeology of the 'bigger' sites, particularly those situated on the landscape of southern Zambezia[2] (Pwiti 1996b; Stahl 1999; Antonites 2012; Chirikure 2018). Consequently, sites such as Mapungubwe, Great Zimbabwe, Khami and Danamombe[3] (Figure 1.1) have always enjoyed the privilege of featuring in most archaeological discourses especially on early state formation, urbanism, interregional interactions, innovation, craft specialisation, and even past human responses to climate and environmental change (i.e. Summers 1960; Beach 1980; Connah 1987; Hall 1987; Huffman 1986, 2000, 2007, 2009; Herbert 1996; Mitchell 2002; Trigger 2003; Phillipson 2005; Pikirayi 2006, 2013; Kim & Kusimba 2008; Manyanga et al. 2010; Chirikure 2015). This bias even manifests on media platforms, particularly television documentaries that explore the prehistory of ancient civilisations in southern Zambezia. These sites are heralded as centres *(mizinda)* of expansive territorial state societies whose archaeology is popularly known under the rubric – Zimbabwe culture[4](Figure 1.2). However, whereas landscapes away from, and in between these *mizinda* centres are highlighted in most Iron Age texts as sources of gold and other key raw materials that contributed to the prosperity of these

[1] Originally the term was introduced by anglophone archaeologist, Roger Summers, (1950) who adopted the terminology from British archaeology to characterise the iron making and using agropastoralists societies of southern Zambezia that thrived in the last two millennia. Despite being constantly criticised as biased on one aspect of the economy of these societies (i.e. Goodwin 1952; Sinclair 1987; Pwiti 1996b; Mitchell 2002), the term will be adopted in this study because of dearth of a better terminology which consistently matches with the local and global archaeology theoretical trends.
[2] A summer rainfall area situated in southern Africa bounded by Zambezi river to the north, Limpopo River to the south, Makgadikgadi Pans to the west and the Indian Ocean to the east.
[3] Also known as Dhlodhlo.
[4] A detailed description of the Zimbabwe culture will be provided in section 1.2.

territorial states, they are frequently relegated as 'peripheries' with less significant prehistories (see Hall & Neal 1904:81; Livneh 1976:46-18; Huffman 1978:98, 2009:51; Hall 1987:91-94; Ndoro 2001:22; Pikirayi 2006; Kim & Kusimba 2008:145; Swan 2008:38-40; Van Waarden 2011:56; Kusimba et al. 2017:80). Equally, most of the Iron Age agropastoralists who resided in these so-called 'peripheries' are marginalised and presented as powerless societies who possessed little or no agency. One such area is Mberengwa, a gold rich area situated between the edges of Mapungubwe, Great Zimbabwe, Khami, and Danamombe (Figure 1.2).

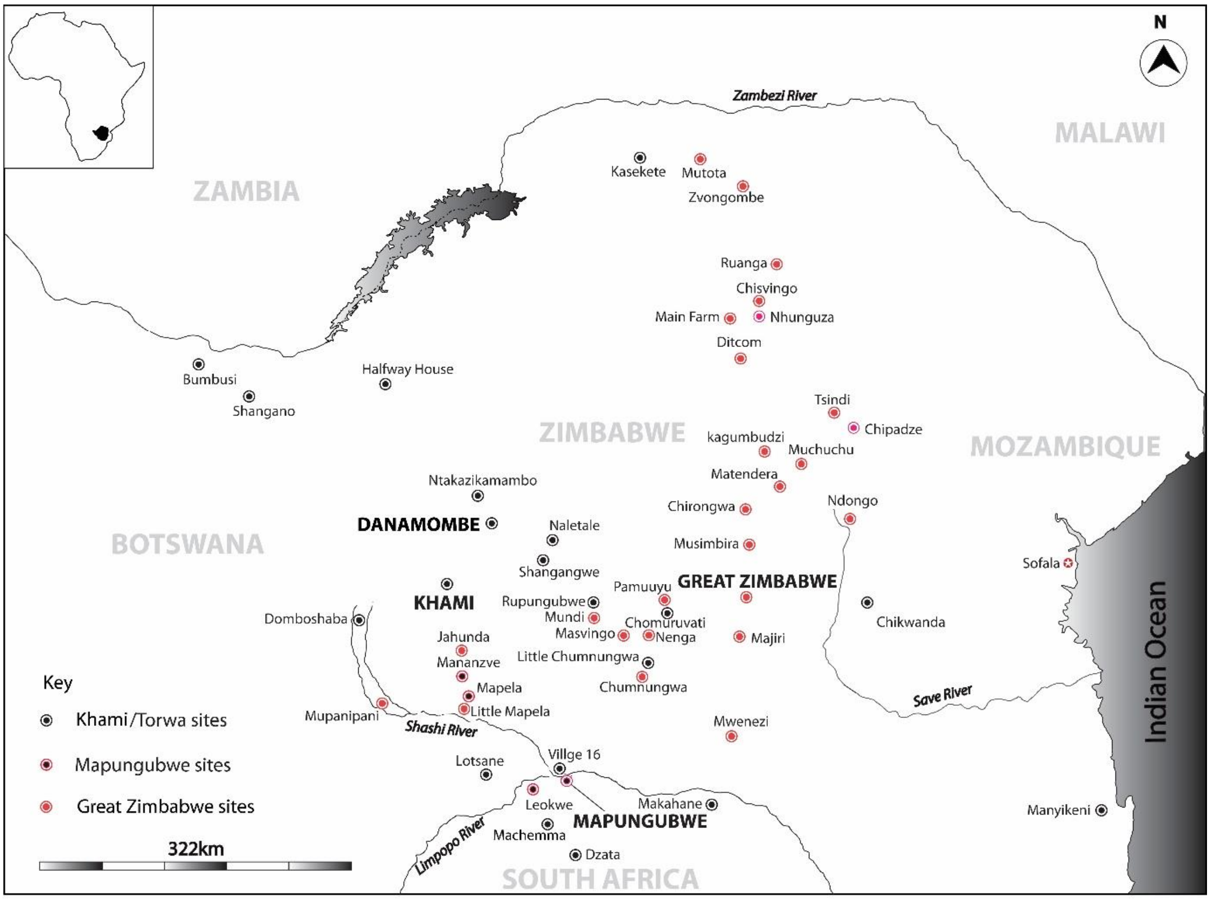


Figure 1.1: Map of southern Zambezia showing the distribution of Zimbabwe culture sites. Highlighted are the 'bigger' sites which are regarded in most scholarly works as more prominent.

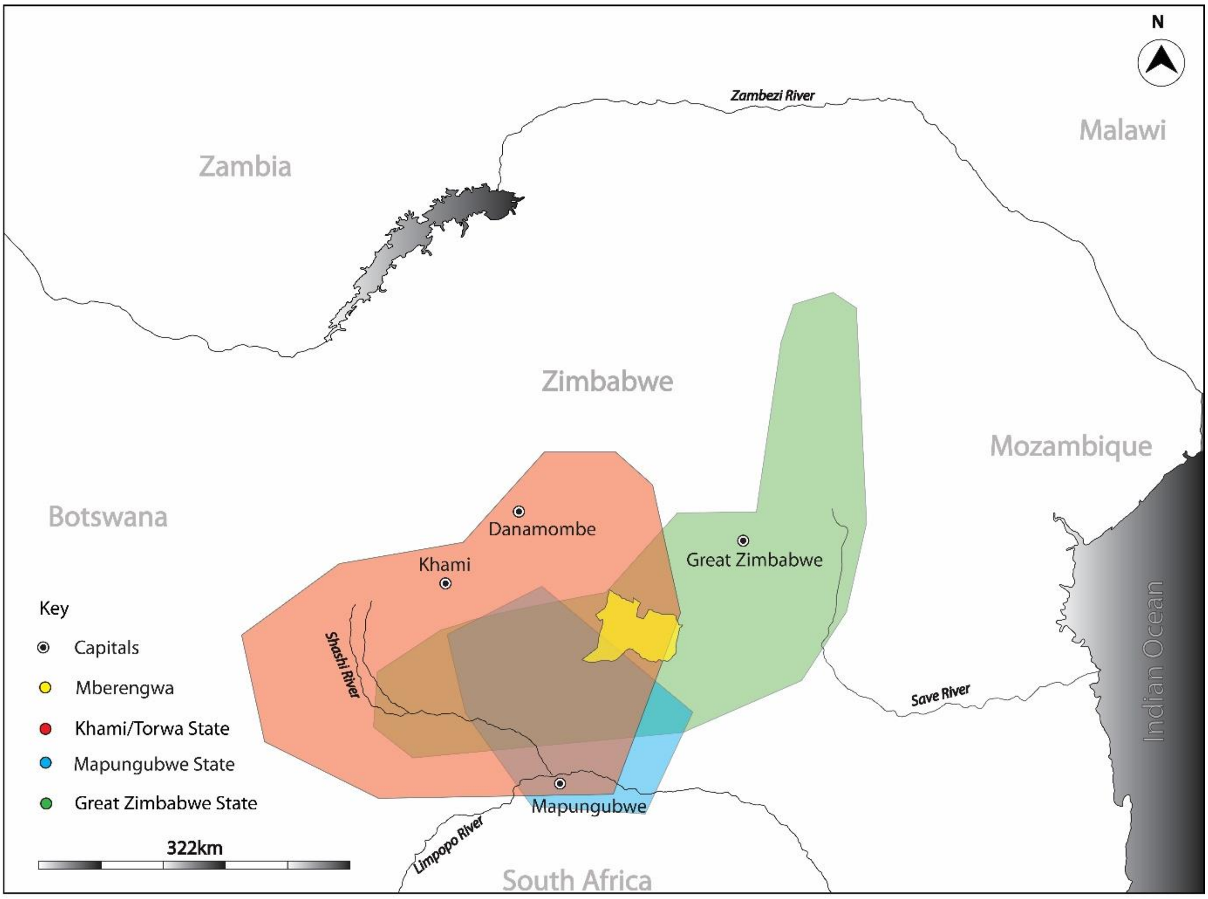


Figure 1.2: Zimbabwe culture centres *(mizinda)* of power and their supposed 'peripheries' (Adapted from Huffman 2007:381, 200, 415; Hannaford & Nash 2016:2).

This tendency of privileging 'bigger' sites as 'centres' and undermining 'smaller' sites as 'peripheries' comes a long way in the historiography of the Iron Age studies of southern Africa, and it is as equally old as the discipline of archaeology. In this part of the global south, it is well-known that archaeology developed as a product of colonialism (Shepherd 2002; Gosden 2012; Chirikure et al. 2017a). As a result, most of the pioneering researchers who initiated research on the Iron Age agropastoralists of southern Zambezia originated from Europe and the Americas, where evolutionary concepts that dichotomised human cultures into binaries of 'barbaric and civilised', 'urban and rural', 'developed and undeveloped,' 'hinterlands and heartlands', 'margins and metropoles', and 'cores and peripheries' had already permeated prehistoric studies (i.e. Childe 1950; Friedman & Rowlands 1977; Kohl 1978; Renfrew 1984; Rowlands, et al. I987). Consequently, most archaeologists and historians extrapolated these approaches into the Iron Age of southern Zambezia, and hence much of what we know today is largely influenced by these frameworks, particularly the notions of 'centres' and 'peripheries' (see Bent 1892; Hall & Neal 1904; Summers 1960; Phillipson 1977, 2005;

Huffman 1978, 1982; 1996, 2007; Hall 1987; Sinclair 1987; Connah 2001; Pikirayi 2001; Trigger 2003; Wood 2005, 2012; Kim & Kusimba 2008; Antonites 2012; Van Waarden 2012; Kusimba et al. 2017).

The first generation of Africanists that worked in southern Africa between 1874 and 1937 established an Iron Age research agenda that was biased on the archaeology of Great Zimbabwe and other 'bigger' sites such as Khami, Danamombe, and Mapungubwe. Initial research undertaken by Karl Mauch (1874), James Theodore Bent (1892), John Willoughby (1893), and other amateur archaeologists such as Richard Nick Hall (1905) was foregrounded on the origins of Great Zimbabwe and other related sites, which had monumental drystone-walled architecture. Being inspired by colonial propaganda entrenched on racism which undermined the local Africans as an uncivilised race incapable of building such colossal structures, they attributed the construction of the walling to Serbians, Phoenicians, and other foreign civilisations whom they suspected to have occupied the ruins. This sparked a huge debate, particularly in Europe which became popularly known as the Zimbabwe controversy (Garlake 1982). Ultimately it prompted the then British Association for Advancement of Science to respectively send David Randal-McIver in 1905, and Gertrude Caton-Thompson in 1929 as professional archaeologists to verify these scholarly positions (see Randall-McIver 1906; Caton-Thompson 1931). Their work respectively concluded Great Zimbabwe as an African precolonial centre which was built by the local Shona[5], people a stance which is widely acknowledged today in global archaeology (Huffman 1996, 2007; Pikirayi 2001; Phillipson 2005; Manyanga et al. 2010; Monroe 2013; Kusimba et al. 2017; Chirikure 2019). Whilst the duo were applauded for resolving the Zimbabwe controversy (Garlake 1973b; 1982; Hall 1987; Pikirayi 2001) and inspiring systematic research at Mapungubwe, which was initially undermined as a peripheral district of Great Zimbabwe state (Fouché 1937), their contribution including that of the amateur archaeologists, laid the foundation of the series of research efforts that prioritised Great Zimbabwe and other few sites during the first six decades of Iron Age research in southern Africa. As was recently exposed by the work of Chirikure et al. (2016a)

[5] The Shona are made up of six major linguistic groups namely the; Karanga, Korekore, Zezuru, Ndau, Manyika, and Kalanga. Originally, the term 'Shona' was created by the linguists working for the Rhodesian government to enable classification of indigenous groups who shared a similar language and culture within southern Africa (Doke 1931; Chimhundu 1992). In this study the term will be adopted considering the fact that due to many centuries of interaction, most of the linguistical groups that define the modern day Shona are genetically and linguistically mixed to the extent that it is very difficult in most cases to find a pure Karanga or Zezuru.

we now know that during these sixty years, Great Zimbabwe enjoyed the privilege of being excavated more than ten times. Ultimately the majority of the sites that had been previously documented by Hall and Neal (1904), and Bent (1892), in the distant areas of south-central Zimbabwe such as Gwanda, Insiza, Zvishavane, and Mberengwa ended up being overshadowed by the Zimbabwe controversy as it diverted most of the research attention to Great Zimbabwe, and other big sites to the extent that even to date, the majority of these sites never had the chance to be explored by professional archaeologists. Moreover, it must be noted that the idea popularised by some contemporary scholars (i.e. Huffman 1986; 1996 2007, 2010; Kim & Kusimba 2008; Kusimba et al. 2017) which presents Great Zimbabwe as a 'metropolis', that controlled a vast territory of southern Zambezia that stretched into these so-called distant 'peripheries' (see Figure 1.2) was birthed during this era (see Hall & Neal 1904:62, 81).

The next generation of archaeologists maintained the research biases that had been set up by the pioneer scholars. As usual, Khami (Robinson 1959), Danamombe (Summers 1959), Great Zimbabwe (Summers et al. 1961), Mapungubwe (Gardner 1963), and other few sites were afforded another round of systematic research. This time they were more detailed, and largescale excavations and surveys were conducted to capture many variables that ranged from ceramic typology, stone architecture, settlement history, mortuary practices, craft production, and housing. In as much as the work of Gardner lacked scientific rigour in data recovery methods, his work, and that of Summers and Robinson laid the foundation for later studies (i.e. Fagan 1967; Garlake 1970; Brain 1974; Hall & Vogel 1980; Meyer 1980; Voight 1983; Thorp 1984a, 1995; Huffman & Vogel 1991; Chipunza 1994; Smith 2005; Chirikure & Pikirayi 2008; Pikirayi 2013; Chiripanhura 2018; Mukwende et al. 2018) that refined the Iron Age archaeology of these Zimbabwe culture capitals (i.e. Brain 1974; Hall & Vogel 1980; Voight 1983; Thorp 1984a, 1995; Huffman 1986; Huffman & Vogel 1991; Collet et. al. 1991; Chipunza 1994; Herbert 1996; Matenga 1998; Smith 2005; Swan 2007; Chirikure & Pikirayi 2008; Kim & Kusimba 2008; Pikirayi 2013; Chiripanhura 2018; Mukwende et al. 2018). Syntheses were published that heralded Mapungubwe, Great Zimbabwe, Khami and Danamombe as 'centres' of early states in southern Africa (Garlake 1963; Summers 1959; Phillipson 1977, 2005; Connah 1987; Hall 1987; Huffman 1996, 2007; Pikirayi 2001; Mitchell 2002). As elucidated by Martin Hall (pers. comm. 2019) during this time archaeologists were so keen to profile these 'bigger' sites as examples of precolonial civilisations that thrived in southern Africa before the arrival of European colonialism.

Consequently, just like Aztec in Mesoamerica (Smith 1990), Uruk in Lower Mesopotamia (Algaze 1989), Xia in the Central Plains of China (Shanxi Team & Linfen 1980), and other prominent places which were celebrated in global archaeology as heartlands of powerful civilisations that were behind various innovations in early human history; the sites of Mapungubwe, Great Zimbabwe, Khami and Danamombe were publicised as centres *(mizinda)* of the earliest civilisations in southern Africa to beget urbanism, class distinction, centralised governance, sacred leadership, craft specialisation, monumental architecture, and agricultural intensification and various signals of socio-political complexity that were associated with state societies (Huffman 1986, 1996 2007, 2009; Hall 1987; Matenga 1998; Connah 2001; Pikirayi 2001; Phillipson 2005; Murimbika 2006; Swan 2007; Pwiti et al,. 2013). For instance, based on the presence of spindle whorl discs, and range of metal objects that were made from gold, and bronze, these sites were regarded as the earliest Iron Age sites to engage in fibre weaving, as well as gold and bronze working (Huffman 1972; Miller 2001). These novelties including drystone walling construction were argued to have been started first at Mapungubwe, which was regarded as the earliest expression of the Zimbabwe culture before they spread to Great Zimbabwe, Khami, Danamombe, and many other places, which were considered as the capitals of expansive territorial states in southern Africa (Huffman 1996, 2007; Murimbika 2006). Similarly, the recovery of exotic imports that ranged from glass beads, porcelain, cowrie shells to cloth, prompted many archaeologists and historians to regard these Iron Age polities as major players in Indian Ocean trade networks that connected southern Zambezia with Asia, Europe, and the Middle East (Garlake 1973b; Hall 1987; Huffman 2000; Mitchell 2002; Wood 2005, 2009; Phillipson 2005; Kim & Kusimba 2008). Aside from international trade, the recovery of cross-shaped copper ingots, and double-iron gongs, particularly from Great Zimbabwe, Khami, and Danamombe, also prompted the scholarly community to acclaim these polities as principal regional traders that participated in the trade networks that linked southern Zambezia with the Zambian Copperbelt, the Katanga region in Congo, and west Africa (Garlake 1973b; Vansina 1969; Swan 2007, 2008). Nevertheless, the same weight of reverence was never applied to Chumnungwa and other contemporary sites in the so-called distant 'peripheries' where similar objects had been reported by Hall & Neal (1904).

As states entities, Mapungubwe, Great Zimbabwe, Khami, and Danamombe were assumed to have expanded their political boundaries into the distant territories such as Buhera, Gwanda, Insiza, Zvishavane, and Mberengwa where they controlled mining and consumption of gold, copper, iron, soapstone, and many other critical resources through coercive measures and manipulation of the trade markets in a way that benefited them more (see Figure 1.2) (Huffman 1978, 1996, 2007; Beach 1980; Garlake 1973b; Kim & Kusimba 2008; Van Waarden 2011, 2012). Part of the archaeological evidence that was used to cement this argument included the gold objects that were recovered from Mapungubwe burials, Great Zimbabwe, and Khami. The assumption by many scholars was that ore used to make these products as well as other metallic objects was sourced from the distant gold belts (Vansina 1969; Swan 2007, 2008; Huffman 2009) yet this was never verified scientifically. Thus, just like in a world systems framework[6] (sensu Wallerstein 1974) these sites became famous as hubs of innovation that had major imperial, and international trading powers, whilst those 'smaller' sites that were situated at the edge of these powerful, large states were largely marginalised and presented as inferior and less developed 'peripheries' whose fate was largely determined by their supposed rulers who resided at the supposed Zimbabwe culture capitals (Summers et al. 1961; Hall 1987; Huffman 1996, 2009; Swan 2008; Kusimba et al. 2017).

However, with time, a third generation of researchers arose (i.e. Garlake 1973a; Barker 1978; Huffman 1978; Rudd 1984; Sinclair 1987; Loubser 1991; Pikirayi 1993; Pwiti 1996b; Steyn et al. 1998; Manyanga 2006; Chirikure et al. 2013a, 2014). This time, the obsession with the archaeology of 'bigger' sites began to fade. This prompted a significant number of archaeologists, and other Africanist groups who were working in southern Zambezia such as the Rhodesian Schools Exploration Society, to spread their research focus on landscapes that were overlooked as 'peripheries' of the Zimbabwe culture capitals. Surveys and excavations that were undertaken at Mapela, Little Mapela (Garlake 1968), Chomuruvati (Cook 1970), Mtanye (Huffman 1972), Nhunguza, Ruanga (Garlake 1973a), Manyikeni (Barker 1978), Nenga (Huffman 1978), Chamabvepfa (Huffman 1979), Tsindi (Rudd 1984; Mukabeta 2019), Zvongombe, Kasekete (Pwiti 1996b), Thulamela (Steyn et al. 1998), Mupanipani (Van Waarden 2011), Jahunda (Bandama et al. 2018), and many other sites showed that these were

[6] The world systems theory was conceptualised by Immanuel Wallerstein to explain the vigorous capitalist economic transformations societies underwent during the 16th century (Rowlands, et al. I987; Harding 2013). Wallerstein (1974) portrayed the global economy anchored onto a dichotomy in which Europe on one hand dominated as an enriched 'centre' of the world economy and the neighbouring regions on the other hand, were systematically impoverished as the 'peripheries'. Despite Wallerstein (1974:16; 1993), repeatedly cautioning that his model was not theoretically astute to enlighten the political economies of pre-capitalist societies within and beyond Europe, most archaeologists, anthropologist and historians failed to resist the temptation of adopting it to address issues arising from ancient studies of the global past (Hall et al. 2011).

also prominent sites that were heavily entangled, and occupied much of the same time as the Zimbabwe culture capitals. As a result, they too had the capacity to construct elaborate drystone walled architecture which demonstrated class distinction, occupational diversity, mortuary variability, and centralisation of power. In fact, as argued by Garlake (1978) most of these sites, particularly those he had excavated in northern Zimbabwe in the late 1960s (see Garlake 1973a), had ample evidence that clearly exhibited political independence from Great Zimbabwe. Down south, the work of Van Waarden (2011), and Chirikure et al. (2014) even showed that some of these sites such as Mupanipani, and Mapela, had respectively introduced drystone architecture earlier than Great Zimbabwe and Mapungubwe. Equally, the presence of glass beads and a range of exotic objects showed that most of these Iron Age sites were also major players in the international trade routes that connected southern Zambezia with the Indian Ocean trade centres as well as the regional trade hubs in western and central Africa, where items such as the double iron bells recovered at sites such as Thulamela might have been imported (see Bvocho 2005; Swan 2007; Chirikure et al. 2014; Chirikure 2019). Moreover, archaeological data gathered from these sites, which were once undermined as 'peripheries' also revealed large quantities of locally produced objects such as spindle whorls and ornaments made from gold, copper, and bronze, which showed that the weaving of fibre, and working of gold and other metals was widely practiced across southern Zambezia (Cook 1970; Garlake 1973b; Huffman 1978; Pwiti 1996b; Steyn et al. 1998; Bandama et al. 2018).

A similar picture that demonstrated Iron Age settlement histories, innovations, and lifestyles that matched with those associated with supposed Zimbabwe culture capitals, was also unfolded in the adjacent dryland landscapes of southern Africa such the Save valley (Thorp 2009, Wood 2009; Shenjere-Nyabezi 2017), Zambezi Valley (Pwiti 1996b; Plug 1997a), north-eastern Botswana (Van Waarden 1998, 2012; Denbow et al. 2008; Mothulatshipi 2008; Klehm et al. 2017), and southern Zimbabwe (Manyanga 2001, 2006; Chirikure et al. 2018; Nyamushosho et al. 2018) which had been previously marginalised as 'archaeologically negligible', and unbefitting for hosting Iron Age economies due to constant aridity, and tsetse-fly infestation (sensu Summers 1960; Robinson 1965a; Phillipson 1969; Ford 1971; Sinclair & Lundmark 1984; Beach 1994; Huffman 2015). Thus, useful lessons on sustainability, resilience, innovation, livestock management, entanglement, and human adaptation to climate and environmental change were drawn from these drylands regions at sites such as Vumba (Van Waarden 1989), Mutamba (Loubser 1991; Antonites 2012), Kadzi (Pwiti 1996b), Malumba, Mwenezi, Mutshilashokwe (Manyanga 2001, 2006), Hlamba Mlonga (Thorp 2009), Ndongo (Shenjere-Nyabezi 2017), and Mananzve (Nyamushosho et al. 2018). Consequently, it became clear that Iron Age settlements situated in drylands were worthy of archaeological research since they had interesting histories and were far much more complex and richer in biodiversity and mineral wealth than the way in which they had previously been conceptualised by environmental determinists such as Roger Summers (1960:270).

Whilst there is no doubt that archaeologists, and historians working in southern Africa have made huge strides towards reconciling the Iron Age archaeology of the marginalised 'peripheries' and drylands in southern Zambezia, the dominant narratives are still told mainly from one angle which prioritises the 'bigger' and more spectacular sites on the landscape, particularly those believed by pioneering archaeologists to have been *mizindas* of the Zimbabwe culture states (see Hall & Neal 1904; Fouché 1937; Summers 1959; Garlake 1973b; Robinson 1959; Huffman 1972, 1986, 1996, 2015; Hall 1987; Connah 2001; Pikirayi 2001; Mitchell 2002; Trigger 2003; Wood 2005, 2009; Phillipson 2005; Murimbika 2006; Swan 2007; Kim & Kusimba 2008; Pwiti et al. 2013; Kusimba et al. 2017). Most importantly, not much is known archaeologically about the gold belt territories in Insiza, Zvishavane, Mberengwa, and other sites such as Geelong, and Aboyne where majority of the gold, and other key resources are alluded to have been procured and which made Mapungubwe, Great Zimbabwe, Khami, and Danamombe prosperous (see Hall & Neal 1904; Summers 1969; Huffman 2007, 2009; Van Waarden 2011, 2012). We do not know much about their settlement history, daily practices, political economy or even the local and regional networks they participated in. Such an enquiry is important, as it enables us to find out how Iron Age communities settled in these areas exploited the local resources, particularly those who had gold deposits at their disposal. Furthermore Mberengwa (Figure 1.2) is a fertile ground in which to explore these issues as it is one of the under-researched gold belt territories and drylands, yet it is acclaimed for hosting Iron Age societies that have been mostly presented as 'peripheries' of the most powerful, and large states (Bent 1892; Hall & Neal 1904; Von Sicard 1956, 1957; Robinson 1961; Summer 1969; Huffman 1973, 1978; Beach 1978; 1980; Van de Merwe 1978; Burret 2006). Furthermore, there are numerous dry-stone walled Iron Age sites such as Chumnungwa (Hall & Neal 1904; Matenga & Chikwanda 1999) whose material culture is likely to have attributes that are associated with supposed Zimbabwe culture capitals. Therefore, it is vital to further research the Iron Age archaeology of this gold belt region in order to verify this position in light of its current representation in the Zimbabwe culture.

1.2. BRIEF BACKGROUND TO THE ARCHAEOLOGY OF THE ZIMBABWE CULTURE

In southern Africa, the Iron Age is broadly associated with two epochs, the fist millennium (CE 200-1000), and the second millennium (CE 1000-1900) (see Phillipson 1975, 2005; Hall 1987; Pikirayi 2001; Huffman 2007). During the second millennium, also known as the Later Iron Age (LIA), southern Zambezia is believed to have hosted numerous drystone walled settlements *(madzimbahwe*[7]*)* of the Shona-speaking societies whose worldview and material culture is commonly known as the Zimbabwe culture. In fact, there is a consensus among scholars that ascribe the origins of the Iron Age societies' ancestry to the Shona people to the grassfields cradle in western Cameroon (Hall 1987; Pikirayi 2001; Mitchell 2002; Huffman 2007). Hereafter, they are said to have abruptly migrated to Southern Zambezia via two routes, the eastern and western streams popularly known as the Chifumbaze complex (Phillipson 2005). Ultimately from CE 200 onwards, these agropastoralists whose ceramics are archaeologically associated with Bambata (CE 150-650), Ziwa (CE 300-550), Gokomere (CE 550-750), and Zhizo (CE 750-1050) facies sedentary settled and lived contemporaneously with the hunter-gatherer communities who had already occupied the landscape of southern Zambezia (Hall 1987; Pikirayi 2001; Mitchell 2002; Philipson 2005; Huffman 2007; Thorp 2010; Manyanga et al. 2013).

Apart from cultivation and livestock domestication, these Iron Age societies thrived on various livelihoods which included, craft production, mining, and metallurgy, hunting and trade, which was conducted locally and internationally (Summers 1959; Garlake 1978; Pikirayi 2001; Mitchell 2002; Manyanga 2006; Huffman 2007; Chirikure & Pikirayi 2008; Mukwende et al. 2018). Their homesteads were largely comprised of rondavel-houses and granaries made of wood, grass, and clay *(dhaka)* and were scattered widely across southern Zambezia (Bent 1892; Summers et al. 1961; Beach 1980; Matenga 1998; Pikirayi 2001; Huffman 2007). It is generally believed that these settlements were positioned in strategic landscapes where Iron Age communities of the Zimbabwe culture could easily access water, cultivable soils, game, grazing fields, minerals, trade routes, and many other necessities which enabled their everyday livelihoods (Garlake 1978; Pwiti 1996b; Huffman 2000; Mitchell 2002; Manyanga 2006; Van Waarden 2012; Chirikure 2015; Nyamushosho et al. 2018). The various Zimbabwean culture

[7] Shona term which literally means revered houses of stones (Garlake 1978; Beach 1980; Hall 1987; Ndoro 2001; Pikirayi 2001).

societies that occupied southern Zambezia between CE 1000 and 1900 can be archaeologically grouped into three cultural entities on the basis of existing radiocarbon dates, ceramic style, and dry stone walling type (see Robinson 1959; Summers et al. 1961; Huffman 1979; Collett et al. 1991; Pikirayi 2001; Manyanga 2006:85-87; Van Waarden 2011:59; Chirikure et al. 2013a, 2014:11). These are Leopards Kopje, Zimbabwe, and Khami (Torwa) agropastoralists.

Regionally, the southern Leopards Kopje societies (CE 1055-1400) are regarded as one of the earliest expressions of the Zimbabwe culture (Huffman 1982, 1996, Mitchell 2002; Pwiti 2005; Antonites 2012). Their footprint in the archaeological landscape of southern Zambezian was largely characterised by the presence of incised wares, which were largely decorated on their shoulders with cross-hatched triangles, and arcade motifs. (Fouché 1937; Garlake 1968; Robinson 1965b, 1985; Manyanga 2006; Huffman 2007; Chirikure et al. 2014; Nyamushosho 2017a). Archaeological research that has been undertaken thus far shows that there were numerous Leopards Kopje polities that were widely spread throughout south-western Zimbabwe, north-eastern Botswana, and northern South Africa (Robinson 1985; Huffman 2000; Pikirayi 2001; Manyanga 2006; Mothulatshipi 2008; Van Waarden 2011; Antonites 2012; Chirikure et al. 2014, 2016a; Nyamushosho et al. 2018). *Mizindas* of these polities included Mapungubwe, Mapela, and Mtanye, these were mostly situated on hills (Pikirayi 2001; Chirikure et al. 2013a, 2016a; Scholfield et al. forthcoming). Palaces of the elites who resided at these elevated places were built on top of the hills and were surrounded by freestanding drystone walled enclosures as well as hillslopes which were modified into artificial terraces using uncoursed blocks to expand living space (Fouché 1937; Garlake 1968; Robinson 1965b, 1985; Manyanga 2006; Huffman 2007; Denbow et al. 2008; Chirikure et al. 2014; Nyamushosho 2017a). Various factors were alluded to as contributors to the development of socio-political complexity among the southern Leopards Kopje polities, these included local and international factors such as cattle wealth and gold trade. Archaeologically this is demonstrated by the presence of large cattle kraals with vitrified dung, which were recorded at Mapela, Mtanye, Mananzve, and Mutshilachokwe as well as the gold burials, which were recovered at Mapungubwe (Voigt 1983; Hall 1987; Huffman 2000, 2007; Wood 2005; Smith 2005; Manyanga 2006; Kim & Kusimba 2008; Nyamushosho et al. 2018). Some Leopards Kopje polities such as Mapungubwe are conventionally believed to have collapsed around CE 1290 due to a drought caused by the Little Ice Age (Huffman 1996, 2007; Van Waarden, 1998, 2011). However, Iron Age settlement continued at other Leopards Kopje polities such as Mapela, Malumba, and Mananzve where communities managed to devise adaptation schemes that enabled them to thrive, even until the 15th century (see Manyanga et al. 2000; Chirikure et al. 2014, 2018; Nyamushosho et al. 2018)

During the period between CE 1300-CE 1660, southern Zambezia was also home to numerous Iron Age polities whose material culture is broadly defined as the Zimbabwe tradition, after the main site Great Zimbabwe (Garlake 1978; Huffman 1982, 1996, Mitchell 2002; Pwiti 2005; Chirikure et al. 2013a). The presence of Iron Age communities affiliated to this tradition was demonstrated by numerous drystone walled enclosures whose architecture comprised free-standing walls and terraced platforms that were built at sites such as Great Zimbabwe, Mundi, Nenga, Pamuuyu, Mupanipani, Zvongombe, Chumnungwa, Little Buhwa, Gorongwe, Mpopoti, Mupanipani, Manyikeni, Nhunguza, Mwenezi, Thulamela, Chipukuswi, Ndongo, Kongezi (see Hall & Neal 1904; Garlake 1970, 1973a, 1978; Hall 1987; Sinclair 1987; Huffman 1996; Steyn et al. 1998; Van Waarden 2011; Shenjere-Nyabezi 2017). Antony Whitty (1959) developed a relative chronology and typology of stone architecture at Zimbabwean walled settlements which showed that the walling was constructed in successive stages, starting with P-type walling, followed by the PQ-type, a transitional phase between P-and Q-type walling. Q-type was regarded as the best of all, these were followed by the R-type walling which was the last. It is generally believed walled enclosures at various Zimbabwe sites were designed to show off prestige and facilitate allocation of living space for the elites whilst the commoners lived in the unwalled areas (Garlake 1973b; Huffman 1996; Pikirayi 2001; Mitchell 2002:316). Ceramics recovered from the majority of Zimbabwe sites were mostly graphite burnished and designed with beaded rims, triangle decoration motifs on their shoulders as well as fabrics, which are fine-textured and coarse-grained (Bent 1892:173; Hall 1905:40; Randall-MacIver 1906:104-106; Huffman 2007:225; Chiripanhura 2018). Archaeological evidence from Great Zimbabwe (Robinson 1961; Pikirayi 2001; Chirikure et al. 2013b; Chiripanhura 2018), and other contemporary sites (see Sinclair 1987) shows that the ancestry of the Zimbabwe people were the Gumanye agropastoralists who thrived between the 11th and 13th centuries (Summers et al. 1961; Beach 1980; Sinclair 1987; Pikirayi 2001; Huffman 2007; Chirikure & Pikirayi 2008; Chirikure et al. 2013a, 2017a). An array of factors is thought to have contributed to the processes that promoted economic growth and the development of socio-political complexity among the Zimbabwe polities in southern Africa. Part of the local factors included availability of productive land which ensured prosperity in cereal and cattle production and which successively stimulated population growth (Garlake 1968, 1978; Pwiti 1996b; Pikirayi (2001:21; Manyanga 2006:14; Chirikure 2014, 2019; Chirikure & Moffett

2016). Local resources such as gold, and ivory, which enabled the merchants who resided at the various Zimbabwe centres, to trade with the Swahili merchants along the Indian Ocean coast (Garlake 1973b, 1982; Huffman 1972; Collet et al. 1991; Wood 2012). In return they acquired exotic imports such as glass beads, Persian tin-glazed earthenware bowls, cowrie shells, Chinese celadon, and many other perishable and imperishable goods from the coast (Huffman 1972, 1996, 2007; Garlake 1973b; Pikirayi 2001; Phillipson 2005). However, it is widely known that the political economy of most Zimbabwe tradition sites was hinged on agropastoralism and other local industries such as craft production (Garlake 1973b; Beach 1980; Pwiti 1996b; Chirikure 2019). Most *Zimbabwes* are believed to have declined around CE 1450 and 1660 (Beach 1980; Huffman 1996, 2015; Pikirayi 2001; Mitchell 2002). Part of the causal factors suggested included succession disputes, ecological catastrophes, and a decrease in regional and international trade (Garlake 1970; Beach 1980; Mitchell 2002; Huffman 2007).

Round about the same era, Zimbabwe tradition societies were thriving, southern Zambezia also witnessed the peopling of Khami agropastoralists whose settlements stretched from south-western Zimbabwe to north-eastern Botswana, and northern South Africa. Previously the peopling of Khami agropastoralists was thought to have begun around CE 1450 (see Huffman 1996, 2007) however, a recent Bayesian chronology, buttressed by ceramic seriation, bead typology and architectural stratigraphy from Chirikure et al. (2012, 2013a, 2017a) shows that their settlement history dates back as far as CE 1250 (also see Van Waarden 2012; Mukwende et al. 2018). Generally, Khami societies invested a great deal in monumental architecture. Their settlements, particularly those which were occupied by their leaders, were either constructed on artificial stone-terraced platforms (including hills) or low-lying flat plains where free-standing walls, occasionally decorated with check patterns, were erected (Robinson 1959; Huffman 1996; Pikirayi 2001; Van Waarden 2012; Chirikure et al. 2013a). According to Summers (1971), there were approximately more than 100 Zimbabwe culture settlements related to the Khami tradition in southern Zambezia. Some of these sites included Khami, Danamombe, Little Mapela, Tabazikamambo, Chamabvefa, Naletale, Chomuruvati, Murahwa's Hill, Vumba Letsibogo, and Dzata (Robinson 1959; Van Waadern 1989; Loubser 1991; Huffman 1996; Chirikure et al. 2017a; Mukwende et al. 2018). The Iron Age communities which resided at the Khami settlements are mainly recognised as descendants of the Leopards Kopje people (Beach 1980; Pikirayi 2001; Huffman 2007; Van Waarden 2012; Chirikure et al. 2013a, 2017a; Mukwende et al. 2018). Khami agropastoralists are renowned in regional archaeology for making globular pots and tall-necked jars, which in most cases they decorated with polychrome bands and panel motifs (Robinson 1959, 1961; Chirikure et al. 2001, 2013a; Manyanga 2006; Van Waarden 2012; Mukwende et al. 2018). Around CE 1685, the majority of the Khami people acquired a new identity as the Rozvi (Changamire) people due to a civil war that initiated socio-political transformations, particularly in south-western Zimbabwe and northern Zimbabwe where Mutapa polities (CE 1450-1900) such as Kasekete were situated (Robinson 1959; Beach 1980; Pikirayi 1993, 2001; Pwiti 1996b; Huffman 2007; Chirikure et al. 2012, 2013a). A further political disturbance was contributed to by the 18th and 19th century Nguni incursions, which resulted in the destruction of most Iron Age settlements. Nevertheless, Iron Age lifeways continued among these Zimbabwe culture groups even when they succumbed to the 19th-century British colonialism (Beach 1980; Mudenge 1988).

A review of this brief background to the archaeology of Zimbabwe culture shows that during the second millennium CE there were numerous Iron Age polities on the landscape of southern Zambezia that were heavily entangled. Most, if not all communities, which were associated with these polities had the capacity to innovate and utilise the local resources at their disposal to benefit their everyday life. Some achieved this despite residing in dryland landscapes where rainfed agriculture was heavily threatened. However, due to limited research, the dominant narratives in academia and in the circles of laymen still portray the Iron Age archaeology of the Zimbabwe culture as hinged on the spectacular sites such as Great Zimbabwe. This necessitates archaeological research that focuses on the marginalised territories.

1.3. RESEARCH OBJECTIVES

Building on the background which has been presented above, this study is aimed at contributing to the Iron Age archaeology of Mberengwa, a gold belt territory in south-central Zimbabwe, which has long been marginalised archaeologically as a ‘periphery’ of the prominent and territorial states of southern Zambezia and using the site of Chumnungwa as a case study. Therefore, surveys and excavations will be undertaken at Chumnungwa in order to:

a. build the chronology and settlement history of the site, and place it in a broad cultural context,
b. recover artefactual evidence for reconstructing daily practices of the Iron Age society that resided at Chumnungwa, paying particular attention to their crafting activities, foodways, herding strategies, networks of entanglement, political organisation, and on the basis of the above,

c. to establish the position of Mberengwa in relation to other social formations of the Zimbabwe culture such as Mapungubwe, Mapela, Great Zimbabwe, Khami, and Danamombe.

This study will be conducted using a stepped methodology to achieve these research objectives. A comprehensive study of published and unpublished archival material will be undertaken first to create a database of what is known and unknown about the archaeology, history, and anthropology of Mberengwa and the Zimbabwe culture. Standard archaeological surveys and excavations (Drewett 1999; Renfrew & Bahn 2004) will be conducted at Chumnungwa, a Zimbabwe culture site situated in Mberengwa (Figure 1.1), to map the site and retrieve reliable material culture data sets. These will be examined using standard principles and protocols of artefact studies (i.e. Voigt 1983; Matenga 1993, 1998; Miller & Van Der Merwe 1994; Tapela 2001; Wood 2005; Thorp 1995; Chirikure & Rehren 2006; Tilley et al. 2006; Huffman 2007; Livingstone Smith et al. 2017) to generate insights that will address the research objectives that informed this study.

Theoretically, this will be achieved using a material culture framework that is intersected by the notions of materiality (i.e. Ellert 1984; Hodder 1989; Caple 2006; Tilley et al. 2006; Huffman 2007; Pikirayi 2007; Hicks & Beaudry 2010), entanglement (Martindale 2009; Hodder 2011, 2012) and Shona philosophies and practices (i.e. Bullock 1927; Gelfand 1966; Bourdillon 1976, 1991; Zachrisson 1978; Beach 1980; Aschwanden 1982, 1987; Ellert 1984; Chimhundu 1992; Ruwitah 1997; Shoko 2007; Chirikure et al. 2012, 2018; Mavhunga 2014; Mungwini 2017) as drawn from archaeology, anthropology, history, and linguistics. This framework will facilitate a multidisciplinary and Afrocentric study of the archaeology of Chumnungwa to address the research gaps that motivated this study?

1.4. THESIS LAYOUT

Chapter Two provides background to the bio-physiography of Mberengwa, its settlement history during the historical and Iron Age eras, the existing knowledge gaps, and rationale behind the selection of Chumnungwa as the case study. **Chapter Three** provides a broader perspective of the theoretical framework that informed this study. **Chapter Four** presents the surveys, mapping, and excavations that were undertaken on both the hilltop and foothill areas of Chumnungwa as well as the immediate environs. In addition, the chapter presents the radiocarbon dates derived from the charcoal samples that were selected from both the hilltop and foothills of Chumnungwa for AMS dating. **Chapters Five, Six, and Seven** respectively present the typological characterisation of pottery, glass beads, and stone-walled architecture recorded at Chumnungwa. These were also examined as proxies for the chronology and archaeological identity of the Iron Age community that resided at Chumnungwa. **Chapter Eight** presents a detailed study of faunal remains recovered from Chumnungwa. **Chapter Nine** explores the various craft objects that were produced and consumed at Chumnungwa. **Chapter Ten** discusses the archaeology of Chumnungwa, and the implications of the findings recovered onsite in light of the objectives that informed this study.

CHAPTER TWO

BACKGROUND TO MBERENGWA AND ADJACENT AREAS: BIO-PHYSIOGRAPHY, HISTORY, AND ARCHAEOLOGY OF A DRYLAND

"…to understand our subject and to penetrate its background we have to consider all sorts of geological, climatic, geographical data but especially consider cultural factors…" (Summers 1969:150).

2. 1. INTRODUCTION

Mberengwa[8] is situated within a biophysical landscape that merges parts of the south-central Zimbabwean Middleveld and the Lowveld regions. This landscape covers an area of approximately 7 800 km^2 (Zachrisson 1978:1), which is geographically bordered by the Bembezi, Ingezi Runde[9], and Mwenezi[10] Rivers (see Figure 2.1). Before the advent of British colonialism in 1890, these fixed boundaries that define the modern-day Mberengwa were non-existent (Von Sicard 1956, 1957; Beach 1978). Ethnohistorical records of early European travellers, hunters, and prospectors that roamed the landscape during the precolonial era shows that most settlements of Iron Age agropastoralists were fluid and extended into the neighbouring Gwanda, Insiza, Mwenezi, Chivi and Zvishavane districts (see Elton 1873; Hall 1892; Hall & Neal 1905; Burke 1969); hence it is vital in this study to consider the adjacent environs illustrated in Figure 2.1, as part of the broader landscape that made up Mberengwa in the precolonial era. In light of this, this chapter explores the bio-physiographical character and settlement history of Mberengwa to generate an understanding of the environmental opportunities and constraints offered by the landscape, as well as the history and archaeology of agropastoral societies that interacted with the landscape and the biodiversity during the Iron Age. As rightfully echoed by Summers (1969:150) such a holistic approach that cross-

[8] Prior 1980, Mberengwa was popularly known as Belingwe and it was named after one the highest mountains in the landscape locally known as Mount Mberengwa (see Hall & Neal 1904; Von Sicard 1956, 1957; Beach 1978; Zachrisson 1978).

[9] Also known as Lundi River.

[10] Also known as Nuanetsi River.

examines nature and culture creates the basis for understanding the past. Ultimately, the chapter outlines the research gaps that motivated this current study.

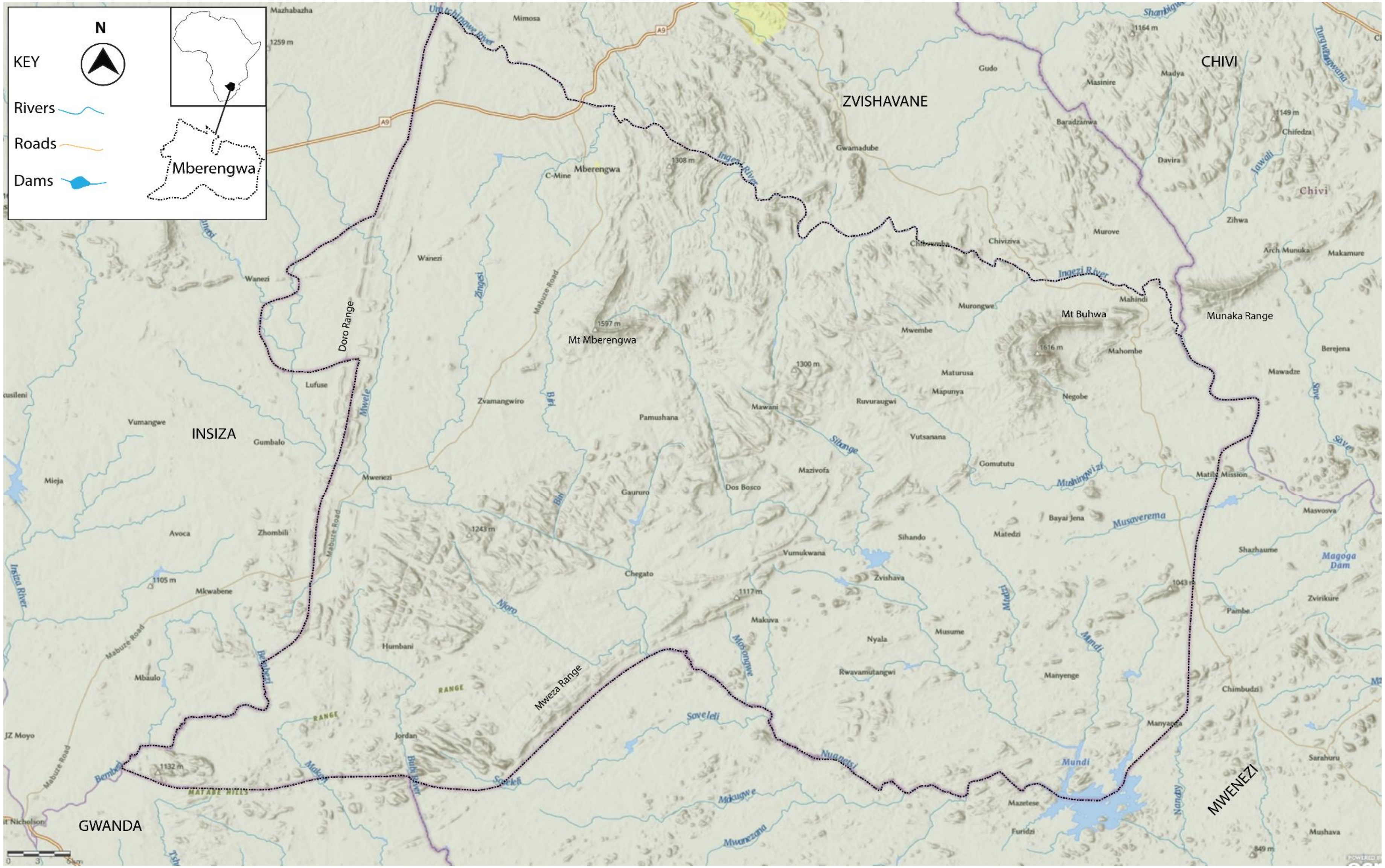


Figure 2. 1: Base map of the Mberengwa landscape, and the adjacent environs (Produced using ArcGIS & Adobe Illustrator databases)

2.2. BIO-PHYSIOGRAPHY

2.2.1. TOPOGRAPHY

As highlighted above, the topography of Mberengwa equally straddles between the Middleveld and the Lowveld landscapes of south-central Zimbabwe. The bulk of the Middleveld landscape is more pronounced in the north-eastern, north-western, and central parts of Mberengwa. This undulating plateau, characterised by mountain ranges, rugged hills, gneiss kopjes, and occasional flat plains, marks the southern limit of the Zimbabwean Middleveld whose altitude generally ranges between 915 and 1 220 m (Pfukenyi et al. 2006). Mt Buhwa[11], an ironstone mountain situated on the north-eastern end of Mberengwa has the highest elevation seconded by Mt Mberengwa (see Figure 2.2). The remaining portions of the Mberengwa landscape situated on the south-western and south-eastern ends fall within the Lowveld region. This escarpment gently stretches further south towards the Shashi, Limpopo, and Save River drainage systems. and it is primarily characterised by low-lying plains and occasional granite hills whose height above sea level is mostly below 915 m (Kay 1970; Pfukenyi 2006). Mberengwa has many topographical features that make the landscapes attractive for hosting and securing agropastoral settlements and livelihoods.

[11] Also known as Buchwa, Vukwa, or Bukwa.

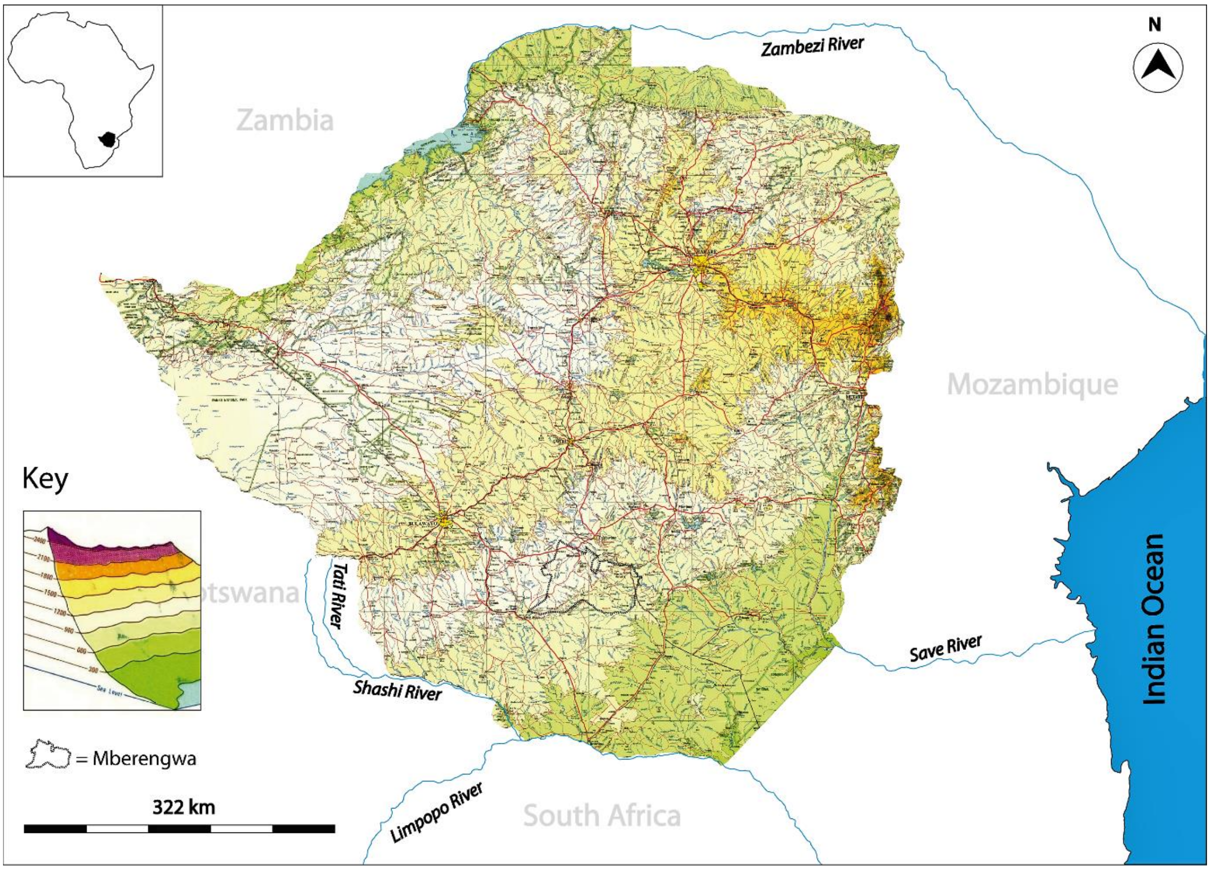


Figure 2.2: Topography of Zimbabwe highlighting the Mberengwa landscape (Adapted from the 1:1 00 000 Relief Map of Zimbabwe, 1984)

2.2.2. DRAINAGE

As demonstrated by the base map in Figure 2.1, the landscape of Mberengwa is drained by a network of rivers which are both ephemeral and intermittent. The Runde is the largest of the three major rivers that pass through the Mberengwa landscape. It rises from the Highveld area in Gweru and flows south-eastwards where it merges with the Save River which then flows into the Indian Ocean. The Ngezi[12] River is the major tributary of the Runde, also rising from the Highveld region and flowing south-eastwards. The southern escarpment of Mberengwa is dissected by the Mwenezi River which rises from eastern parts of Insiza and flows south-eastwards into the Chegato area before it merges with the Limpopo, one of the major tributary rivers flowing into the Indian Ocean. The elevated parts of the Mberengwa landscape also host sources of some of the prominent rivers of southern Zambezia. The slopes on the western edges

[12] Also known as Ingezi River.

of the Doro Range gives rise to the Bubi[13] and Bembezi Rivers, these respectively flow southwards into the Limpopo and Umzingwane Rivers. On the north-eastern end, the escarpment bordered by Mt Mberengwa and Mt Buhwa gives rise to the Muchingwizi and Mundi Rivers. The Mberengwa landscape is characterised by both dendritic and trellis drainage patterns (see Figure 2.1). The dendritic drainage pattern dominates the Lowveld landscape whilst the trellis is more pronounced in the rocky mountain ranges of the Middleveld where the topography of the landscape dictates the flow of numerous rivers such as the Mwenezi, Makari, Biri, and Njoro (Figure 2.1). Generally, it is during the wet season when the landscape of Mberengwa is well watered. However, as the dry season escalates, the majority of the rivers cease to flow (Worst 1956, 1962; Martin 1978). Nevertheless, the drainage systems remain a great source of water, alluvium, and aquatic resources, hence they are likely to have attracted human settlements in the Iron Age.

2.2.3. GEOLOGY

As demonstrated in Figure 2.3, the geology of the greater part of the Mberengwa landscape is made up of granitic and gneiss undulating surfaces which are intercepted by isolated batholiths and kopjes. The mineralogy of these igneous rocks is made up of quartz, feldspar, and other mineral compositions, however, both have fine and coarse-grained textures (Worst 1956, 1962; Martin 1978; Bickle & Nisbet 1993; Ranganai et al. 2008). These granite and gneiss rocks surround most of the schist belts such as the Mweza, Doro, Buhwa, and Mberengwa ranges and in some instances, they have minor intrusions of dolerites and gabbro outcrops which are rich in copper, nickel and titanium (Worst 1956; Hofmann & Kusky 2004).

The geology of the Mberengwa landscape is also made up of the Mberengwa, Buhwa, and Mweza greenstone belts which form the southern limit of the Zimbabwean Archean craton (Martin 1978; Zwaan 2006; Ranganai et al. 2008). These interlayered greenstone belts comprise a succession of ultramafic schists and sedimentary rocks whose lithostratigraphic sequences date to the Sebakwian (2.35 Ga); Shamvaian (2.65 Ga), and Bulawayan (Upper section=2.7 Ga/Lower section=2.9 Ga) eras of the Early Precambrian (Worst 1962; Martin 1978; Wilson 1990; Ranganai et al. 2008). Ultramafic rocks dominate the geology of the greenstone belts and these metamorphosed rocks which comprise emerald, pollucite, uranium,

---

[13] Also known as Bubye River.

thorium, and feldspar are locally classified under the Sebakwian and Bulawayan groups (Worst 1962; Zwaan 2006). Similarly, the Mberengwa, Buhwa and Mweza greenstone belts have segments of metavolcanic rocks with intercalated metasediments – namely molybdenum, beryl, tantalite, columbite and lithium which date to the Shamvaian, Sebakwian, and Bulawayan eras (Worst 1962; Martin 1978; Bickle & Nisbet 1993; Zwaan 2006; Hofmann & Kusky 2004; Ranganai et al. 2008). These are followed by metadisediments which are richly embedded with a range of minerals such as gold, silver, iron ore, copper, lead, zinc, and magnesite. These are prevalent on Mt Mberengwa, Mt Buhwa, the Mweza Range, and Musume area but they are also readily available in the nearby Gwanda (Vubachikwe, Colleen Bawn), and Insiza (Filabusi) Districts (Figure 2.3). The andesitic and felsitic metavolcanics rocks, which comprised barytes, pyrite, corundum, limestone, and kynite, are more prevalent on the Mberengwa greenstone belt whilst the banded ironstone with alternating stratigraphical layers of haematite and quartz are more pronounced on Mt Buhwa (Martin 1978; Bickle & Nisbet 1993). Locally Mberengwa is the largest greenstone belt: it has an approximate width of 30 km and a length of 70 km and so far, it is the well-studied and best-preserved greenstone belt of the late Archaean era (Bickle & Nisbet 1993; Hofmann & Kusky 2004). The Mweza-greenstone belt – mostly renowned for its Sandawana emerald deposit – is situated on the southern end of the Mweza range (Zwaan 2006). The Doro Range on the western end of the Mberengwa landscape is largely made up of serpentinites, dolerites, and pyroxenites, which are silicified to different degrees (Worst 1956; Bickle & Nisbet 1993). These rocks, which form a linear geological intrusion that dissects the Mberengwa landscape in a north to south orientation, are rich in chromite, asbestos, and magnesite (Figure 2.3). The Doro Range is part of the Wedza chamber and this forms the southern section of the renowned Great Dyke of Zimbabwe – the world's longest narrow strip of ultramafic and mafic rocks approximately 550 km in length and which is rich in gold, iron, copper, tin, titanium, platinum, chromium, vanadium, nickel, asbestos silver, mica, and other minerals (Wilson 2001). The age of the Great Dyke is approximated by geologists to be 2.5 billion years (Wilson 2001), it was first reported to the international community in 1867 by Karl Mauch, one of the earliest German geologists who explored the landscape of southern Zambezia in the 19th century (Burke 1969).

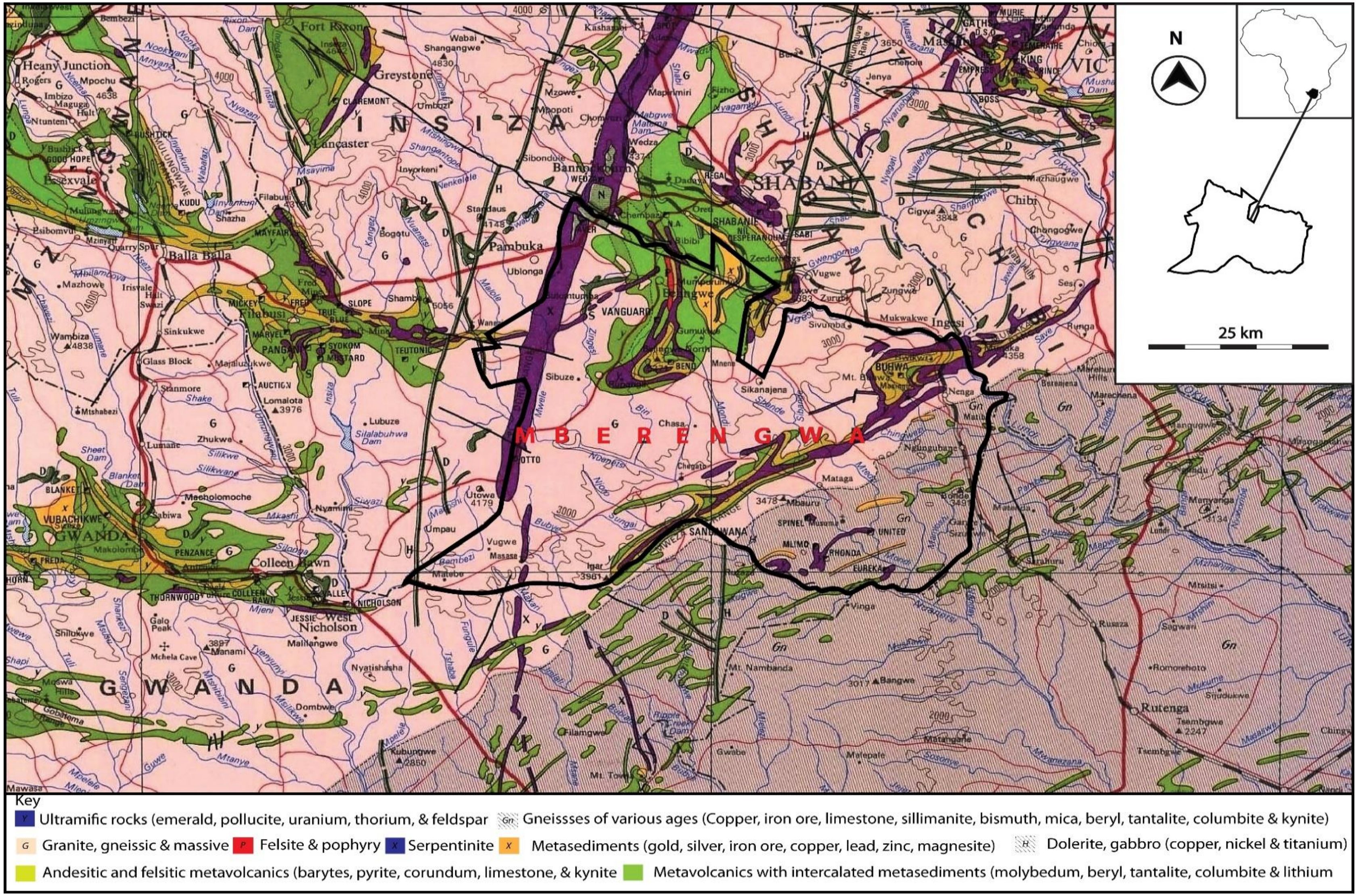


Figure 2.3: Geology of the Mberengwa landscape (Adapted from the 1:1 00 000 Geological Map of (Rhodesia) Zimbabwe, 1971)

2.2.4. SOILS

The major parts of the Mberengwa Middleveld and Lowveld landscape have a mixture of sandy loams and sandy clay loams whose colour ranges from brown to reddish-brown (Thompson 1965; Nyamapfene 1991, 1992; FAO-ISRIC 2003). These fersiallitic soils are a product of the disintegration of gneisses and granitic rocks and their textures vary from coarse to fine-grained. The disintegration of granite and gneiss rocks is regarded as instrumental information of these brownish and reddish-brown soils, which are regarded as good for crop cultivation, however, these soils have a low water retention capacity which makes them susceptible to erosion and high infiltration (Worst 1962; Thompson & Purves 1981; Mossberg & Pettersson 1991). Generally, the depth of these soils is determined by the topography of the landscape, but overall, it is moderately shallow and moderately deep, particularly in the Lowveld area (Nyamapfene 1991). Elevated places such as Mt Mberengwa and Mt Buhwa have a layering of moderately shallow to moderately deep reddish-brown and greyish brown soils which were formed out of the metasediments and some metavolcanic rocks that make up the geology of these two mountains, however, Mt Mberengwa is dominated by shallow to moderately shallow brown, reddish-brown clays formed from mafic rocks (Soil map of Zimbabwe-Rhodesia – 1979; Nyamapfene 1991; FAO-ISRIC 2003). The soils on the Mweza and Doro Ranges are predominantly shallow, and their depth is less than 25cm (Soil map of Zimbabwe-Rhodesia - 1979).

2.2.5. CLIMATE

The climate of Mberengwa is semi-arid, being mainly regulated by seasonal movements of the Intertropical Convergence Zone (ICTZ) which influences the landscape to be predominantly characterised by warm wet summers and cold dry winters (Vincent & Thomas 1961; Zachrisson 1978; Tyson & Preston-Whyte 2000). Maximum temperatures are usually experienced during the summer, particularly in the Lowveld section of Mberengwa, where the highest readings can reach up to 30˚C whilst those of Middleveld sections vary between 21 and 29˚C (Figure 2.4). Rainfall is relatively seasonal; the bulk of it is received during November and April; this period marks the fluorescence of the wet season when most of the domesticated crops are cultivated (Worst 1956; Martin 1978). Local hills such as Mt Buhwa effect orographic rainfall which is brought inland by the monsoon winds rising from the Indian ocean (Huffman 1978; Mossberg & Pettersson 1991). The Middleveld portions of Mberengwa receive much of the rainfall, and recorded totals range between 450 and 600 mm whilst those from the Lowveld areas do not exceed 400 mm (Figure 2.4). The rainfall totals from both the Middleveld and Lowveld sections of Mberengwa are good enough to sustain the cultivation of drought-tolerant crops such as pearl millet *(mhunga)*, sorghum *(mapfunde)*, and finger millet *(rukweza)* (Zachrisson 1978). However, in some instances, little precipitation is received due to climatic oscillations caused by El Niño (Mossberg & Pettersson 1991; Tyson & Preston-Whyte 2000) which positions the Mberengwa landscape to experience acute dry spells during the driest months and periodic droughts in every five or two years (Zachrisson 1978; Shoko 2007). Surprisingly, local farmers are used to these fluctuations and as a dryland, they have cropping mechanisms that enable them to yield bumper harvests from the available rainfall. For instance, they adjust their planting season in tandem with the first rains, locally known as *Gukurahundi,* to ensure a successful harvest (Zachrisson 1978; Jerie & Matanga 2011).

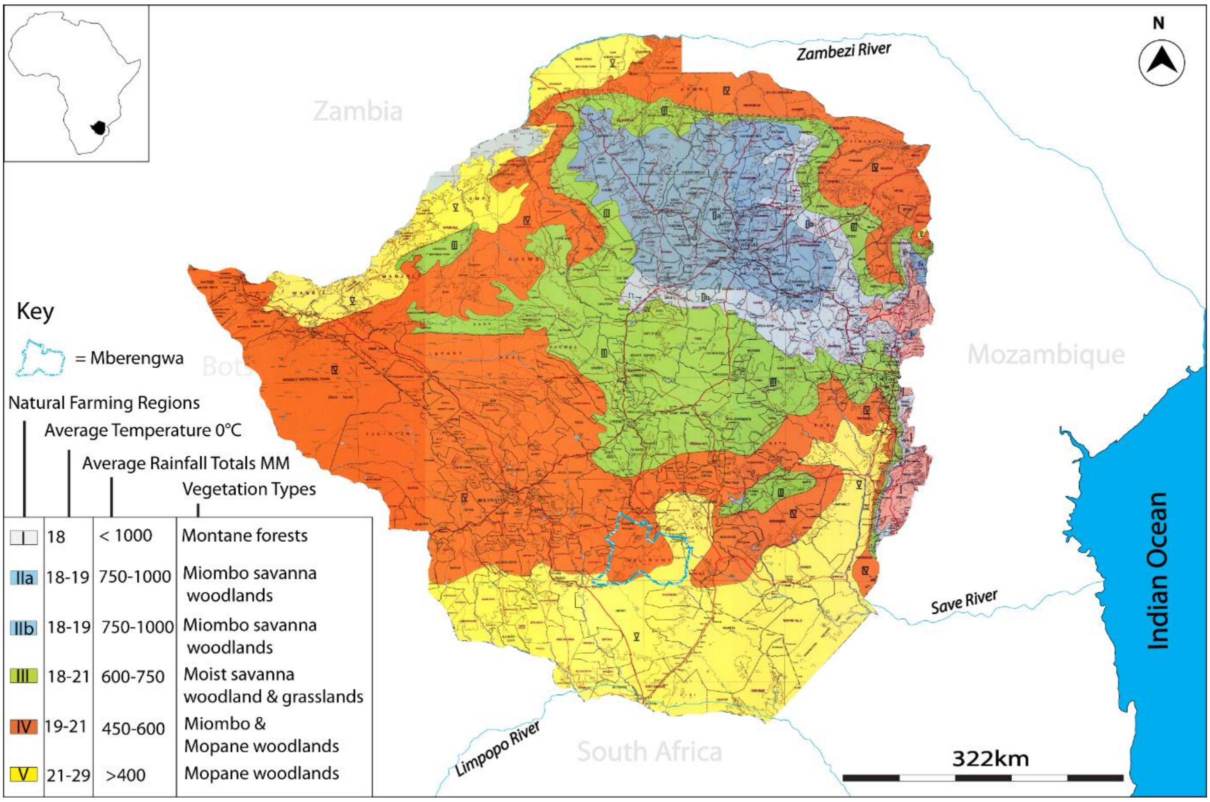


Figure 2.4: Map showing the natural farming regions, climate, and vegetation types of the Mberengwa landscape (Adapted from the 1:1 00 000 Natural Regions and Farming Areas Map of Zimbabwe, 1983)

2.2.6. BIOTA

The vegetation of Mberengwa is greatly influenced by the local climate, hence similar to most semi-arid landscapes, it is dominated by indigenous grass, shrub, and tree species which fall under the Miombo and Mopane woodlands (Figure 2.4). Miombo woodlands are made up of drought-deciduous, semi-evergreen, and semi-deciduous plant species, (Chidumayo 2001; Coates Palgrave et al. 2002), which are largely distributed within the elevated parts of Mberengwa where the bulk of the rainfall is received. The Mopane woodlands populate most parts of the Mberengwa Lowveld, where most mopane species have successfully adapted to the dry conditions, however, these are usually infested with tsetse flies (Summers 1960; Garlake 1978). Key Miombo and Mopane species recorded include *Brachystegia spiciformis* (Msasa), *Colophospermum* (Mopane), *Julbernadia globiflora* (Munondo), *Aloe tauri L. C. Leach* (Aloe) *Brachystegia tamarindoides Benth* (Mountain acacia), *Bivinia jalbertii Tul* (Cobweb seed), *Combretum apiculatum* (Red bushwillow), *Parinaria curatellifolia* (Mobola plum), *Ficus sur* (Cluster fig), *Sclerocarya birrea* (Marula), *Mimusops zeyheri* (Milkwood), *Warburgia salutaris* (Pepper-bark), *Adansonia digitata* (Baobab), *Diplorhynchus condylocarpon* (Rubber tree), *Digitaria* (Common finger grass), *Hyparrhenia* (Common thatching grass), *Uapaca kirkiana* (Mahobohobo) and *Loudetia* (Common russet grass) (Von Sicard 1965:32; Summers 1960; Scoones 1993; Coates Palgrave et al. 2002; Mapaura & Timberlake 2004). Most of these indigenous plant species are useful to the local communities. They are a source of timber used for constructing housing, livestock pens, and wood crafting; traditional herbs for healing sicknesses, browsing and grazing for feeding livestock, firewood used for cooking, and food (i.e. tubers, and fruits) (Bent 1892; Scoones 2001; Mapaura & Timberlake 2004; Brisch 2012). The Mberengwa landscape is also endowed with *Triumfetta annua* (Bur weed), *Amaranthus hybridus* (Smooth pigweed), *Cleome monophylla* (Spindle pod), and *Cleome gynandra* (African cabbage) plant species. Usually these indigenous species thrive during the rainy season and they are mostly consumed as vegetables (Mapaura & Timberlake 2004).

As elsewhere, the Miombo and Mopane woodlands have had a bearing on the animal species that inhabit the Mberengwa landscape. Before the advent of commercial farming, mining and the creation of the Tribal Trust Lands (TTLs), and other colonial projects that deforested the area and pushed away most of the animal species in the late 19th century, historical records of early European travellers, hunters, and prospectors that roamed the Mberengwa during the pre-colonial era show that the landscape was rich in wildlife (see Elton 1873; Hall 1892; Hall &

Neal 1904; Burke 1969). A detailed inventory of some of the recorded wildlife species is presented in Table 2.1, however, it must be noted that most of these mammals, birds, and reptile species still inhabit the Mberengwa landscape, particularly in the neighbouring wildlife ranches such as the Nuanetsi Game Ranch, Bubye Valley Conservancy and the Bubiana Widlife Area (De graaf 1981; Smithers 1986; Skinner & Smithers 1990; Skinner & Chimimba 2005; Manyanga 2006; Castello 2016). The presence of such diversity of wildlife species comes with many benefits. We know from Shona anthropology that wildlife has always been a source of food and raw materials (bone and skin) for making musical instruments, tools, clothing, and mats (Bullock 1927; Holleman 1952; Gelfand 1966; Bourdillon 1976; Zachrisson 1978; Aschwanden 1982, 1989; Gombe 1986; Shoko 2007; Mavhunga 2014, Chirikure et al. 2017b; Manyanga & Pangeti 2017).

Table 2.1. Past and present wild species recorded in Mberengwa (Sourced from Elton 1873; Hall 1892; Manyanga 2001; Skinner & Chimimba 2005; Carruthers 2016)

Taxon	Common Name	Local Name
Orycteropus afer	Aardvark	Hweru/Sambani
Canis mesomelas	Black backed jackal	Gava
Clarias gariepinus	Catfish	Muramba
Alcelaphus buselaphus	Hartebeest	Hwiranondo
Syncerus caffer	Buffalo	Nyati
Tragelaphus scriptus	Bushbuck	Dzoma
Potamochoeus porcus	Bushpig	Humba
Sylvicapra grimmia	Common Duiker	Mhembwe
Crocodylus acutus	Crocodile	Ngwena
Tragelaphus oryx	Eland	Mhofu/Nhuka
Giraffa camelopardalis	Giraffe	Twiza
Lepus capensis	Hare	Shuro/Tsuro
Hippopotamus amphibius	Hippopotamus	Mvuu
Abramis brama	Common bream	Chigwaya
Mellivora capensis	Honeybadger	Tsere
Aepyceros melampus	Impala	Mhara
Oreotragus oreotragus	Klipspringer	Nguruguru
Tragelaphus strepsiceros	Kudu	Nhoro
Achatina sp.	Land snail	Hohzwe
Panthera pardus	Leopard	Mbada
Cercopithecus aethiops	Monkey	Tsoko
Struthio camelus	Ostrich	Mhou
Erethizon dorsatum	Porcupine	Ngara
Procavia capensis	Rock hyrax	Mbira
Redunca redunca	Reedbuck	Bimha
Aethomys chrysophilus	Red veld rat	Mbeva/Matapi

Hippotragus niger	Sable	Ngwarati/Mharapara
Tamiascurus hudsonicus	Squirrel	Mutswiri?
Raphicerus campestris	Steenbuck	Mhene
Stigmochelys pardallis	Tortoise	Kamba
Phacochoerus aethiopicus	Warthog	Njiri
Kobus ellipsiprymnus	Waterbuck	Dhumukwa
Ceratotherium simum	White Rhinoceros	Chipembere
Connochaetes taurius	Wildebeest	Ngongoni/Mvumba
Heterohyrax	Yellow-spotted rock hyrax	Mbira
Equus quagga	Zebra	Mbizi
Panthera leo	Lion	Shumba
Damaliscus lunatus	Tsessebe	Nondo
Tragelaphus angasii	Nyala	Nyara
Crocuta crocuta	Spotted hyena	Bere
Loxodonta africana	Elephant	Nzou

Cattle, goats, sheep, donkeys, and chickens are also prevalent in Mberengwa. These species are domesticated by most families – particularly goats which are the major sources of meat since they can thrive even during times of drought (Zachrisson 1978). However, cattle are also prominent in the area as many of the farms in Mberengwa have been used for cattle ranching for almost a century (Zachrisson 1978; Beach 1994).

2.3. PRECOLONIAL HISTORY

The picture that emerges from oral traditions and written records from European travellers, hunters, and prospectors that roamed southern Africa prior to the advent of British colonial rule shows that long before the migrations of the 18th and 19th centuries, the landscape of Mberengwa was predominantly occupied by numerous Shona polities who co-existed and shared common cultural practices and belief systems of everyday life. (Bent 1892; Von Sicard 1951; Beach 1978, 1980; Livneh 1976; Zachrisson 1978; Bhebe 1999; Ruwitah 1997; Shoko 2007; Brisch 2012). According to Zachrisson (1978:36), these bureaucratic polities were autonomous and fluid; they could be reconfigured, resized, or even disbanded at any given point. Among these included the Negove, Romwe, Negari, and the Nyamhondo (see Zachrisson 1978; Beach 1980). Thus far, the available historical records date the precolonial history of Mberengwa back to the last three centuries and is straddled between the Rozvi-Changamire era (CE 1685 – 1839), the Nguni incursions (CE 1800-1830), and the British occupation around CE 1890 (Mudenge 1974; Beach 1978, 1980; Zachrisson 1978; Van Waarden 2012). Much of the oral tradition was collected by the late Reverend Harold Von Sicard (1951, 1953; 1955, 1956, 1957, 1958), a Lutheran Pastor based at Gomututu and whose seminal work was instrumental in recording the history and anthropology of Shona polities that resided in Mberengwa. Beach (1978, 1980) explored the settlement history of Shona and non-Shona polities that settled within a 30 km radius around Mt Buhwa. Per Zachrisson (1987) provided a comprehensive study of the history of the indigenous groups of Mberengwa, however, with an emphasis on how colonial rule steered change towards their everyday life (Phimister 1980). Aviton Ruwitah's work was instrumental in recording the oral history of the Remba in Mberengwa (Ruwitah 1997). Other related studies focused on the liberation struggle (Bhebe 1979, 1999), and missionary activities in colonial Mberengwa (Söderström 1984, Söderström et al. 2003).

Historians conventionally agree that the Negove is one of the oldest Shona dynasties to settle in Mberengwa sometime around 1730±40 (Bullock 1927; Von Sicard 1955, 1956,1957; Beach 1978, 1980; Zachrisson 1987). According to Beach (1978), this date is synonymous with the year their founding leader – Mutumwapavi – died. Several places have been associated with the origins of their ancestry. Among these are included Wedza (Von Sicard 1955), and Matonjeni (Zachrisson 1987). However, an in-depth study by Beach (1978) shows that the Negove originated from further north in the Mrehwa and Marondera highlands, hence they migrated down south to Mberengwa. The territory of the Negove polity is said to have been bordered by the Runde and Muchingwizi Rivers, and Mt Buhwa. Most of the oral traditions collected by Von Sicard (1955, 1956,1957) emphasized Nenga[14] Hill, Mushonganeburi Hill, Chisungubvu Hill, and Mt Buhwa as former residences and burial places of the Negove ancestry (see also Beach 1978).

The area drained by the Mundi and Mwenezi Rivers on the western side of Mberengwa is regarded by most oral traditions to have been occupied by Romwe agropastoralists affiliated to the Chingoma polity (Von Sicard 1955, 1956,1957; Beach 1978; Zachrisson 1987). These people are believed to have migrated from Romwe Hill east of Mutirikwi under the guidance of Zimusi, their founding leader who died in 1820±24 (Von Sicard 1951:5-7). As suggested by Beach (1978:109) a combination of droughts and raids by the Hlengwe of Rembethu is likely to have forced the Chingoma people to opt for Mberengwa, where they settled at Imbahuru Hill. However, another oral account recorded by the then Ministry of Internal Affairs (1965)

[14] Also known as Nhenga (Von Sicard 1955).

cites the entry of Romwe people to Mberengwa to have been inspired by the need for their specialist rain petitioning services to cure an impending drought, whilst others say they independently chose to settle in Mberengwa sometime around 1800 without any push or pull factors (see Von Sicard 1951; Beach 1978). Subsequently, as recorded by Von Sicard (1951:12) and Zachrisson (1987:21), the Romwe occupation was short-lived, and they eventually migrated further north to the Wedza area. However, the reason why is not provided. Oral history regards the Negari dynasty to have occupied territory the south-eastern end of Mberengwa drained by the Muchingwizi and Runde Rivers (Beach 1978). Their founding ancestor Mutinhima, a renowned Negari leader, died in 1799±32 (Ministry of Internal Affairs 1967; Beach 1978:109).

The area south of the Muchingwizi River is believed to have been occupied by residents of the Nyamhondo polity (Von Sicard 1952; Beach 1978; Zachrisson 1987). Gathered oral traditions regard the Nyamhondo ancestry as part of the Rozvi groups that migrated from the Njanja area in Hwedza under the leadership of Nyamhondo, who died around 1811±28 (Von Sicard 1952, 1953; 1956; Beach 1978; Zachrisson 1987). The area north and south of the Ngezi River stretching to the slopes of Mt Mberengwa is regarded as the territory of the Ngowa dynasty, which was led by Kuvirimara, who died in combat in 1816±28. According to Beach 1978:109), this group is believed to have migrated from the Dondo area, along the banks of the Save River where they proceeded to Chivi and eventually settled in Mberengwa where they displaced the Mazhe people. Conversely, oral traditions collected by Zachrisson (1987:19) redirects the origin of the Ngowa people to Mozambique.

The area stretching eastwards of the Runde River towards the Munaka Range in Chivi is believed to have been a territory of the Nemavuzhe polity which was led by Chiviri[15] who later died around 1760±32 (Beach 1978). Most oral traditions profile the Nemavuzhe people as having occasionally succumbed to Nguni, Venda, and Ndebele raids (Forrestall 1904; Ministry of Internal Affairs 1965; Beach 1978).

Not much is known about the polities which occupied the north-western and south-western flanks of Mberengwa particularly the area drained by the Bembesi, Zingesi, Bubi, Makori, and Mwenezi Rivers, as well as the Doro Range (Beach 1978:109; 1980:207; Zachrisson 1987).

[15] Also known as Vambe (Beach 1978:109).

Most oral traditions omit these areas and therefore little is known about them. Oral traditions collected by (Zachrisson 1987) in 1974 regarded the southwestern end of Mberengwa as a territory of the Mtevaidze dynasty (Zachrisson 1987). It is believed that when the Mtevaidze people migrated from the Great Zimbabwe area in the 1750s they found this part of the Mberengwa landscape occupied by hunter-gatherers whose livelihood was centred on foraging. Similarly, residents of the Chizungu, Humbe, Zumba, Chikomba, Ndanga, Remba[16] , and Bepe polities also occupied the southwestern parts of Mberengwa (Hall & Neal 1904; Von Sicard 1948; Beach 1980). The Ndanga originally migrated from the Gutu and Ndanga area (Zachrisson 1987). A survey of the oral history of the Remba showed that they were part of the indigenous polities that occupied the western parts of Mberengwa, particularly in the Mupandashango area which was under the jurisdiction of the Mposi dynasty around 1700 (Von Sicard 1953, 1957; Mandivenga 1983; Ruwitah 1997). Zachrisson (1987) highlights the Remba as great Ironworkers who had close contact with the Arab traders from the Mozambican coast.

The oral historiography also shows that Mberengwa was at some point inhabited non-Shona polities whose material culture compared with that of the Shona (Bullock 1927; Von Sicard 1948; Beach 1978; Manyanga 2006). According to Zachrisson (1978), the Pfumbi are one of the historical groups under the Matibi dynasty that migrated to Mberengwa around the 1700s. Their roots are traced back to the Limpopo valley in the Marungudze hills, where they are alleged to have been pushed out as a result of the encroaching Nguni incursions. The Pfumbi are said to be closely associated with Venda Mphephu (Zachrisson 1978; Beach 1980, 1994; Manyanga 2006). According to Beach (1978:110), the Venda Mphephu fled from the Afrikaners in Transvaal and sought refuge around the Mt Buhwa area in 1898. Other groups included the Mataga who occupied the western section of the area drained by Mundi River (Beach 1978) as well as the Hlengwe who settled along the Buhwa Range around 1895. Penetration of Shangani, Mpanga, Ndebele, and many other migrant groups fleeing from Shaka's army in KwaZulu-Natal into the Mberengwa landscape around the 1830s, resulted in displacement and annihilation of many Shona and non-Shona polities. However, their ultimate displacement came upon the imposition of British colonial rule. As the British settlers occupied Mberengwa in 1894, they seized most of the fertile portions of the landscape, particularly the Middleveld zones which were ideal for commercial farming, mining, and cattle ranching. The

---

[16] Also known as Lemba (Hall & Neal 1904; Ruwitah 1997).

locals were evicted and resettled in the infertile portions of Mberengwa which were mostly situated in the Lowveld area where a chain of the Mberengwa Tribal Trust lands (BTTL) was formed within a 3 760 km^2 radius which accommodated over 150 000 people (Zachrisson 1978; Beach 1980; Bhebe 1999). Nevertheless, most polities were maintained, but, as a way of aligning them with the settler government for easy administration, they were converted into permanent and static chiefdoms that operated under the constitution of the colonial government (Zachrisson 1978; Bhebe 1999).

Before the advent of British colonial rule, as recorded in several texts (i.e. Bullock 1927; Bent 1892; Von Sicard 1951,1956, Beach 1978, 1980; Zachrisson 1978; Ruwitah 1997; Shoko 2007; Brisch 2012), various Shona polities that resided in precolonial Mberengwa shared a similar socio-political organisation structure that was made up of three levels. *Musha* (homestead) was regarded as the backbone of every polity that ever existed in the historical period, however, its functions and influence were limited to the physical boundaries demarcated on a piece of land which made up the homestead (see Zachrisson 1978). *Musha* thrived under the stewardship of a *Samusha* (family head) who directed the everyday operations of the family which was comprised of wives, children, and immediate relatives (Zachrisson 1978; Shoko 2007). The role of a *Samusha* was hereditary as it passed through inheritance from father to the oldest son (Beach 1980; Shoko 2007). The infrastructure at the *musha* mainly comprised of rondavel-houses and granaries made of wood, grass, and *dhaka* clay (Bent 1892; Brisch 2012). Perhaps for health reasons, livestock pens, particularly those of cattle, were located a stone's throw away from the main houses and near the fields. *Musha* could be moved to another new location after some considerable years of sedentary existence (Zachrisson 1978; Beach 1980). The move could be inspired by the need to secure new farming land, which was fresh and fertile, or misfortunes or even death of the *Samusha*. It is well-known in *Shona* customs that upon the death of a *Samusha*, the sons divided among themselves their father's estate *(nhaka)* (Shoko 2007). Some sons would inherit the *musha* whilst others would move away to establish their own *musha*, particularly when they married. Usually, movement within these societies was flexible since the land was collectively owned and, in cases where the whole family migrated to a new place, the vacated houses usually remained unoccupied and these were locally referred to as *matongo* (Von Sicard 1953:67).

The second level of socio-political organisation within the Shona polities of precolonial Mberengwa was the village *(dunhu)* (Zachrisson 1978; Beach 1980; Shoko 2007; Ruwitah 1997). Analogous with most indigenous communities of southern Zambezia, the village was led by a headman who was locally referred to as *Sadunhu*. As clearly articulated by Zachrisson (1978:38) *dunhu* was an amalgamation of *misha* (plural) that varied considerably in size and population. The *dunhu,* like *musha,* had well-defined boundaries which normally were natural features such as rivers and mountains. A headman was usually related to the royal family and similar to the office of the *Samusha*, his position was hereditary. Usually, within a royal family one son had the ultimate power and ruled as the main leader *(mambo)* whilst others took the *sadunhu* office. However, in some cases, non-royal individuals could take over these administrative posts upon selection by the royals. *Sadunhu's* administered villages on behalf of the *mambo*. They were mostly responsible for distributing land to newcomers who joined their villages and adjudicated disputes at village level, while they referred the more pressing issues to the *mambo* who was overall in charge (see Beach 1980).

Nyika (country) formed the third and apex layer of most Shona polities in precolonial Mberengwa (Von Sicard 1956; Zachrisson 1978; Beach 1980; Bhepe 1999; Shoko 2007). This comprised an amalgamation of all *matunhu* (villages) that created a large territory but not too large (see Beach 1978). The size of the *Nyika* varied but as derived from the works of Beach (1980), Chimhundu (1992) and Chirikure et al. (2017a) it rarely transcended a 100 km radius. Those in charge of the political affairs were called the royalty *(veumambo)*, whilst the senior leader *(mambo or ishe)* was overall in charge of the entire polity. Several leaders who were prominent in precolonial Mberengwa were recorded in numerous oral traditions. These included Mposi, Negove, Mtevaidze, and Negari (Bullock 1927; Von Sicard 1956; Zachrisson 1978; Beach 1980). The capital in which the *mambo* resided was known as *guta*, it accommodated his residences, which were locally known as *muzinda* meaning the seat of political power. As recorded in several oral traditions, various *mizinda* (plural) were usually built on elevated hilltops and kopjes such as Imbahuhuru, Honda, Mupandashango, Mt Mberengwa, Mt Buhwa, and Nenga (Von Sicard 1956; Zachrisson 1978; Beach 1980). Some of these royal residences had drystone walled platforms and free-standing enclosures built of granite and other stones and were locally known as *masvingo* or *zvidzitiro*[17] (Bent 1892; Von Sicard 1953, 1956, 1957; Zachrisson 1978; Beach 1978; 1980; Brisch 2012). A *mambo* had an advisory council comprised of *machinda* and as the highest authority, he had a court at his palace referred to as *dare* where he adjudicated disputes and formulated plans and policies for

[17] During his visit of the Negove homesteads in 1933, Von Sicard (1957:10) noted rough walling which served as windbreaks and screens for the rondavel-houses and granaries *(zvidzitiro)*.

his polity. As illustrated by Zachrisson (1978:39), the majority of these the leaders were not dictators, their rule was based mainly on enhancing the welfare of their subjects. It was only in occasional events where they were paid fines by their subjects during court sessions and random gifts *(zvipo)* which were delivered to them as appreciation. Thus, their livelihood was dependant on their ways of living since they were also hunters, metal workers, and farmers. *Madzimambo* were also regarded as facilitators of annual agricultural fertility rituals such as *mukwerera* where they gathered with their subjects and the local spirit mediums *(masvikiro)* a few months before the rainy season to ask for rain from their ancestry (Zachrisson 1978; Shoko 2007). Succession to the chieftainship was collateral (Zachrisson 1978:39; Beach 1980). The eldest son took over from the father, in the case of his death, the second eldest brother would take over until succession eventually reached the youngest, surviving son. However, typical cases of dispute recorded elsewhere (i.e. Beach 1980) would lead other sons to rebel and as a result, they established their own independent polities. As demonstrated in several accounts, land in Mberengwa was collectively owned within a polity, hence, nobody – no matter how poor – lacked land. Nevertheless, the *mambo* remained the sole custodian of the land, consequently, he oversaw its distribution and utilisation thereof (Beach 1978; 1980; Zachrisson 1978; Shoko 2007).

Agriculture was regarded as the basis of the livelihood of most Shona polities in Mberengwa therefore most people depended on it for food (Shoko 2007). The picture portrayed by most oral traditions recorded by Von Sicard (1953, 1956, 1957, 1958), and Zachrisson (1978) shows that each homestead in precolonial Mberengwa had a piece of land whereupon they cultivated crops such as sorghum *(mapfunde)*, pearl millet *mhunga)*, and finger millet *(rukweza)* for daily subsistence. Cattle *(mombe)*, sheep *(makwai)*, goats *(mbudzi)*, and chickens *(huku)* were also domesticated as food and wealth sources since they constantly multiplied (Bent 1892; Zachrisson 1978). However, during a drought *(shangwa)*, supplementary food was acquired through hunting wild game, fishing, and even gathering wild fruits, and vegetables (Beach 1980).

The historical record also shows that the communities of precolonial Mberengwa were involved in the production of numerous crafts that included pottery, ornaments, basketry, weapons, tools, textiles, and sculpture (Bent 1892; Von Sicard 1953, 1957; Zachrisson 1978; Beach 1980; Brisch 2012). Mining of iron, copper, and gold was also conducted by these communities to the extent that early settlers who occupied Mberengwa in 1894 established their mining claims in ancient workings which had been previously worked by the locals

(Zachrisson 1978). Some of these included open pits in the Mweza and Buhwa ranges (Hall & Neal 1904; Summers 1969; Zachrisson 1978). During his inspection of the Muchingwizi (Cesingo) site, Von Sicard (1957:11) encountered two women who in their youth used to source iron ore *(mhangura)* at Mt Buhwa before the British took over.

It must be noted that the historiography of precolonial Mberengwa is limited just as with any other discipline. Some scholars who made sterling contributions, particularly the likes of Von Sicard, were not trained as historians (see Beach 1983) thus their thinking was hinged on the thoughts of a tribal and static Mberengwa, and therefore, some of their narratives had to be cross-examined with oral traditions that were collected by trained historians such as Beach (1978); and Zachrisson (1978). Furthermore, as experienced in most cases in oral history (see Vansina 1971), the authoritative voices of the various dynasties dominated in most of the traditions and, as a result, little could be gathered about the subjects that were ruled by these dynasties.

2.4. IRON AGE ARCHAEOLOGY

2.4.1. OVERVIEW OF THE IRON AGE SEQUENCE IN MBERENGWA

The Iron Age archaeology of Mberengwa broadly stretches from the EIA (CE 200-900), to the LIA (CE 1000-1840) eras. The beginning of the Iron Age in Mberengwa is highlighted by the presence of Bambata-ware (CE 150-650) at places such as Chamakwangwadza cave (Cook 1970, Huffman 1978). According to Huffman (2007:213), Bambata-ware which is mostly characterised by thin pots with decorated lips, sprouts, and high density of incisions and fine-toothed comb-stamping, represents the vanguard of the Kalundu agropastoralists who spread into southern Africa sometime between CE 150 and 650. However, it must be noted that there are other scholars who largely recognise Bambata pottery as the material culture of the Late Stone Age hunter-gatherers (i.e. Reid et al. 1998, Sadr & Sampson 2006; Phillipson 2005). Nevertheless, later around CE 300, we see the emergence of Ziwa agropastoralists affiliated to the Nkope branch of Urewe. According to Huffman (2007:135), these EIA communities reached Mberengwa and other parts of southern Africa via the Great Lakes region, and their timeline is conventionally dated between CE 300-550 (also see Robinson 1961). Ziwa-ware was mostly characterised by carinated and subcarniated bowls which were mostly decorated with broad bands of large comb-stamping. As the Ziwa agropastoralists spread westwards and southwards, their pottery developed into Gokomere facies (CE 550-750) which was mostly characterised by oblique comb-stamped pots. Typical settlements where Gokomere ceramics were recovered included Chamakwangwadza cave, Chizuhwe, Mushonganeburi, Chisungubvu, 2030:DA4, 2030:CB61, 2030:CB61, 2030:CB19, and 2030:DA5 (Von Sicard 1956, 1957; Huffman 1973, 1978; Van Der Merwe 1978). Later around CE 750 and 1050, Mberengwa was mostly occupied by Zhizo agropastoralists who decorated their pots with diagonal and horizontal rows of comb-stamping, incisions, and occasional bangle-bead-impressions. Typical Zhizo sites included 2030:CB1, 2030:CB24, 2030:CB24, and 2030:CB25 However, at some sites particularly those surveyed by Huffman (1978) (i.e. 2030:CB16, 2030:CB12, 2030:CB49, and 2030:CB61) as demonstrated in Figure 2.5, both Gokomere and Zhizo ceramics appeared together which gives the possibility that the makers and users of Gokomere and Zhizo-ware might have networked at economic and social levels.

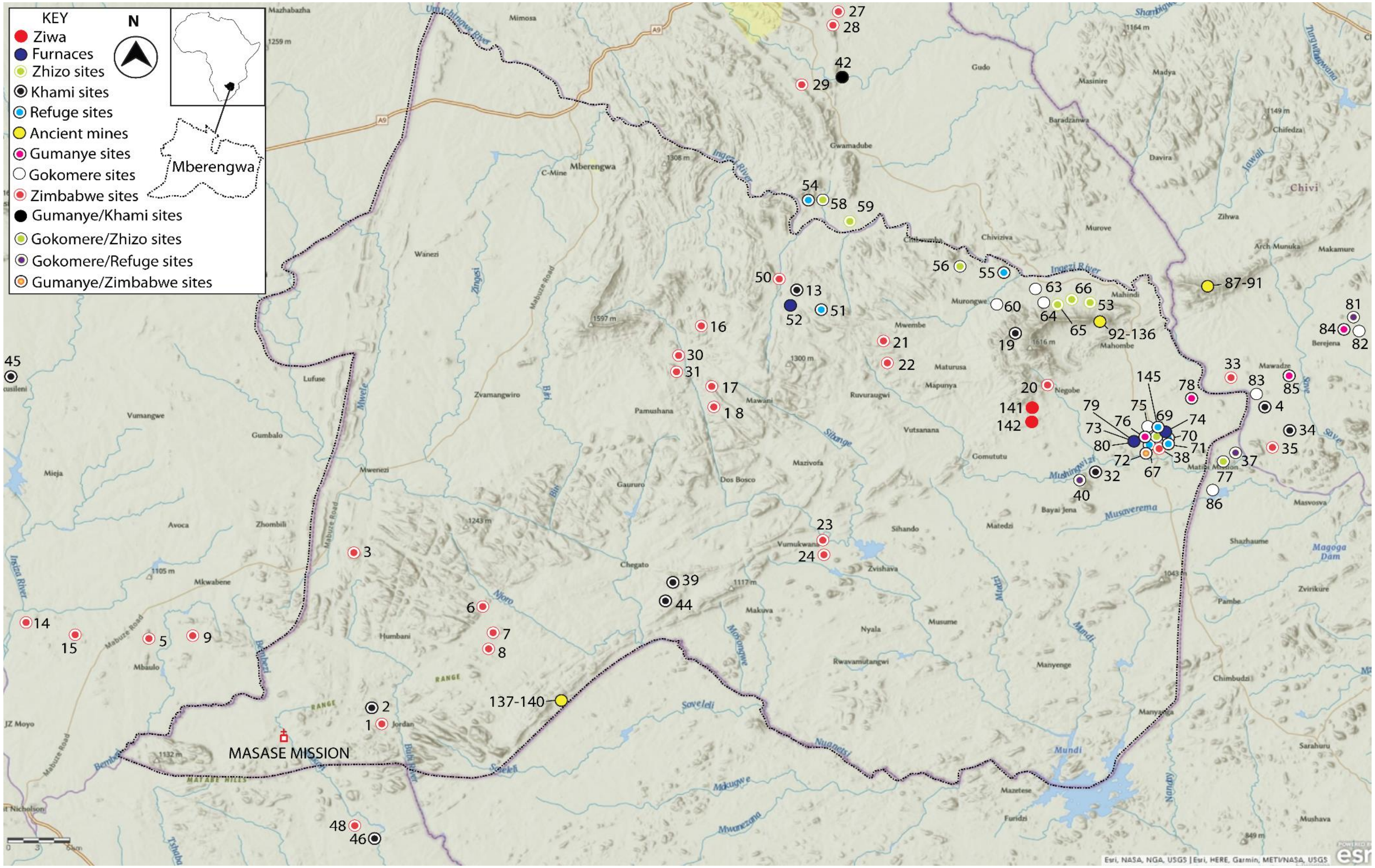


Figure 2.5. Distribution of Iron Age sites in and around Mberengwa. 1 Chumnungwa, 2 Little Chumnungwa, 3 Check Ruin, 4 Chomuruvati, 5

Watoba, 6 Isinknombo, 7 Gombo's 1, 8 Gombo's 2, 9 Molindula, 10 Ruins [1], 11 Ruins [2] , 12 Ruins [3] , 13 Rupungubwe, 14 Ihurzi, 15 Sesinga, 16 Mundi, 17 Nuanetsi, 18 Little Nuanetsi 19 Buhwa, 20 Little Buhwa, 21 Gorongwe, 22 Little Gorongwe , 23 Escep(g)we, 24 Little Escep(g)we , 25 Ruins [1] , 26 Ruins [2] , 27 Mpopoti, 28 Little Mpopoti, 29 Wedza, 30 Biri, 31 M'wele Tributary, 32 Muchingwizi, 33 Pamuuyu, 34 Domboshoko, 35 Chipukuswi 36 Tokwe River, 37 Mushonganeburi, 38 Nenga, 39 Rubabvu, 40 Chisungubvu, 41 Gwamakuyo, 42 Chamabvepfa, 44 Dwala Farm 2, 45 Lumene, 46 Mkashi River, 47 Mdenezero, 48 Ensindi 2, 49 Sabafu, 50 Zumnungwe, 51 2030:CA14, 52 2030:CA15, 53 2030:CB1, 54 2030:CB5, 55 2030:CB11, 56 2030:CB12, 57 2030:CB15, 58 2030:CB16, 59 2030:CB17, 60 2030:CB19, 61 2030:CB20, 62 2030:CB21, 63 2030:CB22, 64 2030:CB23, 65 2030:CB24, 66 2030:CB25, 67 2030:CB36, 68 2030:CB39, 69 2030:CB49, 70 2030:CB50, 71 2030:CB51, 72 2030:CB52 ;73 2030:CB54, 74 Nenga 2030:CB58, 75 2030:CB59, 76 2030:CB60 77 2030:CB61, 78 2030:CB62, 79 2030:CB65, 80 2030:CB66, 81 Chamakwangwadza cave, 82 2030:DA4 83 2030:DA5, 84 2030:DA10, 85 2030:DA16, 86 Chizuhwe; 87 R2707; 88 R3035; 89 R819; 90 R929; 91 R930; 92 R2699 ; 93 R3026; 94 R3027; 95 R3041; 96 R2700; 97; R3037; 98 R3019; 99 R869; 100R3022; 101 R3036; 102 R3022; 103 R3038; 104 R2071 105 R3020; 106 R3021; 107 R2702; 108 R926; 109 R3367; 110 R3040; 111 R2704; 112 R2703; 113R2708;114 R2709; 115 R2710; 116 R2711; 117 R2712; 118 R2713; 119 R2714; 120 R2715; 121 R2716; 122 R2717; 123 R2718; 124 R2719; 125 R2720; 126 R2721;127 R3024; 128 R3018; 129 R927; 130 R928; 131 R3023; 132 R2732; 133 R3274; 134 R3025; 135 R2880; 136 R-; 137 R2733; 138 R3028; 139 R3029; 140 R3030; 141 Buchwa 2030 C2,; 142 Buchwa 2030 C2, ; 145 Nenga Hill. A comprehensive site inventory is provided in Appendix 1 (Produced using ArcGIS & Adobe Illustrator databases).

As EIA farmers these communities sedentarily settled in small villages with widely scattered houses and grain bins built of pole, grass, and *dhaka* on open flats along the river valley regions (Huffman 1978; Van Der Merwe 1978; Burret 2006). These societies also manufactured shell beads and engaged in nonaligned smelting and smithing of metals for everyday use (Von Sicard 1956,1957; Huffman 1978; Burret 2006). Recovery of clay women figurines at Mushonganeburi and site 2030:CB1 confirmed figurine making as one of the crafting activities practiced during the first millennium (Von Sicard 1957; Huffman 1978).

The advent of the LIA era in Mberengwa is associated with the rise of Gumanye and other Zimbabwe culture communities (Huffman 1973, 1978; Van Der Merwe 1978). According to Huffman (2007:243), the timeline of the Gumanye agropastoralists in southern Africa is conventionally dated between CE 1030-1250, however, a recalibrated radiocarbon date from Nenga 2030:CB58 one of the Gumanye furnace sites in Mberengwa excavated by Van der Merwe (1978) in 1975 using OxCal v4.3 at 95.4% resolution (Figure 2.6) shows an older date which places the timeline of Gumanye agropastoralists in Mberengwa to have dated back as far as CE 779.

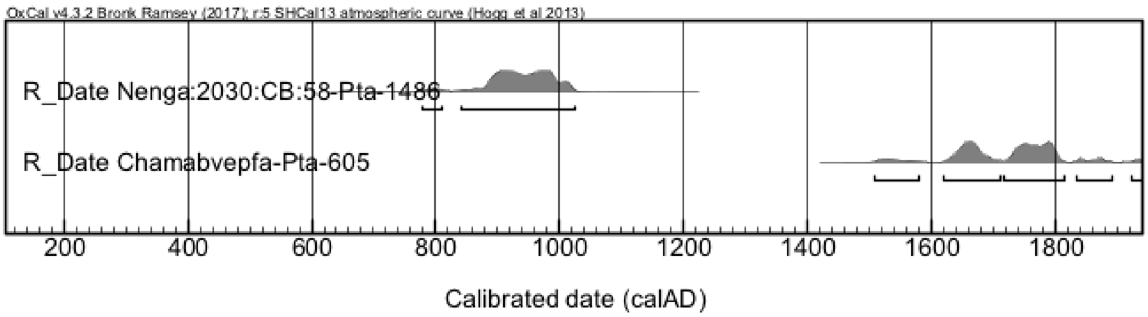


Figure 2.6. Available radiocarbon dates for dated Iron Age sites in Mberengwa. These were calibrated using the OxCal v 4.3 using the southern hemisphere atmospheric curve (Hogg et al. 2013).

So far the available data restricts settlements of the Gumanye people to the Mt Buhwa area particularly at those sites (see Figure 2.5; Appendix 1) where Huffman (1973, 1978) and Van der Merwe (1978) surveyed, however, it must be noted that their settlements also spread into the neighboring districts such as Chivi at sites such as Gumanye Hill - the type site, and Chivowa, stretching further south into the Shashi Limpopo Basin (Robinson 1961; Sinclair 1987). Similar to the EIA societies, not much research has been conducted towards the development of the culture-history of the Gumanye agropastoralists in Mberengwa except the work of Huffman (1978) and Van der Merwe (1978) at Nenga 2030: CB58. Nevertheless, from the little data that we have, we know that the Gumanye people, just like their EIA predecessors, engaged in metallurgy, shell-bead making, figurine crafting, Indian Ocean trade, and resided in plastered pole and *dhaka* houses. Their houses were mostly sited on the elevated ground such as granite hilltops (Huffman 1987:84) perhaps for defense purposes (Mitchell 2002), signaling class distinction (Chirikure et al. 2013a), or enabling a wider view of the landscape (Sinclair 1987). From a regional perspective, the Gumanye agropastoralists are believed to have been the ancestors of the Karanga-speaking people who build Zimbabwe type stone walled settlements (Sinclair 1987; Van Waarden 1998; Pikirayi 2001; Chirikure et al. 2013a). For this reason, some scholars attribute them as the propagators of the Zimbabwe-styled stone-walled architecture (e.g. Robinson 1961; Chirikure & Pikirayi 2008; Chirikure et al. 2018).

The presence of Iron Age communities affiliated to the Zimbabwe tradition in Mberengwa is demonstrated by numerous drystone walled enclosures whose architecture was comprised of free-standing walls and terraced platforms at sites such as Little Buhwa, Mundi, Nenga, Pamuuyu, Gorongwe, Mpopoti, Chipukuswi, Kongezi, and Chumnungwa, which Garlake (1978:484) regarded as the largest of them all (Appendix 1). So far, no locally derived radiocarbon dates are able to place the chronology of Zimbabwe communities in Mberengwa in a specific timeline, but conventional radiocarbon dates from other sites in southern Zambezia show that the Zimbabwe agropastoralists thrived between CE 1300 and CE 1660 (Sinclair 1987; Pikirayi 2001; Chirikure et al. 2018). However, the available data demonstrated in Figure 2.5 shows that most of these sites were situated on top of granite kopjes along prominent rivers such as the Bubi, Bembezi, Runde, Mwenezi, Mundi, Mupwapwezi, Ingezi and Muchingwizi (Hall & Neal 1904; Huffman 1978). As shown in 2030:CB52 (Figure 2.5; Appendix 1), some of the sites were former homesteads of the Gumanye people. Numerous finds recovered by antiquarians and professional archaeologists at sites such as Chumnungwa, Mundi, Nenga and Pamuuyu show that they engaged in various crafting activities that included stonemasonry, figurine making, and pottery. Nevertheless, we are yet to know more about these aspects of their everyday life since most of the data about the archaeology of these societies is largely known from cursory datasets that were drawn from the better-researched sites such as Great Zimbabwe. Nevertheless, we also know that settlements of these LIA sites were situated close to the Buhwa, Mberengwa and Mweza greenstones belts perhaps as a strategy to harness iron, copper and other minerals which were smelted and fabricated into jewelry, weapons and utility tools (Hall & Neal 1904; Huffman 1978).

The landscape of Mberengwa was also inhabited by the Khami agropastoralists at sites such as Buhwa, Little Chumnungwa, Rupungubwe, Chomuruvati, Muchingwizi, Domboshoko, and

Chamabvepfa (Figure 2.5; Appendix 1). As discussed, in the introductory chapter their presence was largely characterised by the presence of globular pots and tall necked jars decorated with polychrome bands and panels (red and black motifs), occasional incisions and graphite burnish designs (Bent 1892; Hall & Neal 1904; Von Sicard 1957; Cook 1970; Huffman 1973, 1978, 1979). Their homesteads were largely built on artificial platforms reinforced with drystone revetment or occasional free-standing walling which were mostly decorated with check designs (Cook 1970; Garlake 1970; Huffman 1978). Some of these homesteads were former residences of the Gumanye people (see Figure 2.5). Recalibration of a radiocarbon date from Chamabvepfa which was excavated by Huffman (1979) places the Khami era to have flourished between CE 1621 and 1718 (see Figure 2.6). Regionally, the Khami period in the Mberengwa archaeological record is mostly associated with the Torwa (CE 1250-1685), and the Rozvi (CE 1685-1900) states whose major capitals were Khami, and Danamombe respectively CE 1250 (Beach 1980, Pikirayi 2001; Van Waarden 2012; Chirikure et al. 2012, 2013a, 2017a; Mukwende et al. 2018).

Around the 18^{th} and 19^{th} centuries, some Iron Age people living in Mberengwa are believed to have succumbed to the effects of the Nguni incursions, which resulted in most Iron Age communities retreating to concealed or refuge settlements such as Chisungubvu, Nenga Hill and Mushonganeburi cave (Figure 2.5; Appendix 1) until the British took over in 1894 (Livneh 1976; Zachrisson 1978; Beach 1980; Bhebe 1999). Nevertheless, not much changed in terms of their everyday routine; as demonstrated in Von Sicard (1957) and Huffman (1978), they still practiced metallurgy, crop cultivation, shell-bead making, stonemasonry and even gathered tortoises – perhaps as a supplementary food.

2.4.2. HISTORIOGRAPHY OF IRON AGE RESEARCH

The initial recognisance of the Iron Age archaeology of Mberengwa was carried out by James Theodore Bent, a British explorer and antiquarian, who was hired by Cecil John Rhodes in 1891 to excavate Great Zimbabwe. As recorded in his 1892 book titled *"The Ruined Cities of Mashonaland"*, Bent travelled to Great Zimbabwe in the company of his wife Mabel. Along the way, they passed through the site of Chomuruvati, a Khami phase site situated on the banks of the Runde River (Figure 2.5) where they took some photographs and metric attributes of the decorated free-standing stone walls and platforms (also see Brisch 2012). Bent (1892:103) concluded Chomuruvati as a fortress and temple to the inhabitants of the area.

The next phase of research was undertaken by the Rhodesia Ancient Ruins Limited, an antiquarian company operated by Wallace, G. Neal and Johnson G, which was commissioned and sponsored by Rhodes and the British South African Company in May 1895 to search for gold and other hidden treasures at Iron Age sites in Mberengwa and other parts of southern Zambezia. The duo identified more than 31 Zimbabwe culture sites which all had stone-walled enclosures and out of the total, they excavated 21 sites (see Appendix 1 for a comprehensive inventory) from which they respectively concluded that three of the major sites were the provincial centres (capital towns) of Great Zimbabwe state that controlled all the other 'smaller' sites in Mberengwa. Chumnungwa[18] was regarded as the main capital that controlled the southern side of Mberengwa, and its jurisdiction extended into Insiza (Filabusi) and Gwanda east. Mundi was regarded as the centre of the eastern end of Mberengwa whilst Mpopoti controlled the northern parts of Mberengwa (Hall & Neal 1904:81). Thus, similar to the centre-periphery model, modelled from the world systems theory (sensu Wallerstein 1974; Rowlands, et al. 1987; Kardulias & Hall 2008; Harding 2013), Hall and Neal (1904:8) regarded these as centres that were strategically set up by Great Zimbabwe to oversee mining and distribution of gold and other precious minerals.

Therefore, time and again they were expected to collect gold from the 'smaller' sites which they would channel back to the capital Great Zimbabwe for elite consumption and international trade activities. Hall and Neal (1904), regarded these sites as provincial gold smelting precincts on the basis that they exhibited significant evidence used to process gold and which included, crucibles, tuyeres, furnace fragments, gold pellets, and gold dust. Secondary evidence used to support this hypothesis included finished gold and copper jewellery (i.e. beads, bangles, bracelets, and chains) which they looted from human burials they uncovered at sites such as Mundi, Mpopoti, and Insinkombo. Hall and Neal (1904:101) regarded these skeletal remains to have belonged to the elites who were in charge of these alleged district centres of Great Zimbabwe. These included the skeletal remains of seven individuals that were uncovered at Chumnungwa who were buried in shallow graves in the original positions they had died. Hall and Neal (1904:102) concluded them to be victims of a massacre during the conflict. Other finds recovered at the Zimbabwe culture sites (Appendix 1) surveyed and excavated by the

---

[18] Previously referred to as Umnukwana, Camunungu or Camunhungu ruins by early researchers such as Hall & Neal 1904:227; Von Sicard 1957:19; Livneh 1976). Locally it is also known as Chomutangala Felix Ncube (pers. comm. 2017).

Rhodesia Ancient Ruins Limited company included a soapstone game board, iron spearheads, stone pebbles, iron arrowheads, copper needles, iron hoe heads, soapstone bowl fragments (decorated with a herringbone pattern) and local pottery which was neither described nor illustrated. Most of the finds recovered at the Zimbabwe culture sites that were excavated by Hall and Neal (1904) were similar (see Appendix 1), however, recovery of double iron bells[19] similar to the three which had had already been recovered at Great Zimbabwe and San Salvador in Angola (Bent 1892), and a HIH croisette copper ingot, similar to those found around Great Zimbabwe and Mazowe area, made the site of Chumnungwa exceptional. Perhaps this was the reason why Chumnungwa, out of all the sites they excavated in Mberengwa, got mapped (see Figure 2.6). Nevertheless, the mapping exercise was only limited to the walled area. A similar site map that excluded the unwalled areas of Chumnungwa was also produced by Matenga and Chikwanda (1999:172).

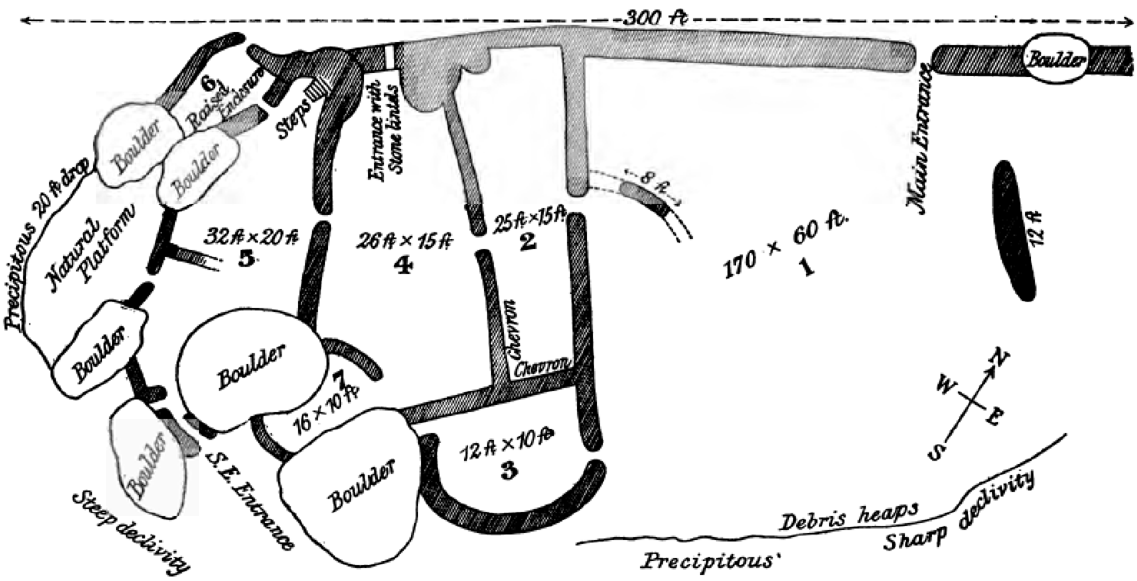


Figure 2.6: The initial site map of Chumnungwa that was produced by Hall and Neal (1904:228-229)

Around December 1900 the Rhodesia Ancient Ruins Limited ceased their antiquarian operations in Mberengwa and most parts of southern Zambezia due to a growing awareness of the massive damage they were doing to the sites (Hall & Neal 1904). In a bid to justify their ruinous operations Neal connived with Richard Nick Hall and they published all their findings

[19] Also known as iron gongs (see Walton 1955; Vansina 1969).

on the work of the Rhodesian Ancient Ruins Company into journal articles and eventually in a book entitled, '*The Ancient Ruins of Rhodesia'* which was printed in 1902. Their main thesis regarding the authorship of these Mberengwa clusters of stone-walled sites and those elsewhere in southern Zambezia was centred on that of Karl Mauch (Burke 1969) and Bent (1892) which alluded to the Arabians and Phoenicians of the Middle East. Nevertheless, even though the work of Hall and Neal (1904) was largely unscientific and ruinous, as bemoaned by other researchers (i.e. Randal McIver 1906; Caton-Thompson 1931; Garlake 1973b; Pikirayi 2001) their report on the archaeology of the Zimbabwe culture in Mberengwa remains one of the most comprehensive.

As part of his oral history research, Von Sicard (1956, 1957) surveyed the north-eastern and south-eastern parts of Mberengwa in a bid to identify ancient settlements of the Negove polity. This led him to identify new Iron Age sites such as Nenga Hill, Rubwe ruchena, Rupungubwe, Muchingwizi, Mushonganeburi, Chesvingo 1 (Cesingo 1), Rubabvu, Chisungubvu, and Chizuhwe (see Appendix 1). His survey data, however, was less informative and marred by his obsession with alluding most of the Iron Age sites as Remba and Negove ancient abodes, which operated under the hegemony of Great Zimbabwe without proper archaeological fieldwork. Nevertheless, his work played a pivotal role in the documentation of the Iron Age archaeology of Mberengwa and the recording of vandalism of most of the sites he had surveyed and those that had been reported by Hall and Neal (1904) such as Mundi (Cesingo 2) and Buhwa. For instance, at Buhwa, Von Sicard (1957) collected surface finds of shell beads (ostrich eggshell and freshwater mussel which were manufactured onsite), glass beads, and polychrome ware which had geometrical designs, reminiscent of Khami pottery. According to Von Sicard (1957), Buhwa yielded numerous glass beads – many more than any other Iron Age site in Mberengwa. Following Hall and Neal (1904) Von Sicard concluded that Buhwa was a precolonial mining precinct of Mberengwa. This followed his recovery of numerous finds of metalworking debris such as furnaces, tuyeres, and finished goods such as bangles, beads (copper and iron), a bronze chisel, and copper wire.

Using survey data from the Rhodesian Mines Department, the National Museum and Queen Victoria Museum, Roger Summers (1969:35-103) compiled an inventory of more than 54 gold and copper ancient mine sites spread over the Buhwa, Mberengwa and Mweza greenstone belts which were identified by various informants, including Harold Von Sicard (see Appendix 1). Some of these sites included R2880, an open-pit site that had a series of revetment walls, and soapstone bowls. According to Summers, such mines were operated by the ancestors of the

Shona people since the beginning of the Iron Age until the advent of the Nguni and the British in the 19^{th} century, however, due to lack of archaeological research, these sites could not be dated or assigned to any Iron Age traditions.

As a follow up to the initial survey conducted by Bent (1892:103), Cooke (1970) with the help of the Rhodesian Schools Exploration Society sunk a 2m x 2m test pit at Chomuruvati (unwalled area). Part of his findings included glass beads, a house floor made of *dhaka*, shell beads *(Achatina sp)*, grinding stones, stone scrapers, iron bangles, fine copper wire, copper beads, and locally made pottery which he described as typical of polychrome-ware which had been recovered at Khami by Robinson (1959).

Garlake (1970) carried out a pilot study of the style and chronology of 83 stone walled Iron Age sites in Rhodesia (now Zimbabwe). Twenty-two of the total sites he explored were located in Mberengwa (see Table 2.2), and, five of these (Pamuuyu, Domboshoko, Tokwe River, Dwala Farm 2 and Mkashi River) were new additions to the Mberengwa Iron Age sites database, whilst the remainder had been identified by previous researchers. Having considered the architectural attributes of the walling, which included, function, form, and decoration, Garlake's study concluded the typology of the Mberengwa stone-walled sites to have broadly fitted within six architectural styles that define the Great Zimbabwe-Khami eras (see Table 2.2). Based on the field data he gathered from his study of the correlation between pastoralism, tsetse fly regions, and location of Zimbabwe-type sites during the later Iron Age, Garlake (1978) suggested Chumnungwa (Figure 2.2) as one of the ten largest Zimbabwe tradition sites on the landscape of southern Zambezia that politically controlled all the Zimbabwe tradition sites in Mberengwa, and the neighbouring Mwenezi, Zvishavane, Chivhu, Gwanda, Matopo, Umzingwane, Insiza, and Beitbridge, districts.

Table 2.2. Garlake's (1970) architectural styles of stone walled Iron Age sites he sampled from Mberengwa

Architectural styles	Key architectural attributes	Iron Age sites sampled from Mberengwa
Style 1	Freestanding walls built with undressed blocks and decorated with herringbone pattern. These have squared entrances	Chumnungwa
Style 2	Freestanding walls built with dressed blocks and decorated with chevron pattern. Most of the entrances are rounded	Buhwa, Little Buhwa, Chumnungwa
Style 3	Retaining walls built on artificial platforms	Chipukuswi, Tokwe River,
Style 4	Freestanding walls built with both dressed and undressed granite blocks. Entrances were usually squared, and occasionally rounded	None
Style 5	Revetment walls built on artificial platforms. These were decorated with check patterns, and panelled herringbone. The walls have squared entrances	Gorongwe, Little Gorongwe, Domboshoko, Sabafu, Rupungubwe
Style 6	Free standing walls, largely decorated with check, cord, chevron, and herringbone patterns	Nyamabvepfa, Rupungubwe, Muchingwizi, Chomuruvati, Wedza, Ensindi 2, Kongezi, Little Chumnungwa, Rubabvu
Style 7	Retaining walls built on circular platforms. They were frequently erected for individual houses	Mkashi River, Dwala Farm 2

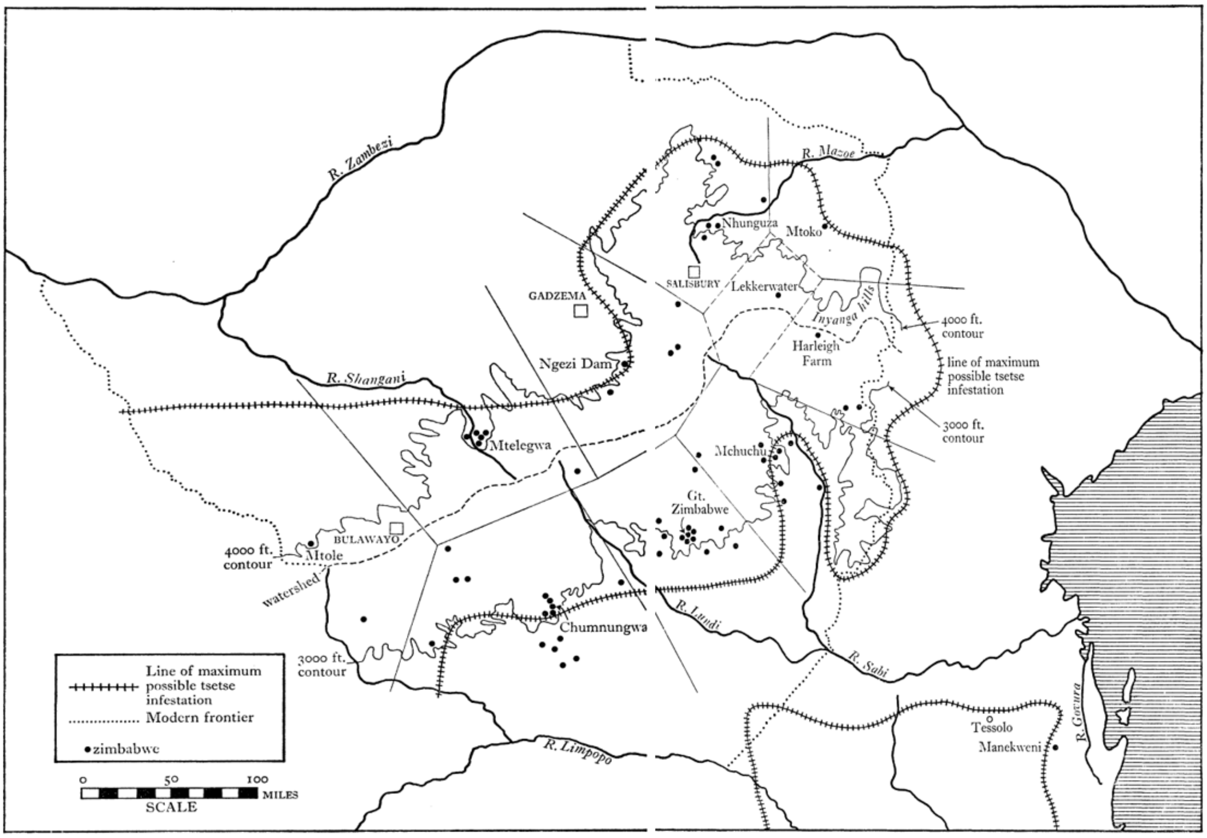


Figure 2.7: Location of Chumnungwa and other Zimbabwe tradition sites which Garlake (1978) alleged to have controlled the Zimbabwe plateau during the later Iron Age (Adapted from Garlake 1978: 484-485).

Huffman (1973, 1978), being supported by the Rhodesian Schools Exploration Society, explored the Iron Age archaeology of Mt Buhwa, however, due to the expansion of modern settlements into the Buhwa area, his survey was limited to a 16 km radius. A total of 48 sites were surveyed, and of the total, 30 were new sites whilst the remainder were known sites which had been previously documented by Bent (1892); Hall and Neal (1904); Von Sicard (1956,1957); Cook (1970); and Garlake (1970). Settlements at these sites fairly spread through the EIA and LIA eras (Appendix 1). According to Huffman EIA settlements were mostly spread on the flats whilst the LIA people mostly build their homes on hilltops. The latter were clearly and respectively expressed at Chamakwangwadza and Nenga, a Zimbabwe-type site situated 1 km west of Nenga Hill. Surface collected ceramics fell within Bambata, Gokomere, Silver leaves, Zhizo, Leopards Kopje, Gumanye, Great Zimbabwe, Khami, and Refuge periods. Other finds and features recorded included slag, tuyeres, glass beads, stone-walled enclosures, fauna, (cattle teeth), shell beads, spindle whorls, figurines, and house floors. Just like Hall and Neal (1904), Huffman (1973, 1978) concluded the Zimbabwe culture communities which settled in this part of the Mberengwa landscape were peripheral districts of the Zimbabwe and Khami hegemonies.

As part of the Rhodesian Schools Exploration Society expeditions, Huffman (1979) also excavated Chamabvepfa, a small settlement site with both revetment and freestanding walls situated north of Ngezi River. Out of the sixteen test trenches he sank inside the walled and walled areas of Chamabvepfa, Huffman recovered numerous finds which included polychrome banded and panel-ware, cattle bones, sheep/goat bones, iron hoe, spindle whorl, as well as shell and glass beads. Huffman (1979) concluded Chamabvepfa was a Gumanye settlement which was later turned into a provincial district of the Torwa state during the 17th and 18th centuries.

Van der Merwe (1978) carried out an archaeometallurgical survey of metalworking sites that were identified by Huffman (1973) in the Buhwa area. He managed to identify nine metal smelting precincts including Nenga 2030:CB58, a Gumanye iron smelting site he excavated and radiocarbon dated. Some of the finds recovered at these sites included slag, dolly holes, tuyeres, and furnace walls, as well as haematite, which was probably sourced from the surrounding area (see Appendix 1). More recently Burret (2006) identified twelve more Iron Age sites southeast of Mt Buhwa along the Mupwapwezi River Valley and classified two of these EIA sites as affiliated to the Ziwa tradition.

2. 5. EXISTING RESEARCH GAPS

Whilst previous archaeological research that was undertaken in Mberengwa should be credited for recording the distribution of Iron Age sites and establishing their settlement histories, as well as reconstructing archaeometallurgical processes at some sites such as Nenga 2030, there are a number of existing research gaps that are yet to be addressed archaeologically. For instance, to date, the sites of Chomuruvati, Chamakwangwadza cave, Chamabvepfa, and Nenga 2030:CB58 remain the only known places that were systematically excavated during the entire twelve decades of Iron Age research in Mberengwa. Consequently, much of what we know about the archaeology of the Iron Age sites such as Chumnungwa, Mundi, Little Chumnungwa, Chisungubvu, Nuanetsi, Wedza, Check Ruin, Gwamakuyo, Rubwe ruchena, Kongezi, and others listed in Appendix 1, is based largely on speculation, and data derived from unsystematic excavations that were undertaken by the antiquarians and treasure hunters during the late 19th and early 20th centuries (see Hall & Neal 1904). Extending systematic archaeological enquiry to these neglected sites is vital in order to generate a comprehensive understanding of the Iron Age archaeology of Mberengwa, and how the sites relate to one another.

Furthermore, little is known about the chronology of Iron Age sites in Mberengwa. As demonstrated in Figure 2.6, to date, there are only two radiocarbon dates available that account for the chronology of Gumanye and Khami agropastoralists. The chronology of the rest of the Iron Age groups including Bambata, Ziwa, Gokomere, Zhizo, Zimbabwe, and Refuge remains unknown. Consequently, it is very difficult to place these groups in a broader cultural context of the Iron Age of southern Zambezia.

More importantly, there are no detailed studies of material culture that was excavated at Chumnungwa and other Iron Age sites which were vandalised and looted by antiquarians – particularly those associated with the Zimbabwe culture (see Hall & Neal 1904). Therefore, archaeologically, we do not know much about the agropastoralists that resided at these places particularly aspects of their ethnicity, settlement organisation, foodways, livelihoods, herding practices, socio-political organisation, entanglements, as well as the coping mechanisms that they might have used to adapt to this dryland. Rather, as illustrated in the introductory chapter, much of what we know about these issues is based on speculation, largely drawn from better-researched sites such as Mapungubwe, Great Zimbabwe, Khami, and Danamombe. Such interpretations are based on the premise that these sites shared similarities in stone architectural design (i.e. Huffman 1996, 2007, 2009). However, most of these assumptions have hardly been verified using data from the Mberengwa Iron Age sites.

Similarly, the relationship between the drystone walled sites in Mberengwa and other social formations of the Zimbabwe culture, needs to be revisited using secure datasets. For instance, much of what is known about the position of the drystone walled sites in Mberengwa in the Zimbabwe culture is based on untested scholarly assumptions (i.e. Hall & Neal 1904; Garlake 1973b; Huffman 1978, 1996; 2009; Hall 1987; Ndoro 2001; Swan 2007; Kim & Kusimba 2008; Van Waarden 1998, 2011; Kusimba et al. 2017) which downplayed these places as 'peripheries' of Great Zimbabwe, Khami and Danamombe hegemonies that were set up to procure gold and other key raw-materials which made them prosperous. However, as suggested by Garlake's (1978) transhumance model, there is a possibility that some of the sites such as Chumnungwa may have been centres of independent polities. Nevertheless, the practicality of placing the whole landscape of Mberengwa under Chumnungwa's hegemony as well as the surrounding Insiza, Beitbridge, Mwenezi, Zvishavane, Chivhu, Gwanda, Matopo, and

Umzingwane districts remains unsubstantiated. What is also missing is how did these raw materials benefit those Iron Age communities which settled in Mberengwa who had gold, and other mineral deposits at their disposal. Such information is vital if we are to understand how Iron Age sites located in Mberengwa thrived and how they related to other social formations of the Zimbabwe culture.

2. 6. THE WAY FORWARD

Ultimately, Chumnungwa, a Zimbabwe culture site situated 7 km northeast of Masase Mission (Figure 2.6) was selected as the case study for retrieving resolved material culture datasets that would be examined to fill the existing knowledge gaps. The rationale for choosing Chumnungwa was based mainly on three factors. Firstly, the site of Chumnungwa has never been systematically excavated yet it is renowned as the largest Zimbabwe culture site in Mberengwa with so much research potential (Hall & Neal 1904; Garlake 1978; Matenga & Chikwanda 1999). Despite being constantly referenced as a 'peripheral district' of Great Zimbabwe in most of the debates and syntheses on the evolution of socio-political complexity in the Zimbabwe culture (i.e. Hall & Neal 1904; Livneh 1976; Hall 1987; Kim & Kusimba 2008; Swan 2008; Huffman 2009; Kusimba et al. 2017), its chronology remains unknown, and the majority of its material culture is yet to be examined using standard principles and protocols of artefact studies. Secondly, despite having a legacy of looting, Chumnungwa is one of the few Zimbabwe culture sites in Mberengwa with stratigraphy and drystone architecture that has survived a wave of colonial and post-colonial vandalism when compared to other Iron Age sites (see Hall & Neal 1904; Garlake 1970; Matenga & Chikwanda 1999). Thus, the majority of the sites that could potentially be researched, have subsequently vanished in the last century as a result of mining, cattle ranching, infrastructure development projects initiated by colonial and post-colonial government departments. Some of these projects involved the construction of irrigation dams and deep tanks such as Mundi-Mataga, Mutubaidzi, Bvumbura, and Mateku (see Von Sicard 1957; Zachrisson 1978; Matenga & Chikwanda 1999). Similarly, the large scale and forced resettlement of local people (over 150 000) by the colonial government into reserves such as the Mberengwa Tribal Trust Lands, which were created to alienate the locals from fertile land and the mineral-rich greenstone belts, exposed numerous Iron Age sites to the landless locals and hence some sites ended up being invaded for agricultural and settlement purposes (Zachrisson 1978; Beach 1980; Bhebe 1999). For instance, when Von Sicard (1957:11) visited Chesvingo 1 in 1943, he found the site occupied by Amos Hove who had built his homestead around the site. When he made another visit in 1952, its stratigraphy had been severely disturbed. Initially, Von Sicard (1957:12) had recorded a similar scenario at Mundi (Chesvingo 2) in 1933, and by the time he came back in 1953 most of the sections of the site had vanished. Likewise, when he visited Buhwa ruins which had been identified by Hall and Neal (1904) fifty years previously, he concluded that *"…there was practically nothing left of the stone structures at that time"* (Von Sicard 1957:16). Thirdly, Chumnungwa was selected due to the fact it is was the only Zimbabwe site with a dense archaeological deposit for which I managed to secure an excavation permit from the National Museums and Monuments of Zimbabwe. As a way of reconciling the limitations of the Chumnungwa datasets, and enabling a comparative study, an inventory of other Iron Age sites in the research area was created (see Appendix 1).

2. 7. SUMMARY

There is no doubt that Mberengwa is dryland, which is vulnerable to droughts, high temperatures, and tsetse fly (Worst 1956; Summers 1960; Garlake 1978; Mossberg & Pettersson 1991). However, despite these environmental constraints, archaeology and history clearly show us that Mberengwa continuously attracted settlements of numerous agropastoral communities whose livelihood was centred on stock raising, crop cultivation, mining, metallurgy, hunting and much more (Bent 1892; Hall & Neal 1904; Von Sicard 1956, 1957; Garlake 1970; Huffman 1973, 1978, 1979; Beach 1978, 1980; Van der Merwe 1978; Zachrisson 1978; Burret 2006). Such deep antiquity of human settlement, which stretches for more than two millennia, is not surprising given the range and diversity of natural resources, and the possibilities of human resilience and dryland adaptation as learned elsewhere in the neighbouring drylands such as the Shashi-Limpopo basin (see Manyanga et al. 2000; Smith 2005; Mothulatshipi 2008; Nyamushosho et al. 2018).

Whilst the dominant narratives on the Iron Age archaeology of southern Zambezia marginalise the Zimbabwe culture sites in Mberengwa as docile 'peripheries' that served under the hegemonies of Mapungubwe, Great Zimbabwe, Khami and Danamombe (i.e. Hall & Neal 1904; Huffman 1978, 1996; 2009; Hall 1987; Ndoro 2001; Kim & Kusimba 2008; Van Waarden 1998, 2011; Kusimba et al. 2017), there is the possibility that they might actually have thrived as independent polities as previously suggested by Garlake (1978) and others (Chirikure et al. 2012, 2013a). All these positions remain speculations that await to be tested archaeologically. Furthermore, the fact that the archaeology of most Iron Age sites in

Mberengwa is barely known is an opportunity to address this lacuna. As demonstrated by the bio-physiographical data, the research area is exceptionally endowed with huge deposits of gold, copper, iron, silver, lead, zinc, magnesite, and other rock minerals along the Mberengwa, Buhwa, and Mweza greenstone belts. These minerals are also readily available in the nearby Zvishavane, Gwanda, and Insiza Districts (Worst 1956, 1962; Martin 1978; Bickle & Nisbet 1993; Ranganai et al.2008). Aside from mineral wealth, the landscape of Mberengwa also hosts rich biodiversity and a network of navigable rivers that intersects the Zimbabwean Middleveld and Lowveld regions (Pfukenyi et al., 2006). Such diversity of natural resources makes the landscape an ecological niche and optimal for cattle production. Therefore, there is the possibility that if these communities were always attracted to this dryland then it means that in some ways there were able to utilise these resources which were at their disposal and become prosperous, consequently, they could probably determine their fate in a way that is different from our current understanding. This raises the need to revisit the archaeology of these places using Chumnungwa as a case study in order to generate insights on the chronology, settlement history, spatial organisation, and the social, economic, and political aspects of the Iron Age society that resided at Chumnungwa. However, in order to do this systematically, we have to come up with a standard framework on how we can approach the material culture of these agropastoralists that resided at Chumnungwa. The next chapter is focused on this issue.

CHAPTER THREE

IN PURSUIT OF A MATERIAL CULTURE FRAMEWORK

"*Theories are like toolboxes…positively, they orientate us in a particular direction, showing us where to go and what to look for*" (Tilley 2006:10).

3.1. INTRODUCTION

Archaeologists and other academics from cognate disciplines such as the social sciences, humanities, and material sciences have long engaged with the materiality of societies of the ancient past. Consequently, there is an enormous body of scholarship that surrounds the subject of material culture[20] as the basis for understanding ancient people from the standpoint of objects, and the landscapes they entangled with (see Summers et al. 1961; Binford 1962; Garlake 1973b; Prown 1982; Appadurai 1986; Miller 1987; Matenga 1993; Pikirayi 1993, 2001; Pwiti 1996b; Manyanga 2001; Caple 2006; Tilley et al. 2006; Huffman 1996; 2007; Chirikure & Pikirayi 2008; Hicks & Beaudry 2010; Chirikure et al. 2012, 2013a, 2017a; Wynne-Jones 2013, 2016; Mukwende et al. 2018). To provide an all-embracing definition that captures all dimensions of entanglements between objects and humans, material culture in this study and will be defined as a broad range of movable or immovable things made or modified by humanity, consciously or unconsciously which embody cultural values (Prown 1982:2; Miller & Tilley 1996:5; Appadurai 1986; Miller 1987; Stahl 2002; Caple 2006:4; Tilley et al. 2006:4; Pikirayi 2007; Hodder 2012; Wynne-Jones 2013). This is inclusive of artefacts, features, and ecofacts that feature in everyday life no matter how big or small but not extending to materials which do not express human modification or human culture (Champion 1980; Patnaik 1995). In archaeology, material culture is often recovered ubiquitously as either survey or excavation data that would have survived a host of conditions after being discarded by its

[20] For convenience sake, the terms 'material culture' and objects will be interchangeably used to refer to material finds that are recovered from archaeological sites.

users and makers (Bahn 1992; Patnaik 1995; Wynne-Jones 2013). As noted by Prown (1982) and Lucas (2010) this residue of human behaviour constitutes a broad range of utilitarian and non-utilitarian objects which includes ceramics, metals, beads, bones, and stone. All these objects, despite embodying messages about their producers and consumers, do not speak (Hodder 1982; Caple 2006). It becomes the duty of the archaeologists to decode these messages and meanings using a broad range of specialist approaches that range from material sciences to basic typologies in order to facilitate their interpretation (Prown 1982; Caple 2006; Pikirayi 2007; Hicks & Beaudry 2010; Lucas 2010). In doing so as cautioned by Patnaik (1995:63) there is the danger of misinterpretation or over-interpretation of the material culture if the associated context is not considered. Nevertheless, it is achievable to interpret material culture without subjectivity in as much as its difficult to escape from one's present biases and experiences (Prown 1982:2; Caple 2006:20; Pikirayi 2007). Thus, as shall be illustrated in this chapter, material culture is central to this study: it serves as the primary database that addresses the research objectives that inspired this study.

3.2. APPROACHES TO MATERIAL CULTURE IN GLOBAL ARCHAEOLOGY: A BRIEF REVIEW

Globally, material culture studies have become central to archaeological research in the last century (Caton-Thompson 1931; Childe 1939; Binford 1962; Miller 1987; Oestigaard 2004; Tilley et al. 2006; Chirikure & Pikirayi 2008; Hicks & Beaudry 2010; Hodder 2012; Wynne-Jones 2013). Pioneering studies particularly those undertaken in the western world were largely motivated by antiquarianism (Prown 1982; Caple 2006; Tilley et al. 2006). As a result, they were largely focused on description and classification of spectacular objects looted and collected from Africa and other regions around the world that ended up being kept in 'cabinets of curiosities' for posterity reasons at museological institutions such as the British Museum (Cochran & Beaudry 2006; Tilley et al. 2006). Today, antiquarianism is globally remembered as the shallowest approach to material culture (Pikirayi 1997; Oestigaard 2004; Caple 2006; Tilley et al. 2006; Chirikure et al. 2013b; Wynne-Jones 2013; Chirikure 2015; Mukwende 2016). It is mostly criticised for reinforcing a world order that dichotomised the level of technological advancement of the ancient societies that manufactured these objects into a binary of 'civilised and barbaric' (Prown 1994; Shepherd 2002; Caple 2006; Hicks & Beaudry 2010).

It was only in the early 20th century that a systematic study of material culture into various typologies and seriations based on similarities and differences of physical traits began to emerge (Oestigaard 2004; Caple 2006; Gosden 2006; Hicks & Beaudry 2010). This saw the proliferation of cultural and natural historical paradigms which were inspired by evolutionary schemes such as the three-age system, neolithisation, and the Linnaeus classification, popularised by the likes of Linnaeus (1735), Christian Jurgensen Thomsen (1836), General Pitt Rivers (Thompson 1977), and Gordon V Childe (1939) as the basis for establishing the world prehistoric cultures and their chronologies using quantitative and qualitative datasets of material culture. Thus, as highlighted by Baltali (2012:3), during this period, *"Similarities in archaeological material within particular geographical settings were interpreted as representing cultural entities",* whilst *"Material cultural differences were taken as reflections of essential cultural differences".* For instance, objects such as lithics, and ceramic teapots could be classified on the basis of their physical properties such as shape, decoration, raw material, and surface finish, including design (Whittaker 1998; Tilley et al. 2006). Though typologies greatly helped to order material culture into various cultures based on their physical properties, and enabled comparative analyses, they were heavily criticised as a rigid, grand narrative, and anti-diversity to the several functional and social contexts the objects could be exposed by their producers and consumers (Whittaker et al. 1998; Hicks & Beaudry 2010). This led some archaeologists to question if these established typologies were true reflections of the identities of these prehistoric cultures or personal imaginations (see Hill & Evans 1972). Nevertheless, as revealed by later scholars such as Whittaker (1998), these limitations could be addressed as long as the consistency was maintained to facilitate cross-evaluation of each, and every typological classification established (see also Caple 2006).

A shift in priorities of material culture studies was experienced in global archaeology during the mid-20th century (Oestigaard 2004; Tilley et al. 2006; Hicks & Beaudry 2010). The primacy of material culture studies became enshrined in science-based approaches where objects were examined as proxies of human behaviour which was actioned and acquired to enhance human adaptation (Binford 1965, 1972; Oestigaard 2004; Tilley et al. 2006). Many ethnoarchaeological experiments were undertaken by processual archaeologists to create middle-range theories to understand the technological processes material culture underwent during its production in the archaeological past and predicting human behaviour. It was during this time that Lewis Binford's (1965:205) view of culture as "man's extrasomatic way of adaptation" became popular. Whilst these functionalist approaches proliferated in America and other parts of the world, in was only after a couple of decades that they emerged in the global south (see Pikirayi 1997; Wynne-Jones 2013).

Subsequently, the birth of the post-processual archaeology in the last quarter of the 20th century was ushered in by theoretical shifts in global archaeology and anthropology. It saw the proliferation of material culture studies that were oriented on qualitative aspects such as the symbolism and sociology of objects (i.e. Hodder 1982; Appadurai 1986; Kopytoff 1987; Miller 1987; Shanks & Hodder 1995). As echoed by Cochran and Beaudry (2006:194) these new approaches, which were largely inspired by social theorists such as Bourdieu (1977) and (Giddens 1979), were distinct from the previous object-based studies which relegated and detached the social context in which the objects were produced and consumed. Thus, material culture in this era came to be regarded as *'symbols in action'* (Hodder 1982:11). It consequently became the motive of many archaeologists to try and establish recursive relations that existed between objects, their makers, and users, in their quest to unearth the deeper meanings of material culture in the archaeological past (Tilley et al. 2006; Hicks & Beaudry 2010). One example was that of Huaxtepec, a very famous ancient garden in the Aztec empire (Maldonado 2000) where Granziera (2005), successfully explored the social connections between Aztec people and their monuments using traditions recorded by early Spaniards who used to visit Aztec. Besides being a botanical garden, Granziera's (2005) study, also revealed Huaxtepec as a symbolic place where royalty undertook fertility rituals that connected them with spiritual forces of nature. Thus, material culture became a research avenue that archaeologists could use to generate insights on the everyday lives of ancient societies and their respective worldviews (Hodder 1982; Caple 2006). However, in doing so it was necessary to pay attention to the context which enabled the material culture to retain its meanings and symbolism (Shanks & Hodder 1995; Tilley et al. 2006).

In the following decades, material culture studies in global archaeology burgeoned and developed a multidisciplinary perspective that pursued a deep understanding of the materiality of objects. The focus of most analyses was extended to the chemical properties of objects using a material science-based approach such as the *chaîne opératoire* which sought to reconstruct and interpret their lifecycle stages (see Caple 2006:21; Tilley et al. 2006; Hicks & Beaudry 2010; Chirikure 2015).

An approach that examines material culture as expressions of human entanglement was recently developed among post-processualists (Hodder 2011, 2012). Though it is still in its infancy, the concept of entanglement has its roots in the anthropological study carried out by Thomas (1991) in the last quarter of the 19th century. Over the years a number of scholars have explored entanglement from various perspectives (i.e. Dietler 1998; Stahl 2002; Tilley 2006; Martindale 2009; Hodder 2012), but one common aspect in most of these approaches is description of entanglement as meshworks, networks, or interconnections that are birthed by interactions between humans and things. Thus, objects are perceived as armed with the power to pull people into a web of relationships (Thomas 1991; Stahl 2002; Martindale 2009). In other words, as material culture circulates between societies it connects people and creates relations that can be commercial, political, religious, or even marital. In the process, it attains new meanings, whilst in some cases, it retains the old meanings that were initially acquired during its production (Thomas 1991). Such perspectives on material culture and human entanglement were recently updated by Ian Hodder (2012). Drawing from his long engagement with material culture, especially from Çatalhöyük in Turkey, Hodder proposed a new way of thinking that would approach material culture as entangled things. Thus, unlike previous frameworks that focused on what we could learn about ancient societies using material culture, he focused on what we can learn about material culture itself, including how it was connected to the other. Whilst Hodder's approach has been heralded for recognising the fact that no single object can be understood without the other, it is yet to provide practical ways this can be achieved. Nevertheless, as argued by Hodder it is necessary to explore the processes that entangle humans and objects. In that way the concept of entanglement becomes useful for this study as it goes beyond denoting the meshworks that connect humans and things to issues 'behind the scenes' such as how and why they enacted? Thus, entanglement has potential to generate an understanding of the entrapments created by these interactions that govern the life cycle of humans and things whilst at the same time acknowledging that they are not isolated as they exist within networks that afford them opportunities to interact.

3.3. APPROACHES TO THE MATERIAL CULTURE OF THE IRON AGE ARCHAEOLOGY OF SOUTHERN AFRICA: A BRIEF REVIEW

The development of material culture studies in the Iron Age archaeology of southern Africa is reminiscent of theoretical trends that were mostly experienced in the western world (Garlake 1982; Pikirayi 2001; Chirikure et al. 2012). As illustrated in the introductory chapter, this trajectory is not surprising considering the fact that archaeology in this part of the global south emerged as a result of European colonialism (Shepherd 2002). Consequently, as rightfully critiqued by most scholars (i.e. Beach 1980; Hall 1983; Ndoro 1996; Pwiti 1996b; Pikirayi 2007; Chirikure et al. 2012; Fredriksen & Chirikure 2015), material culture studies in Iron Age studies of southern Africa have largely remained trapped in Anglo-American approaches in the last century.

Similar to Europe, the earliest approaches to the material culture of the Iron Age of southern Africa were entrenched in antiquarianism (Garlake 1973b; Hall 1987; Huffman 1996; Pikirayi 2001; Shepherd 2002). The cohort of researchers who studied 'relics of the past' during this era – the last quarter of the 19th century, mostly comprised explorers, missionaries, mineral prospectors, traders, hunters, and imperial agents that facilitated colonisation of southern Africa. As pseudo-archaeologists their research efforts were mostly limited to brief descriptions, photography, illustration, and the collection of antiques they encountered in their surveys of the territories of southern Zambezia (see Mauch 1874; Willoughby 1893; Burke 1969; Brisch 2012). With time, institutions such as the Rhodesia Ancient Ruins Limited company were set up by Cecil Rhodes and the British South African Company in the newly established colonies such as Rhodesia[21] (see Chapter 2) to engage in treasure hunting, and looting of material culture at Zimbabwe culture sites such as Great Zimbabwe, Khami, Matendera, and Chumnungwa (Hall & Neal 1904; Hall 1905). The majority of the finds recovered from these sites, including local pottery, were rudimentarily studied, and eventually discarded as 'useless' products of the local Shona people whom they largely perceived as 'uncivilised' (Pikirayi 2001:14). It was only the 'more spectacular objects' such as gold jewellery, soapstone artworks, copper ingots, double-iron gongs, glass beads, celadon dishes as well as the drystone-walled architecture that were afforded much research attention, and curation. These were regarded as exotic material culture of a 'civilised race' who were highly skilled in art and architecture, hence they featured in most of the popular publications and debates that dominated Europe during these times (i.e. Hall & Neal 1904; Hall 1905).

It was only around the 1900s that professionalism in material culture studies of the Iron Age of southern Zambezia began to emerge (Garlake 1973b; Hall 1984; Pikirayi 2001; Chirikure et al. 2013b). This period saw the works of David Randal-McIver (Randall-McIver 1906), and Gertrude Caton-Thompson (Caton-Thompson 1931), renowned students of Sir Flinders Petrie, establishing chronostratigraphic culture-histories of objects they excavated from various Iron

[21] Now Zimbabwe.

Age sites such as Khami, Danamombe, and Naletale. Despite being focused on dating these Zimbabwe culture sites, particularly using imported objects such as glazed-ware, they succeeded in setting up a systematic classification scheme of local pottery, glass beads, metals, lithics, human remains, stonewalling and other material culture which was adapted by the next generation of researchers (i.e. Schofield 1948; Robinson 1959; Summers et al. 1961) including those who excavated Mapungubwe (see Fouché 1937), Ingombe Ilede (Fagan 1967), Chomuruvati (Cook 1970), Nhunguza, and Ruanga (Garlake 1973a).

As from the 1960s onwards, local pottery, which is ubiquitous in the region, took centre stage in the material culture studies of the Iron Age of southern Zambezia (Pikirayi 1999:69). A new crop of researchers arose that relied on pottery typologies to trace the archaeological identities, relative chronologies, and migration pathways of Iron Age agropastoralists in Southern Africa and beyond through correlating their pottery with that of the contemporary Bantu-speaking communities (i.e. Huffman 1974; Soper 1971; Maggs 1976; Denbow 1983; Phillipson 1985; Sinclair 1987; Morais 1988; Pwiti 1996b). Despite being incessantly criticised for relegating other aspects of the material culture of agropastoralists (sensu Beach 1980; Hall 1984; Vansina 1995; Pikirayi 2007; Fredriksen & Chirikure, 2015), their approach was credited for refining the settlement histories of Iron Age communities in southern Africa through the establishment of ceramic sequences that were backed by radiocarbon dating (Huffman Pikirayi 1997; Mtetwa et al. 2013) . Even today, these typological approaches established in Europe and America (Hall 1984, Pikirayi 2007), are still continually being applied to local ceramics recovered at most Iron Age sites in southern Africa (Pikirayi 1993; Soper 2002; Huffman 2007; Antonites 2012; Moffett 2017; Shenjere-Nyabezi 2017; Chirikure et. al., 2018; Nyamushosho et al. 2018).

Similar to the theoretical developments experienced in the global north as a result of the rise of post-processual archaeology during the last quarter of the 20th century (Fredriksen & Chirikure 2015), southern Africa witnessed the emergence of studies that were oriented on the sociological aspects of Iron Age material culture (Pikirayi 1997). For instance, unlike the previous approaches which were limited to object and monument typologies (i.e. Summers 1958; Garlake 1970) new studies undertaken by a new crop of researchers (i.e. Huffman 1972, 1981, 1984, 1996; Evers 1988; Ndoro 1991, 1996; Collett 1993; Matenga 1993, 1998; Lindahl & Matenga 1995; Herbert 1996; Bvocho 2005; Chirikure 2007, 2015; Pikirayi 2013; Lindahl & Pikirayi 2010) began to explore the social relations that possibly existed between Iron Age agropastoralists and their material culture. Thus, movable and immovable objects such as stonewalling, sculpted figurines, and pottery were now treated as embodiments of social messages which required a deeper understanding of the worldview of the people who produced and consumed them in order to meaningfully understand them (Evers 1988; Collett 1993; Huffman 1996; Pikirayi 2007; Chirikure 2015).

In recent years, science-based approaches developed from elsewhere have been adopted to study a wide range of objects, and monuments at Iron Age sites in southern Africa. Geochemical methods such as Scanning Electron Microscopy with Energy Dispersive Spectrometry (SEM-EDS), Neutron-Activation Analysis (NAA), and Wavelength Dispersive X-Ray Fluorescence Analysis (WD-XRF) have been used to reconstruct technological processes and sequences of the production of glass, clay, iron, copper, gold and bronze objects recovered at sites such as Nenga 2030:CB58 (Van der Merwe 1978), Mapungubwe (Saitowitz 1996; Miller 2001; Robertshaw et al. 2010; Chirikure et al. 2015), Thulamela (Miller 2002), Baranda (Chirikure & Rehren 2006; Koleini et al. 2017), Great Zimbabwe (Bandama et al. 2016; Mtetwa 2017), and Jahunda (Bandama et al. 2018). Botanical remains dating to the second millennium CE have been also explored at Mwenezi, Bluejay, Ziwa, Kadzi (Jonsson 1998), Mutamba (Steyn & Antonites 2019), and Mtanye (Scholfield et al. forthcoming) using techniques such as Optical Microscopy (OM). Archaeometry methods such as Mass spectrometry (for oxygen, carbon, and nitrogen isotopes) and Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS) have been applied to archaeofauna recovered at sites such as Mapungubwe (Smith 2005), Bosutswe (Denbow et al. 2008), Ndongo (Shenjere 2011) and Khami (Dyvart et al. 2018), to reconstruct past environments and diets. New technologies such as Geographical Information Systems (GIS) and satellite imagery platforms such Google Earth Pro and LiDAR have been also used to map dry stone walling and structures at some Zimbabwe culture sites (see Manyanga 2006; Mothulatshipi 2008; Chirikure et al. 2014, 2016b; Huffman 2012; Nyamushosho 2017a), and Tswana towns in southern parts of Gauteng province in South Africa (see Sadr 2012; Sadr & Rodier (2012).

3.4. REGIONAL, AND GLOBAL CONTRIBUTIONS OF MATERIAL CULTURE STUDIES TO ARCHAEOLOGY

By default, archaeologists are virtually dependent on material culture as a vehicle for exploring behaviour of societies of the ancient past (Huffman 1996, 2007; Caple 2006; Tilley et al. 2006; Pikirayi 2007; Hicks & Beaudry 2010; Wynne-Jones 2013). Consequently, there are numerous examples from prehistoric studies undertaken regionally and globally that highlight the significant contributions of material culture in the production of archaeological knowledge.

Great Zimbabwe is one case study that demonstrates the contribution of material culture studies towards reconstruction and refinement of settlement histories of ancient civilisations in southern Africa. Long before the advent of radiocarbon dating, all the relative dates suggested by both antiquarians (see Bent 1892; Hall & Neal 1904; Hall 1905) and professional archaeologists (see Randall-McIver 1906; Caton-Thompson 1931) who excavated this LIA settlement were largely modelled using imported objects such as glazed ceramics, and glass beads, as these were highly perceived as chronological indicators of ancient civilisations during those times. Similarly, when the technique of radiocarbon dating was eventually introduced at Great Zimbabwe by Roger Summers in the 1950s (see Summers et al.1961), it was charcoal, another form of material culture that was sampled from the middens excavated at the Great Enclosure and Hill Complex and respectively sent for radiometric dating at the Michigan and Gulbenkian Laboratories in the then Salisbury[22] (Huffman & Vogel 1991; Chirikure et al. 2013b). Consequently, the newly established radiocarbon dates, were cross-dated with typologies of local pottery, glass beads, stone architecture style, and other material finds recovered from the site to create a settlement history of Great Zimbabwe that was defined by five periods of Iron Age occupation (Summers et al. 1961). The earliest settlement was attributed to the Gokomere society that lived at Great Zimbabwe during a period that spanned the 5th and the 8th centuries. Their material culture signature was largely characterised by comb-stamped globular pots that were recovered at Great Zimbabwe's Hill Complex. Subsequently, the Gokomere people were replaced by the Gumanye around the 9th century whose material culture mainly comprised of gourd-shaped pots and hemispherical bowls. The following periods that spanned the 13th and 19th centuries marked the era of Great Zimbabwe settlements on the hill complex, spreading into the Great Enclosure, Western Enclosures, and Valley Enclosures. The material culture of the Later Iron Age communities that resided at Great Zimbabwe during this period was largely characterised by graphite burnished pottery, Zimbabwe glass bead series (Wood 2011), and dry-stone walled architecture (Whitty 1961).

Later, building upon the work of Garlake (1968) which dated the last period of consumption of glazed ware at Great Zimbabwe to CE 1450, Huffman and Vogel (1991) (also see Huffman 2007: 395-397) revised the settlement history and shortened its chronology to the 14th and 15th centuries. This altered the Summers et al. (1961) occupational sequence since builders of

---

[22] Now Harare, the capital city of Zimbabwe.

stonewalling at Great Zimbabwe, were no longer associated with the Gumanye phase. Nevertheless, this was later revised by forthcoming studies that were undertaken by Chirikure et al. (2012, 2013b, 2018) using archival data, and a Bayesian model that combined radiometric dates, ceramics, glass beads and other material culture recovered at Great Zimbabwe, and which all concurred with the initial settlement history proposed by Summers et al. (1961) (also see Pikirayi 2001; Chirikure & Pikirayi 2008). Consequently, despite being previously challenged by some scholars (i.e. Garlake 1968; Huffman & Vogel 1991; Huffman 1996, 2007, 2010), the chronology reconstructed by Summers et al. (1961) using various combinations of material culture, continues to be regionally and globally heralded as the most comprehensive settlement history of Great Zimbabwe (see Garlake 1970; Sinclair 1987; Chipunza 1994; Matenga 1998; Pikirayi 2001; Chirikure et al. 2013b, 2018).

Material culture studies enabled archaeologists working in the Middle East to generate insights on the settlement organisation of the EIA (BCE 1250-1000) Levant societies of west-central Jordan (Holladay 1992; Routledge 2000, 2009; Porter 2013). A comprehensive study of the Levantine-built structures in the Jordan valley revealed a settlement layout that reflected the everyday necessities of the EIA societies that resided at the archaeological sites of al-ʻAliya, al-Muʻammariyya, and Lahun (Porter 2013). Spatial data derived from the excavated house floors and foundations showed that the Levantine community compartmentalised their pillared houses into chambers and foyers that enabled craft production, socialisation, food preparation, bulk storage of surplus grain and fodder, feeding, slaughtering and occasional penning of small-sized livestock such as sheep and goats (Routledge 2000; Porter 2013). As a way of securing themselves, defence structures such as towers, gates, and fortified walls, whose thickness ranged between 4 and 4.6 metres, were constructed encircling their homesteads (Porter 2013). Such a settlement layout enabled the EIA Levant societies to sedentarily live their everyday life whilst at the same time safeguarding themselves against any possible attacks by other groups and food crises, whenever harsh weather prevailed (Porter 2013).

Likewise, through studying of material culture extracted from the walled and unwalled areas of Khami, archaeologists working in southern Africa have also managed to refine the interpretation of use of space among the Iron Age communities associated with the Zimbabwe culture (see Robinson 1959; Huffman 1996; Mukwende et al. 2018). Prior to Mukwende's et al., study, the settlement organisation at Khami was understood from a structuralist framework which dichotomised space into elite and commoner zones without an in-depth understanding of the distribution of the material culture across the site (i.e. Robinson 1959; Thorp (1984ab);

Hall 1987; Huffman 1996, 2007; Pikirayi 2001; Van Warden 2012). Based on the assumed densities of material culture deposits, walled areas were restricted to the elite, an upper class which mainly comprised the ruling family, their immediate family, and revered officers. Because they lived in the walled areas the elite were believed to have enjoyed a variety of privileges such as luxurious food, utensils, tools, weapons, jewellery, and housing. For instance, their rondavel houses were thought to have been the only houses constructed with thick earthen floors made of a thick clay locally known as *dhaka*. Because they were the elite, it was also believed they had ultimate access to, and control of imported objects such as glazed ceramics, muzzleloaders, and glass beads. However, this interpretation was undermined by Mukwende's et al. (2018) study which comprehensively analysed material culture from both walled and unwalled areas to the realisation that residents from the respective settlements had equal access to exotica and food, and most importantly, they shared similar material culture which included utilitarian and non-utilitarian objects such as pottery, bangles, bracelets, iron hoes, spears, arrows, axes, and rings (including the plaited ones).

Studying material culture has been also instrumental in crafting inter-regional trade networks which showed participation by some societies of the ancient past. For instance, Roderick and Susan McIntosh's analysis of material culture recovered from surveys and excavations they carried out in the Inland Delta of the Niger River in Mali revealed the factors that led Jenne-Jeno to become a major commercial centre during 250 BC and CE 1400 (McIntosh & McIntosh 1981; McIntosh 2005). According to McIntosh and McIntosh (1981) recovery of stone beads, gold, copper, and iron objects whose raw materials were unavailable in the Inland Delta was a clear sign that residents of Jenne-Jeno participated in long-distance trade to acquire these resources. Thus, the navigability of the Inland Delta enabled them to connect with Saharan traders from distant regions such as Akjoujt, where salt, iron, gold, and copper ores were abundant. In exchange for these much-needed resources, they traded their surplus rice, dried fish, fruit, fish oil, and other savanna products which were abundant in the Inland Delta. In the long run, Jenne-Jeno experienced massive economic growth, and thus became a major trade centre in West Africa that hosted merchants who flocked from distant territories such as the Saharan region (McIntosh & McIntosh 1981).

The study of material culture has also enabled archaeologists to reconstruct foodways of past societies. One case study is the Nyanga agricultural complex in northeastern Zimbabwe which was occupied by Iron Age agropastoralists between CE 1300 and 1900 (Soper 2002). Considering, the wide presence of terraces, water furrows, fortifications, pit enclosures and other stone structures which made the complex to be famously recognised as one of the most extensive agricultural landscapes in Sub-Saharan Africa (Randall-McIver 1906; Summers 1958; Hall 1987; Pikirayi 2001; Soper 2002; Phillipson 2005; Huffman 2007; Pwiti et al. 2013); archaeologists became very keen to find out the range of foods that were consumed by the residents of Nyanga. Extensive research was respectively carried out by Summers (1958) and Soper (2002), which lasted for several years. Data derived from excavated sites such as Nierkerk (N.VI.3), Van Nierkerk Ruins[23], Ziwa SN153 Ziwa MSE17 Chirimanyimo, Muozi, Chirangeni revealed a wide range of animal and floral remains that were examined by faunal (i.e. Cooke 1958:153-158; Plug & Badenhorst 2002) and botanical specialists (i.e. Wild 1958:173-179; Jonsson 2002:249-250). The plant species identified included cow peas, ground beans, bulrush millet, maize, melons, sorghum, *rapoko,* and pumpkin (Wild 1958; Jonsson 2002). These were consumed along with meat sourced from animal species such as waterbuck, cape duiker, hartebeest, nyala, sheep, goats, cattle, chicken, impala, buffalo, and bushpig (see Cooke 1958; Plug & Badenhorst 2002). Thus, it became clear that societies of the Nyanga agricultural complex thrived on a mixed food economy which was characterised by the exploitation of both wild and domesticated plant and animal species (Summers 1958; Soper 2002).

Over the years, material culture studies, have also enabled archaeologists to test longstanding models on evolution and the nature of societal entanglements in the ancient past. One case in point is the emergence of Sumerian "city-states" in Mesopotamia during the times of the Uruk civilisation (3700-3100 BC) (see Algaze 1989; Stein 1999). Being influenced by the world system theory which profiled the colonial expansion of European societies into less developed areas of the third world (sensu Wallerstein 1974), pioneering scholars such as Algaze (1989, 1993) identified a world system that interconnected Uruk, and the neighbouring Iran, Anatolia, Syria, and Egypt during the Bronze and Early Iron Age (EIA). Basing on the assessment of the density of archaeological findings which demonstrated urban agglomerations, monumental architecture, social stratification, expressive artworks, craft novelty, military prowess, ancient writing, accounting systems, agriculture intensification, and interregional interaction, major sites in Lower Mesopotamia such as Uruk, and Eridu were classified as the ‘centre’ of Uruk

[23]Now Ziwa.

civilisation whilst ‘smaller’ sites in the Zagros region and the upper parts of the Tigris–Euphrates drainage such as Jebel Aruda, Hacineb Tepe, and Nineveh, were marginalised as ‘peripheral’ provinces (Algaze 1993-25-35; Oates 1993:412). Similarities in material culture (i.e. cylinder seal impressions, architecture, and ceramics designed with Urukian style) between these ‘centres’ and ‘peripheries’ propelled a wide belief that Uruk civilisation expanded to the latter settlements in the distant ‘peripheries’ through conquest and commercial ties which enabled them to acquire timber, alluvium, metals, stone, and other critical resources they lacked (Oates 1993). According to Algaze (1993), commerce propelled the transition of southern Mesopotamia from an agricultural village to a hierarchical urban centre. This approach to the material culture of the Sumerian ‘city-states’ made Uruk, the first world metropolis which strategically established colonies on the roads leading to the sources of the raw materials it needed (Algaze 1993; Oates 1993).

However, later studies undertaken in south-eastern Turkey began to show that in as much as the material culture of these supposed ‘centres’ and ‘peripheries’ appeared similar, these resemblances were not necessarily a product of Urukian colonial expansion where southerners from Uruk inhabited the northern sites as had been argued by Algaze (1989). For instance, archaeological fieldwork carried out at Hacinebi Tepe, and other supposed ‘peripheral’ sites of the Sumerian ‘city-states’ (Stein 1999) exposed substantial monumental architecture, stamp seals, and fine wheeled ceramics which were designed with Anatolian style. As argued by Stein (1999), it became clear that in as much as Uruk material culture featured at Hacinebi Tepe as products of cultural contact, the community that resided onsite also made and consumed their own indigenous material culture which showed that they also controlled the local trade in which seals designed with Anatolian style were used to stamp some of their trade dealings. Thus, because much research efforts were invested more on the material culture of the supposed ‘centres’ such as Uruk, it had remained impossible to determine whether the site of Uruk was unique in this region or if it was simply prioritised accidentally as a result of numerous excavations that made it seem more important than its supposed ‘peripheries’ which had been partially researched (Stein 1999). Consequently, today we now know that different communities have the capacity of sharing similar material culture though various platforms of entanglement that include trade, intermarriages, and even warfare, without being of the same culture (Renfrew & Cherry 1986; Chirikure et al. 2013a). This means cultural groups can select traits they want from imitated materials and discard what they do not need. In the same manner, they hybridize these elements to match their own experiences and needs. As a result, if archaeologists are not careful when confronted with this situation when dealing with material culture, they may end up categorising these similar but different traits into a single cultural group (Stein 1999).

Studying of material culture has also been instrumental in unpacking the flow of political power in Iron Age southern Africa. As discussed earlier in the introductory chapter, numerous studies conducted on stone architecture, exotic imports, ritual objects and other material remains uncovered at Mapungubwe, Great Zimbabwe, Khami, and Danamombe resulted in creation of unilinear neo-evolutionary frameworks that theorised these places as capitals of centralised state systems that respectively exercised a monopoly over a hierarchy of district settlements spread across southern Zambezia. For instance, Mapungubwe was theorised as a bureaucratic polity that had a five-tier hierarchical system that spanned over 30 000 km2 (see Huffman & Hanisch 1987; Huffman 1996, Trigger 2003; Kim & Kusimba 2008). Gold, bronze, soapstone, ivory, and other imported items such as glass beads, porcelain, and cloth were closely associated with elites who resided at these Zimbabwe culture capitals leading to the development of class distinction and inequality (Pikirayi 2001; Wood 2005; Huffman 2007; Van Waarden 2012). However, in more recent years further archaeological enquiry has been extended to the settlement sites that were regarded as peripheral districts of Mapungubwe, and other Zimbabwe culture capitals. Presence of prestige objects and symbols of high status at places such as Mapela, Mtanye and Mutamba, shows that they also retained some level of political and economic independence which allowed them to partake in the regional economy. In fact, as argued by Antonites (2012), and Chirikure et al. (2012, 2013a, 2014, 2017a), it appears that Zimbabwe culture societies were so heterarchical (sensu Crumley 1987) hence there is possibility that political power was flexible and networked. Nevertheless, as cautioned by some scholars (see Beach 1980; Antonites 2012; Chirikure et al. 2012, 2017; Moffett 2017), there are chances that heterarchy in some contexts co-existed with hierarchies of control for enabling social inequality and domination.

Through the study of material culture, archaeologists working in southern Africa have also been able to reveal the various crafting activities that were conducted by Iron Age communities that resided in dryland regions, such as the Shashi Limpopo Basin, to sustain their livelihoods. Surveys and excavations were undertaken in the last eight decades at Leopards Kopje sites such as Mapungubwe (Fouché 1937; Gardner 1963; Meyer 1980; Calabrese 2007), Bambadyanalo[24] (Gardner 1963), Mapela (Garlake 1968; Chirikure et al. 2014, 2016a), Malumba, Mutshilachokwe (Manyanga 2006), Megwe (Mothulatshipi 2008), Mtanye (Huffman 2008; Scholfield et al. forthcoming), and Mananzve (Nyamushosho et al. 2018) revealed a range of organic and inorganic objects. These included pottery, gold objects (i.e. sceptre, rhino, bowls, beads, bangles, oils, tucks and coiled wires, largely recovered within the Mapungubwe burials), slag pellets, tuyeres, spindle whorl discs, bone points, and needles, stone hammers, iron hoe butts, spear blades, worked ivory, bronze necklaces, shell beads, copper bracelets, and wound wires. A study of these objects using material culture approaches that ranged from basic typologies to material sciences showed that most of these items were produced onsite for various uses that ranged from domestic to ritual contexts (see Meyer 1980; Voigt 1983; Huffman 1996, 2007; Bvocho 2005; Calabrese 2007; Bradfield 2015; House 2016; Nyamushosho 2017a; Scholfield et al. forthcoming). Therefore, we now know that the Leopards Kopje societies that settled in the Shashi Limpopo Basin took advantage of the local resources to engage in various crafting activities that included fibre spinning, metallurgy, pottery making, leather tanning, figurine-making, bone carving, shell bead-working, and many others which generated revenue that bolstered their livelihoods and economies (Manyanga 2006; Mothulatshipi 2008; Nyamushosho et al. 2018).

3.5. DISCUSSION

Building upon the above, it is clear at this juncture that any archaeological study that is not centred on material culture is meaningless (Prown 1982; Caple 2006 Huffman 2007; Wynne-Jones 2013). This inevitably positions material culture that will be recovered from Chumnungwa as the primary source of archaeological data for generating insights that will address the objectives that informed this study. Therefore, every effort will be made to recover as much material culture as possible, but this process will be undertaken systematically and meticulously in accordance with the principles and protocols of field archaeology illustrated in the forthcoming chapter (also see Drewett 1999; Renfrew & Bahn 2004). Drawing from previous studies (Hall & Neal 1904) and similar research experience at neighbouring Zimbabwe culture sites such as Chomuruvati (Cook 1970), Nenga (Huffman 1978), and

[24] Also known as K2.

Chamabvepfa (Huffman 1979), various kinds of material culture associated with Iron Age agropastoralists will be anticipated at Chumnungwa (sensu Hall 1987; Pikirayi 2001; Huffman 2007). Among these are pottery, glass beads, drystone walling, lithics, spindle whorl discs, shell beads, metal objects, metal working debris, and perhaps residues of plastered pole and *dhaka* houses, as well as grain bins. As illustrated in the introduction, all these movable and immovable objects will definitely not speak for themselves despite carrying messages that can enlighten us on aspects that shaped the everyday life of the Iron Age community that resided at Chumnungwa.

Therefore, as recommended by most theorists of archaeological material culture (i.e. Caple 2006; Tilley et al. 2006; Pikirayi 2007; Huffman 2007; Hicks & Beaudry 2010; Hodder 2012; Wynne-Jones 2013; Chirikure 2015), a multidisciplinary approach which considers the typological, functional, and sociological dimensions of objects recovered at Chumnungwa will be adopted in this study as a holistic method for extracting rich and contextual data to aid in reconstructing the archaeology of the Iron Age community that resided at Chumnungwa. The application of this multidisciplinary approach will enable this study to minimise subjectivity as these methods will respectively reconcile other limitations. For instance, object typologies will be prioritised in this study as the basis for establishing the chronology and settlement history of Chumnungwa alongside radiocarbon dates which will be generated from datable charcoal using Accelerator Mass Spectrometry (AMS) dating. The object typologies and morphologies will also enlighten aspects of daily life and resource utilisation. As rightfully argued by Pikirayi (1997: 69), despite being heavily criticised as rigid and typology-oriented, studies of material culture remain indispensable to cursorily known sites such as Chumnungwa.

Furthermore, as commonly practiced by Iron Age archaeologists in southern Africa (i.e. Caton-Thompson 1931; Collett 1993; Matenga 1993, Ndoro 1996; Huffman 1996, 2007; 1998; Bvocho 2005; Manyanga 2006; Chirikure et al. 2012, 2013ab, 2018; Van Warden 2012; Pikirayi 2013; Fredriksen & Chirikure 2015), recourse will be made to Shona anthropology (i.e. Gelfand 1966; Bourdillon 1976, 1991; Aschwanden 1982, 1987; Ellert 1984; Chimhundu 1992; Ruwitah 1997; Shoko 2007; Chirikure et al. 2012, 2018; Mavhunga 2014; Mungwini 2017) and history (Von Sicard 1953, 1957; Beach 1977, 1978, 1980; Zachrisson 1978; Bhila 1982; Mudenge 1988) to reconstruct the production, functional, and social contexts of the material finds uncovered onsite in a meaningful way that is conversant with the worldview of the Chumnungwa community. However, in order to ensure the use of appropriate ethnohistorical sources so as to avoid the danger of misinterpreting the objects, particularly due to biases of the authors, these sources will be cross-evaluated as recommended by historians (see Vansina 1971; Caple 2006; Cochran & Beaudry 2006). The concept of entanglement offers this study an opportunity to trace power and agency of Chumnungwa community particularly how it negotiated and reconfigured economic and socio-political relationships and meanings of material culture based on everyday experiences. Studying architecture, imports, local crafts, and other material remains will help to unearth some of the entanglements between the Chumnungwa community and its neighbours as well as the local, regional and international trade networks that connected southern Zambezia and the Indian Ocean world.

3.6. SUMMARY

This chapter has shown that material culture is undoubtedly a rich source of archaeological data armed with great potential to generate insights into the behaviour of past societies, particularly on how they were entangled with various objects that featured in their everyday life. Despite being largely influenced by theoretical developments in the western world, adoption of the material culture framework in this study is one sure way to go in modelling the settlement history and everyday practices that shaped the lives of the residents of Chumnungwa as long as their archaeological and social contexts are taken into consideration. The following chapter gives an account of the fieldwork that was conducted at Chumnungwa.

CHAPTER FOUR

FIELDWORK AT CHUMNUNGWA:
ARCHAEOLOGICAL SURVEY, & EXCAVATIONS

"Fieldwork is in many ways the ultimate archaeological mode of being-in-the world; stereotyped, perhaps, but one that holds true." (Olsen et al. 2012:60).

4.1. INTRODUCTION

Fieldwork at Chumnungwa (Figures 4.1, and 4.2) was conducted in stepped methodology to address the objectives that informed this study. Archival studies were conducted first to gather background information from published and unpublished records that foregrounded the current study in light of the previous research studies. Recourse was made to the monument inspection reports, survey and excavation reports, monographs, autobiographies, maps, photographs, journal articles, and site registers housed at information repositories such as the National Archives of Zimbabwe (Harare and Bulawayo branches), National Museums and Monuments of Zimbabwe (Harare and Bulawayo museums), University of Cape Town African Studies Library (Cape Town), and the office of the Surveyor-General in Harare, Zimbabwe. Subsequently, archaeological surveying, mapping (including the immediate environs), and excavation of Chumnungwa were undertaken to piece together the site's spatial layout, chronology, and catchment area, as well as the settlement history, and aspects of the daily life of the Iron Age community it hosted. A detailed summary of these research activities conducted at Chumnungwa under Permit 007/2017, which was issued by the National Museums and Monuments of Zimbabwe, is presented in the forthcoming sections.

4. 2. ARCHAEOLOGICAL SURVEYING, MAPPING, AND SITE DESCRIPTION

" Before one commences an archaeological excavation it is essential to know the ground and to make a careful reconnaissance of the surroundings…only after the outward appearance has been analysed can we turn to the questions of excavations, for we cannot understand the implications of the one without knowledge of the other" Summers (1958:9).

An intensive intra-site survey and mapping exercise of Chumnungwa (20°56'44.30"S 29°42'46.98"E) was conducted using standard procedures and equipment recommended when carrying out archaeological fieldwork (Summers 1958; Bahn 1996; Drewett 1999; Renfrew & Bahn 2004; Olsen et al. 2012). This exercise was aimed at mapping the spatial layout and catchment area of Chumnungwa and to document the distribution and density of archaeological deposits on the hilltop and foothill areas which were targeted for excavations using satellite imagery, data capture sheets, grids, Garmin GPS receivers, digital cameras, and notebooks. Pedestrian surveys conducted at Chumnungwa showed that the site is made up of two geophysical components, namely the hill and the plain (Figure 4.1). The hill covers a surface area about 4 000 m^2 which is made up of an oval-shaped granitic kopje that forms a ridge on its summit, flanked by two knolls whose highest altitude rises to 961 m. The plain covers an approximate surface area of 800 000 m^2 which spreads from the foothill further down to the stretch of land currently inhabited and cultivated by the contemporary agropastoralists. Both the surfaces of Chumnungwa hill and plain were covered with ashy middens (see Figure 4.3) that had dense scatter of ceramics, slag, metals, *dhaka* floor rubble, bone fragments and grain bin foundations which were probably food-storage infrastructures used for storage of cereals such as sorghum and millet for future consumption (sensu Manyanga 2006; Van Waarden 2012; Nyamushosho et al. 2018).

Figure 4.1. View of Chumnungwa from the northern end of the site showing the hill and the plain.

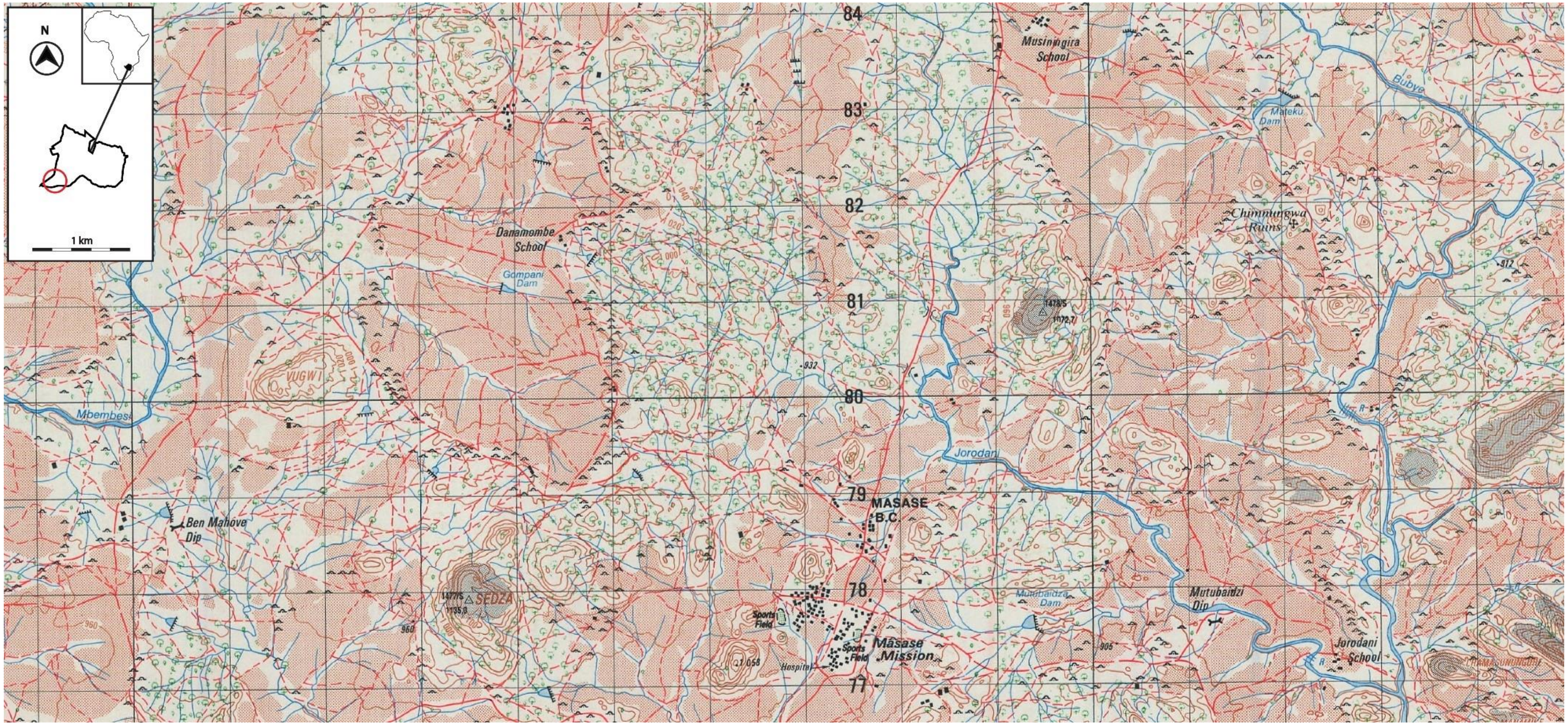


Figure 4.2. Location of Chumnungwa in relation to Masase Mission and Bubi (Bybe) River. (Adapted from the 1:50 000 Map Sheet 2029 D3 of Masase Zimbabwe, 1982).

A series of mortar-less drystone walled enclosures that were connected by the natural rock boulders on the summit and precipices of Chumnungwa Hill were also surveyed to map the density of stonewalling architecture (A detailed study of the stonewalling is provided in Chapter 7). Two livestock kraals with a huge accumulation of vitrified dung were recorded. The smaller one, presumably a goat/sheep kraal (sensu Peter 2001; Badenhorst 2010) was situated on the northern end of the hill summit whilst the larger one, presumably a cattle kraal, (sensu Badenhorst 2010; Fraser & Badenhorst 2014) was situated on a plain which stretched from the northern end of the foothill to the north-western end (Figure 4.3). A survey of the catchment area of Chumnungwa showed that the site was strategically situated within a well-resourced area bordered by the Bubi River, Mwenezi River, Mberengwa and Mweza greenstone belts as well as the Doro range, which forms the southern section of the renowned Great Dyke of Zimbabwe (see Table 4. 1 and Figure 4.4). Thus, the residents of Chumnungwa had access to water, cultivable soils, minerals (iron, copper, and gold), wildlife, aquatic resources, and a strategic view of the surrounding landscape, particularly those who occupied the hilltop (see Table 4.1). Ultimately, a comprehensive site map that showed the distribution and density of the ashy middens that were recorded on both the hilltop and foothill of Chumnungwa was produced using Google Earth Pro, ArcGIS & Adobe Illustrator databases (see Figure 4.5). As clearly shown in Figure 4.5, Chumnungwa is bigger than that which had been portrayed by previous researchers (i.e. Hall & Neal 1904:228-229; Matenga & Chikwanda (1999:172) who only mapped the walled areas of the hill summit.

Figure 4.3. [a & c] = *dhaka* fragments of housing recorded on the hilltop of Chumnungwa, [b] = a section of large kraal with vitrified dung situated on the northern end of the foothill stretching to the north-western end, [d] = *dhaka* fragments of housing recorded on the foothill of Chumnungwa, [e] = remnants of a grain bin foundation recorded on the foothill of Chumnungwa, [f] = part of ceramic fragments scattered on the plain of Chumnungwa.

Table 4. 1: List of natural resources available within the catchment area of Chumnungwa

Natural Resource	Distance		
	0-10 km	11-20 km	21-30 km
Water sources	X	X	X
Cultivable soils	X	X	X
Iron ore	X	X	X
Copper ore	X	X	X
Gold ore	X	X	X
Tin ore			
Wildlife	X	X	X
Aquatic resources	X	X	X
Wild fruit trees	X	X	X
Wild vegetables	X	X	X
Edible worms and insects	X	X	X
Firewood	X	X	X
Thatching grass	X	X	X
Gravel	X	X	X
Timber	X	X	X
Clay	X	X	X
Red ochre		X	X
Graphite	X	X	X
Soapstone	X	X	X
Granite	X	X	X
Dolerite	X	X	X
Quartz	X	X	X
Chert	X	X	X
Navigable rivers	X	X	X
Grazing lands	X	X	X
Wetlands	X	X	X

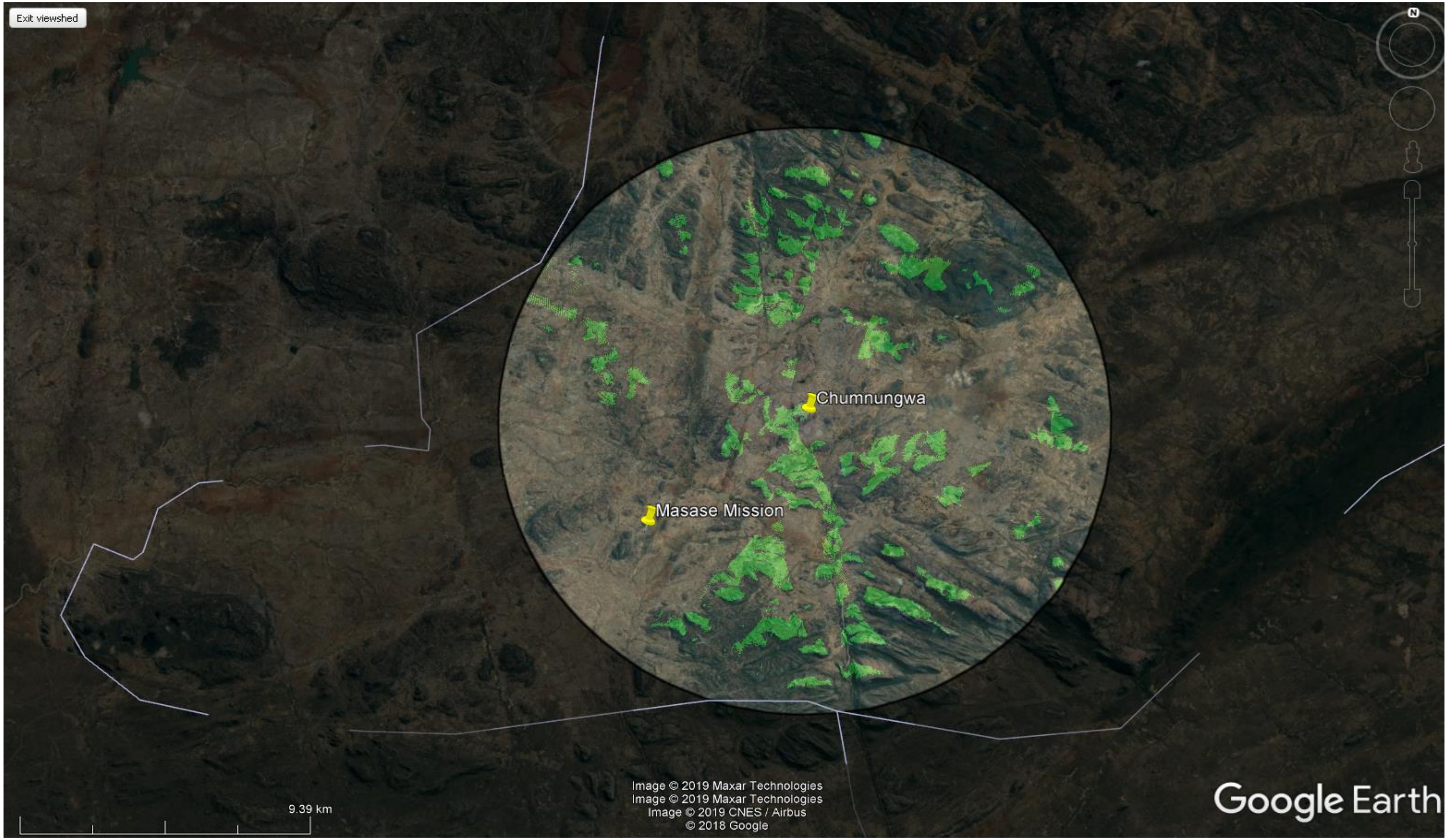


Figure 4.4. A strategic view of the surrounding landscape (green sheds) from Chumnungwa hilltop within a 10 km radius. Modelled using Google Earth Pro Viewshed

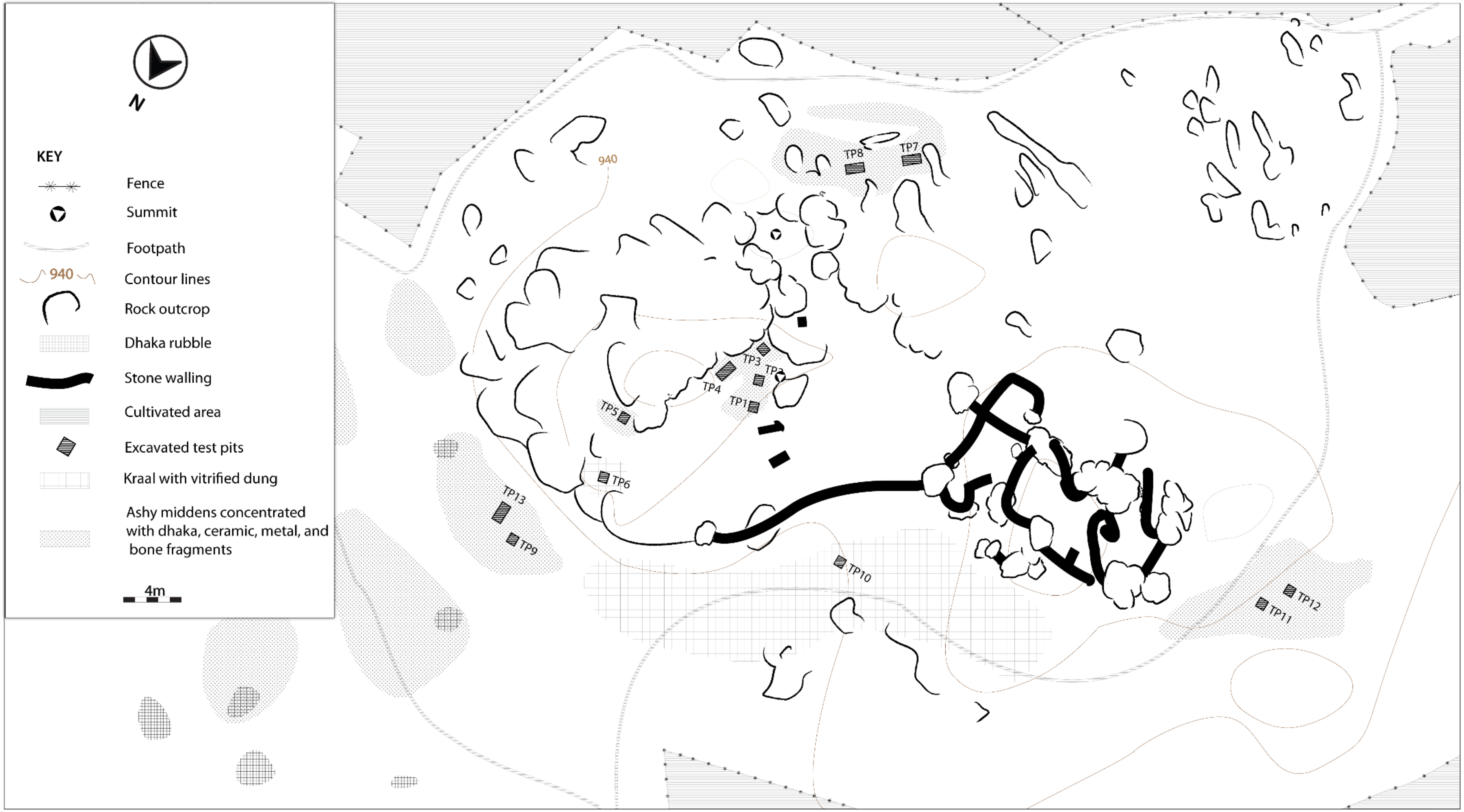


Figure 4.5. A comprehensive site map of Chumnungwa showing the distribution and density of the ashy middens that were recorded on the hilltop and foothill areas. The site map also shows the location of the kraals, stonewalling and the excavated test pits.

4.2. ARCHAEOLOGICAL EXCAVATIONS

4.2.1. EXCAVATION STRATEGY

The excavations at Chumnungwa were conducted using standard equipment and protocols recommended for archaeological fieldwork (see Renfrew & Bahn 2004; Drewett 1999) in order to retrieve reliable data sets that were used to generate insights on the chronology, settlement history, and several aspects of everyday life of the Iron Age community that resided at Chumnungwa. However, how the way in which excavations were conducted was also informed by how the legacy of vandalism had unfolded at Chumnungwa which left most parts of the surface destroyed by treasure hunters who previously dug the site during both the colonial (Hall & Neal 1904) and post-colonial (Matenga & Chikwanda 1999) eras (Also see Chapter 2). Consequently, the remaining large ashy middens spread across the hilltop and foothill areas of Chumnungwa were targeted for the stratigraphic excavations since they had not been vandalised. A test pit approach was adopted that was aimed at salvaging and sampling the sections of the ashy middens that had not been disturbed by gully erosion and cultivation. Nevertheless, some of the middens were partially affected by burrowing. Thirteen test pits (three measured 2m x 1m and the remainder measured 1m x 1m) were sunk on the selected ashy middens spread on the hilltop and foothill areas of Chumnungwa to establish the depth of the archaeological deposit and enable its comparison to determine how the residents of these respective areas were related. These were meticulously excavated and recorded following the natural stratigraphic layering of the soil deposit and associated context until bedrock or sterile soil was reached. All the material finds were collected and bagged for further study at the Natural History Museum in Bulawayo including the shell and glass beads which were screened from the dug soil using 5 mm and 2 mm mesh sieves (Figure 4.6). Datable charcoal samples were selected from the finds and these were sent to the Beta Analytic Laboratory in Florida, USA for Accelerator Mass Spectrometry (AMS) dating. The next sub-sections present the outcomes from the excavations.

Figure 4.6. One of the sieving stations that was operated by Lovemore Zhou on the left, and Siphelani Mangena during the hilltop excavations.

4.2.2. EXCAVATION RESULTS

4.2.2.1. THE HILLTOP AREA

Test Pit 1

Test Pit 1 was sunk on an ashy midden situated on the edges of the north-eastern central end of Chumnungwa hill summit (see Figure 4.5). Three natural layers of stratigraphy were recorded (Figure 4.7). The first layer was made up of light grey ashy soil followed by a gritty layer of dark grey ashy soil. The last layer comprised compacted red-brown soil which was set on a bedrock that protruded at a depth of 50cm. Finds recovered from Test Pit 1, included fauna, lithics, slag, potsherds, shell beads, finished metals, and a spindle-whorl disc fragment.

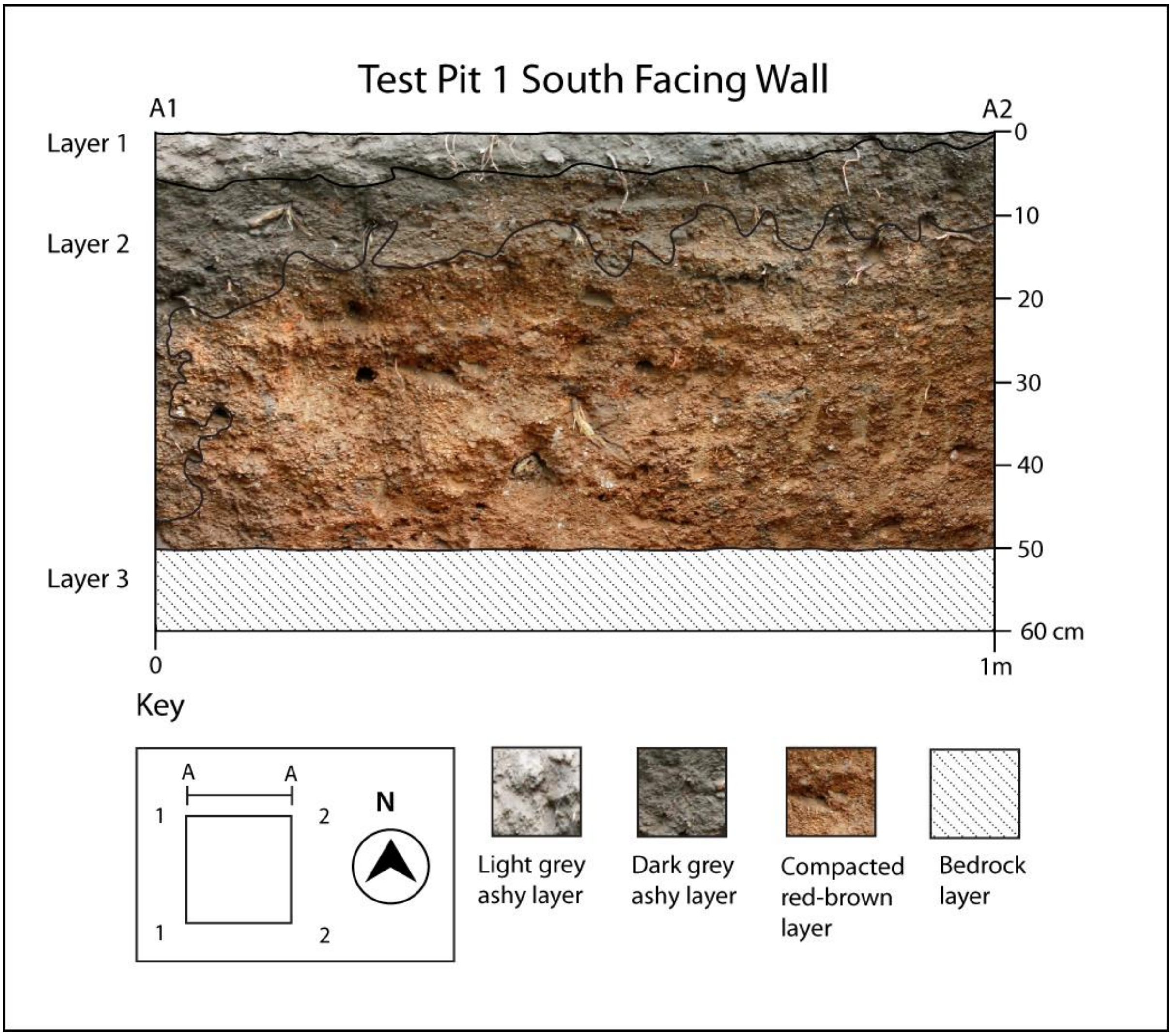


Figure 4. 7: Stratigraphy of Test Pit 1 South Facing Wall.

Test Pit 2

Test Pit 2 was dug 1.5m away from Test Pit 1 to augment the subsurface data (see Figure 4.5). Two layers with clear stratigraphy were uncovered which comprised light and dark grey ashy soils respectively (Figure 4.8). Numerous finds were recovered that matched those from Test Pit 1, however, the most exceptional ones were those made of soapstone and glass.

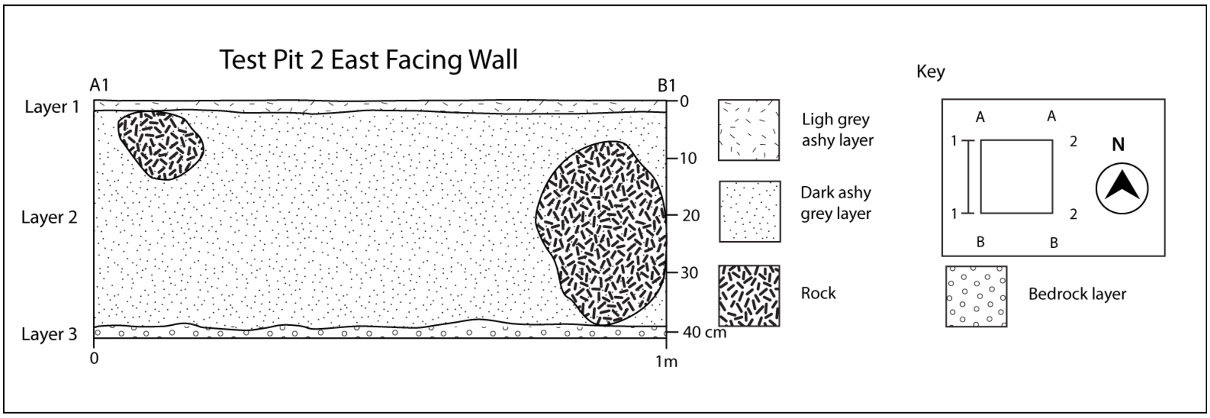


Figure 4. 8: Stratigraphy of Test Pit 2 East Facing Wall.

Test Pit 3

Test Pit 3 was dug to a depth of 39cm on the same ashy midden that hosted the preceding test pits (Figure 4.5). A single layer of dark ashy grey soil was uncovered before the bedrock layer protruded (Figure 4.9). Finds from this layer included highly decorated potsherds, lithics, fauna, glass beads, a spindle-whorl disc fragment, and shell beads.

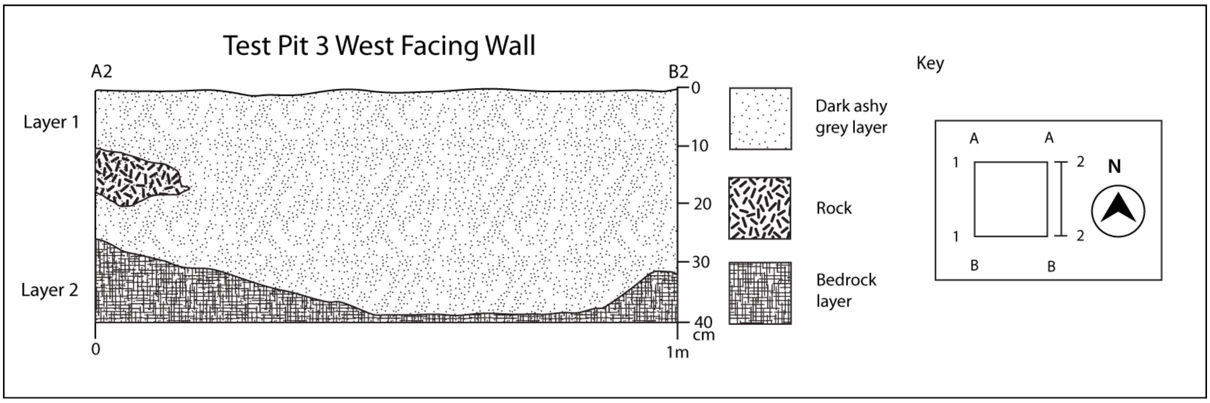


Figure 4.9: Stratigraphy of Test Pit 3 West Facing Wall.

Test Pit 4

Test Pit 4 was sunk on top of a grain bin foundation which was 3m away from Test Pit 3 (see Figure 4.5) to generate data that would illuminate the foodways of the residents of Chumnungwa. A single stratigraphic layer was unearthed that was made up of dark, ashy grey soil which rested on a granite bedrock (Figure 4.10). Numerous finds which included glass beads, metals, lithics, fauna, and potsherds were recovered.

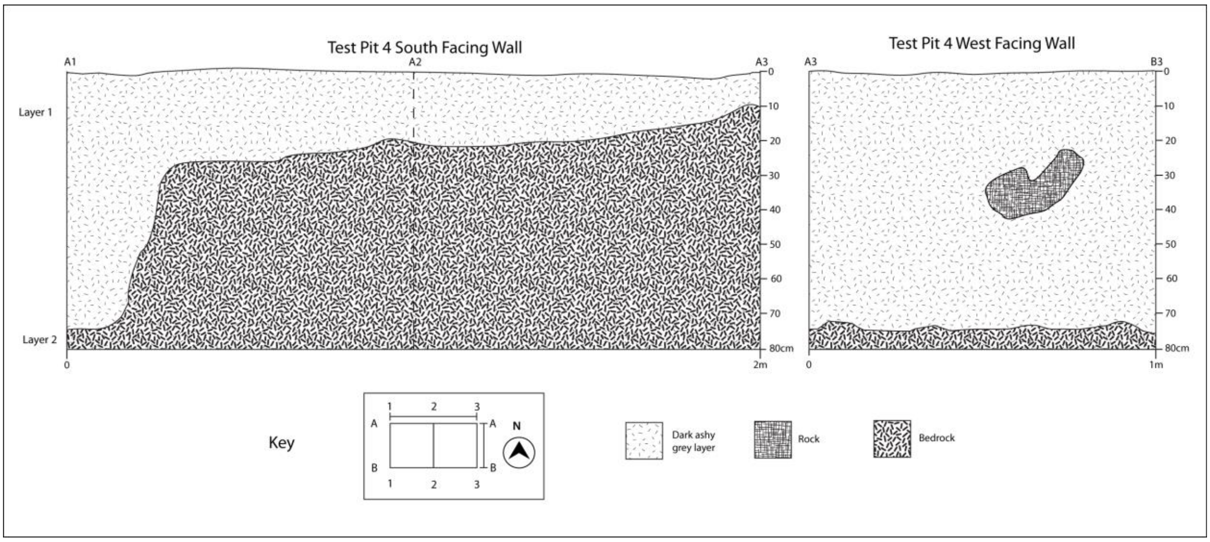


Figure 4.10: Stratigraphy of Test Pit 4 South and West Facing Walls.

Test Pit 5

Test Pit 5 was excavated on a midden situated on the northern end of the Chumnungwa hill summit that appeared to have hosted some houses (see Figure 4.5). The top layers of deposit comprised dark, ashy, compacted grey soil whilst the bottom layer of the trench which was set on the bedrock was made up of light grey ashy soil (Figure 4.11). Decorated potsherds were recovered from both layers as well as fauna and metals.

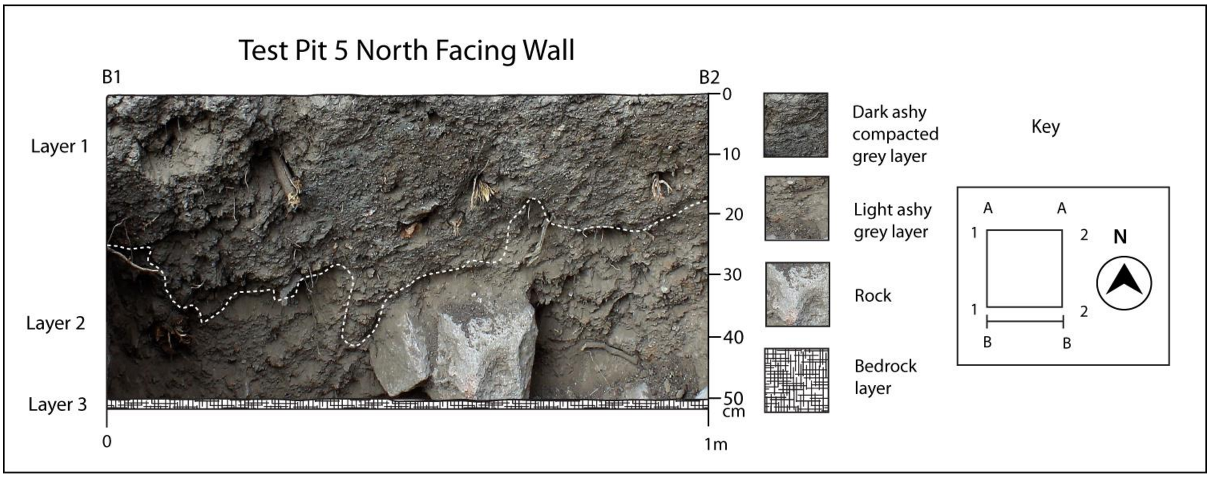


Figure 4.11: Stratigraphy of Test Pit 5 North Facing Wall.

Test Pit 6

Test Pit 6 was sunk on a small kraal situated adjacent to the northern precipice of Chumnungwa hill (see Figure 4.5). The rationale for undertaking the excavation was to retrieve datable charcoal samples that could potentially illuminate the relationship between the kraal and the residents of Chumnungwa. The test pit yielded a large deposit of dung mixed with ash and other material finds that reached a depth of 98cm. Recovered finds included graphite burnished potsherds, animal fauna, figurine fragments, soapstone, shell beads, metals, glass beads, and charcoal. Five layers of stratigraphy were recorded (Figure 4.12). The upper layer was made up of compacted light red soil with ashy pockets. The subsequent layer developed into a light ashy dung layer which was succeeded by a matrix of dark ashy soil with vitrified dung with a glassy-like slag-like appearance whose depth extended to 61cm. Layers of compacted light red soil with ashy pockets and dark ashy soil with vitrified dung resurfaced respectively until a granite bedrock protruded. Some charcoal samples derived from Layer 3 (Beta-495456) and layer 5 (Beta-495455) were selected and sent for AMS dating (Figure 4.12). The results are presented in Section 4.3 below.

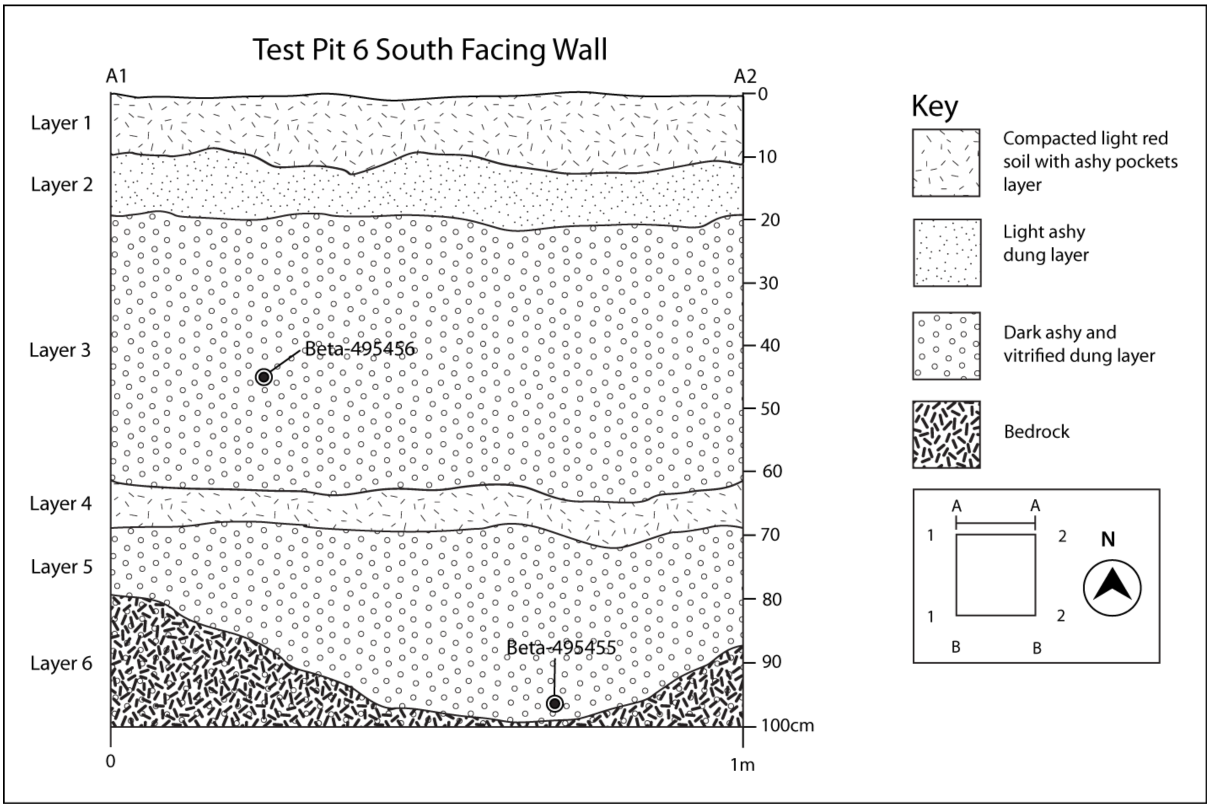


Figure 4.12: Stratigraphy of Test Pit 6 South Facing Wall.

Test Pit 7

Test Pit 7 was sunk on an artificial terrace midden that spreads from the south-eastern precipice of Chumnungwa hilltop (see Figure 4.5). This appeared to be the main midden where Chumnungwa residents of the hill summit might have dumped their refuse. The terrace was excavated to retrieve resolute material culture data sets that would be comparatively studied with finds recovered from the northern end and north-eastern central end of Chumnungwa hill summit. A single stratigraphic layer that was made up of light ashy grey soil which rested on a granite bedrock was uncovered (Figure 4.13). The deposited material finds consisted of numerous slag nodules, fauna, bone implements, shell beads, metals, glass beads, graphite burnished pottery, figurine, lithics, and spindle-whorl disc fragments.

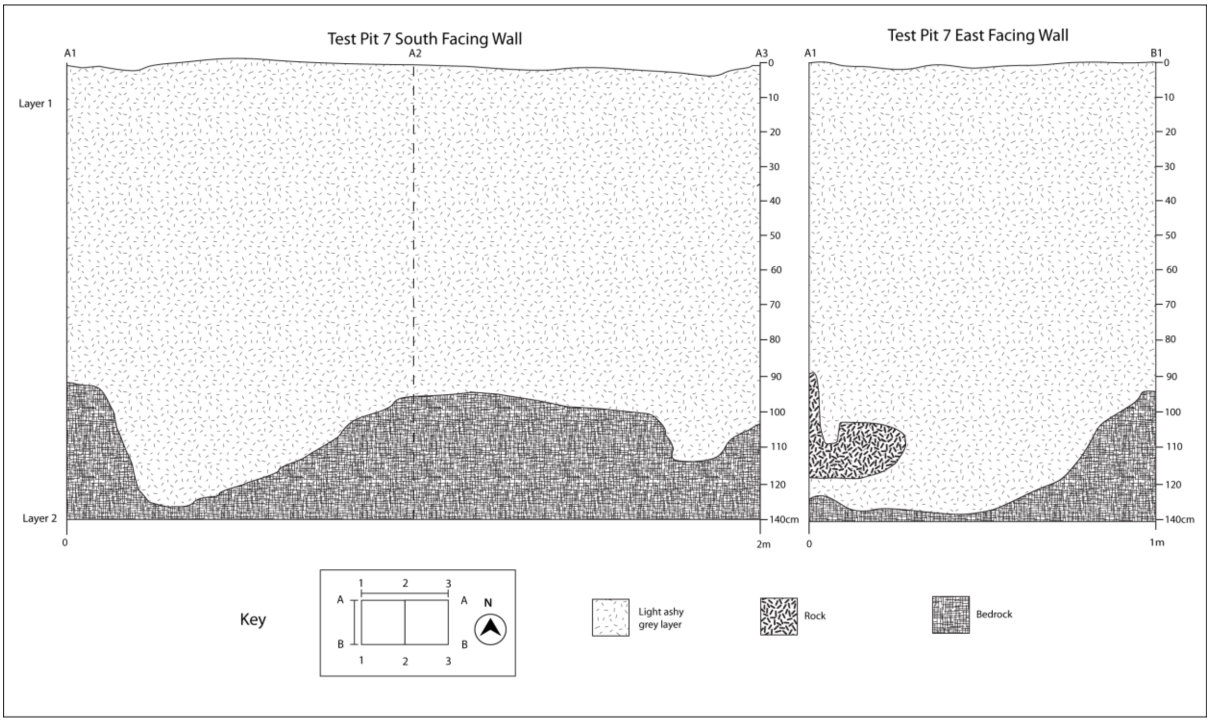


Figure 4.13: Stratigraphy of Test Pit 7 South and East Facing Walls.

Test Pit 8

Test Pit 8 was dug 3m away from Test Pit 7 (see Figure 4.5). This was done to augment the material finds recovered from Test Pit 7 and to retrieve reliable charcoal samples (Beta-495458, Beta-495459, and Beta-495457) that would be dated for control purposes (Figure 4.14). Similar, to Test Pit 7, numerous finds were recovered from a single stratigraphic layer that comprised of light ashy grey soil which rested on a granite bedrock (Figure 4.14). However, the density of the material finds recovered from Test Pit 8 was higher.

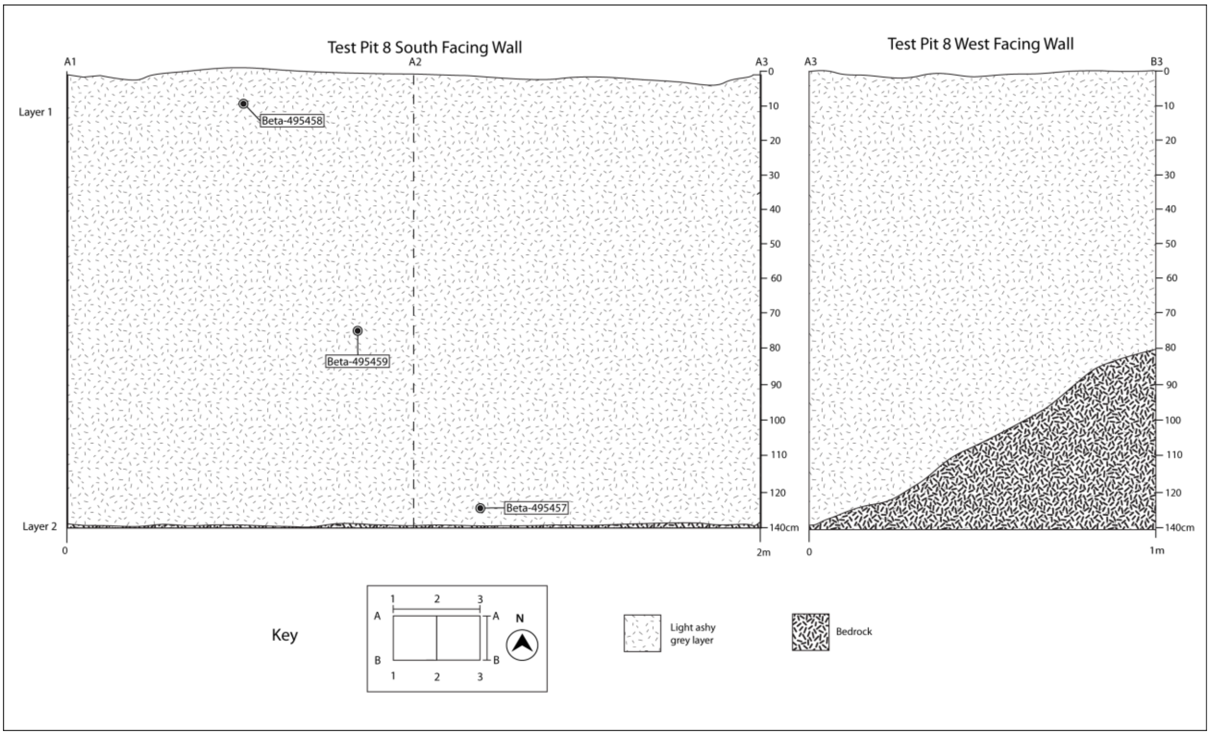


Figure 4.14: Stratigraphy of Test Pit 8 South and West Facing Walls.

4.2.2.2 THE FOOTHILL AREA

Test Pit 9

Test Pit 9 was sunk on an ashy midden situated on the northern end of Chumnungwa foothill (see Figure 4.5). The rationale was to retrieve material culture finds that would be comparatively studied with those recovered from the hill summit. Two layers of soil stratigraphy were uncovered. The top layer was comprised of compacted light grey ashy soil whilst the bottom layer was made up of dark ashy grey soil which culminated into a sterile layer (Figure 4.15). Numerous archaeological specimens were retrieved from Test Pit 9. These included metals, fauna, lithics, shell beads, potsherds, glass beads, and fragments of a figurine and a spindle whorl disc.

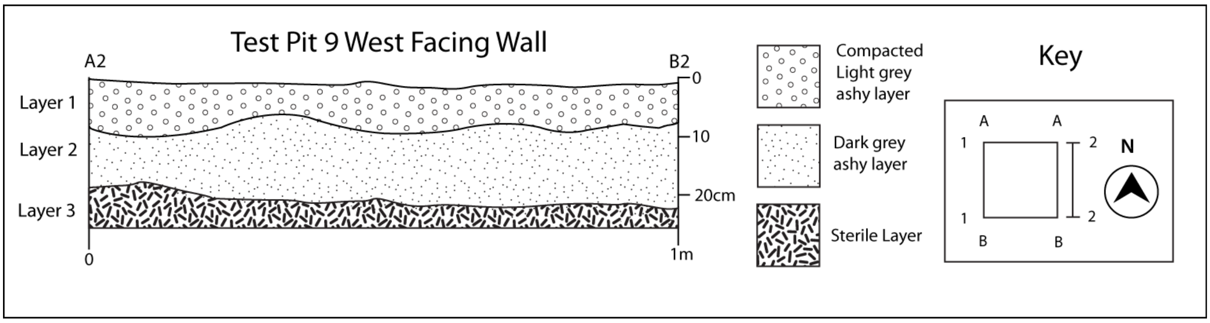


Figure 4.15: Stratigraphy of Test Pit 9 West Facing Wall.

Test Pit 10

Test pit 10 was dug on the central end of a large kraal, situated on the north-western edge of Chumnungwa foothill (see Figure 4.5). The kraal was excavated to establish how it related to those who occupied the foothill area of Chumnungwa. Three layers of stratigraphy were uncovered (Figure 4. 16), however, no material culture was recovered from Layer 3 which reached the granite bedrock at a depth of 49cm. Finds recovered from Layers 2 included fragments of a figurine and spindle whorl disc, potsherds, metals, fauna, lithics, shell beads, and glass beads.

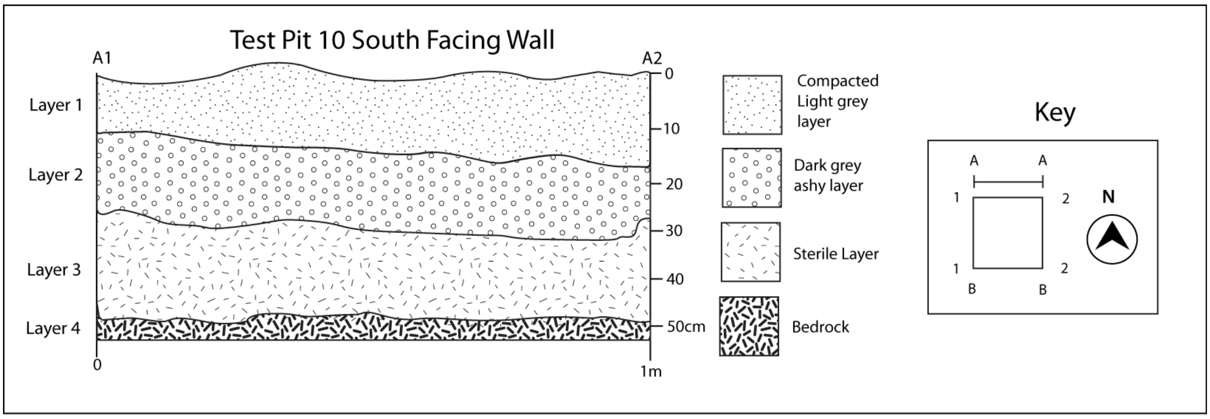


Figure 4.16: Stratigraphy of Test Pit 10 South Facing Wall.

Test Pit 11

Test Pit 11 was sunk on a midden west of Chumnungwa foothill to obtain samples from the western flats on the edge of the hill (see Figure 4.5). Two layers of soil stratigraphy were exposed. The top layer comprised compacted light grey soil whilst the bottom layer was made up of dark grey ashy soil which reached the bedrock at a depth of 36cm (Figure 4.17). Numerous finds were recovered that included metals, lithics, figurine fragment, spindle whorl disc fragment, potsherds, fauna, shell beads, and glass beads. Charcoal samples derived from Layer 1 (Beta-495460) were selected and sent for AMS dating (Figure 4.17, see Section 4.3 for detailed results).

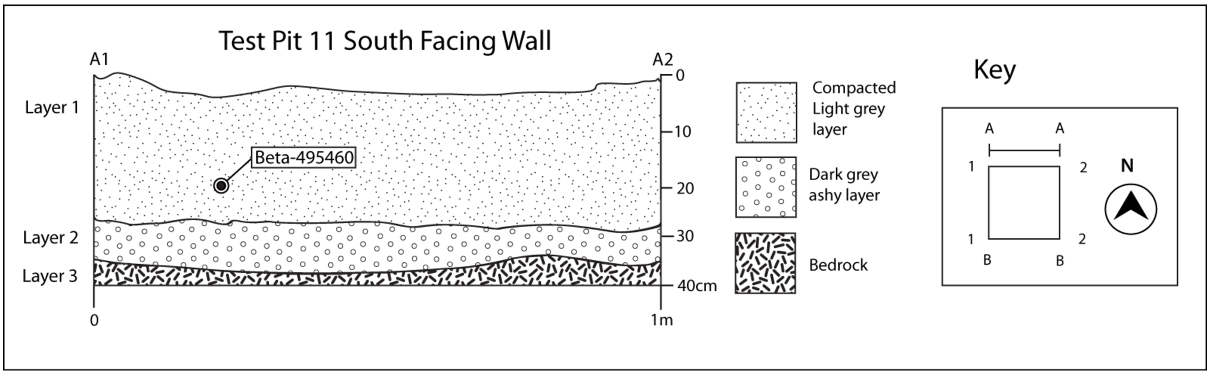


Figure 4.17: Stratigraphy of Test Pit 11 South Facing Wall.

Test Pit 12

Test Pit 12 was sunk next to Test Pit 11. This was done to augment the material finds recovered from Test Pit 11. Four layers that yielded archaeological deposit which ranged from *dhaka* floor rubble, potsherds, slag nodules, fauna, shell beads, metals, glass beads, and lithics were uncovered (Figure 4.18). The first layer was comprised of compacted grey ashy soil. The subsequent layers contained red-brown soil which reinforced a *dhaka* house floor with a gravel foundation (Figure 4.19). Ultimately, the test pit hit the bedrock, at a depth of 51cm.

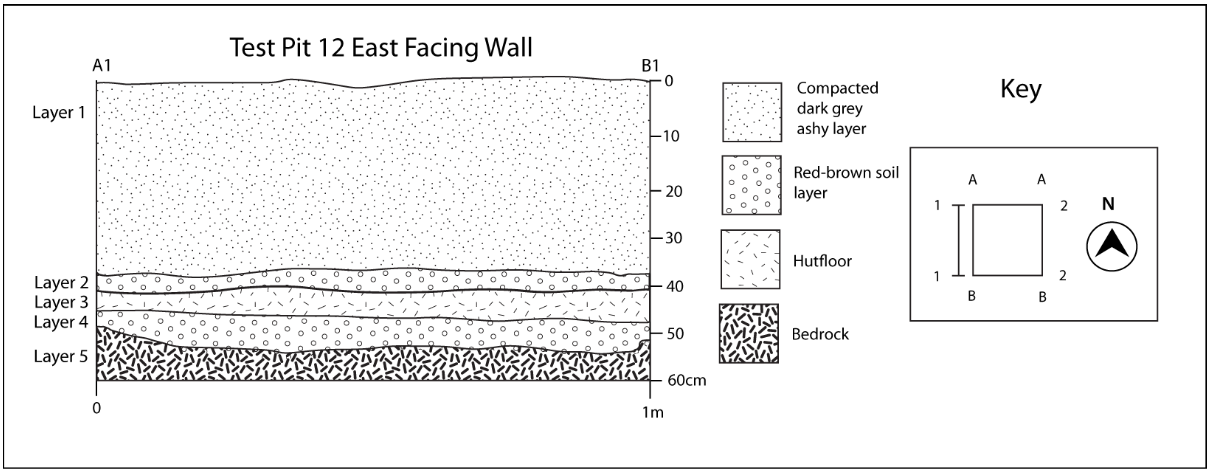


Figure 4.18: Stratigraphy of Test Pit 12 East Facing Wall.

Figure 4.19: *Dhaka* house floor exposed in Test Pit 12.

Test Pit 13

Test Pit 13 was sunk 1 m away from Test Pit 9. This was done to augment the samples recovered from Test Pit 9 and to retrieve reliable charcoal samples (Beta-495461) that would be dated for control purposes (Figure 4.20). Two layers with very clear stratigraphy were exposed which comprised compacted dark and light grey ashy soils respectively (Figure 4.20). Finds recovered matched those from Test Pit 9, however, soapstone was only recovered from Test Pit 13.

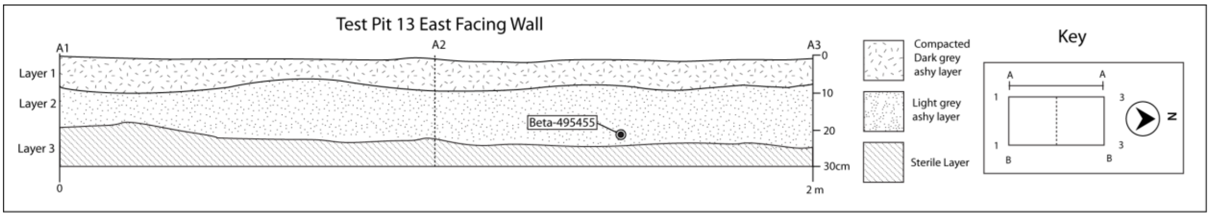


Figure 4.20: Stratigraphy of Test Pit 13 East Facing Wall.

4.3. CHUMNUNGWA RADIOCARBON DATES

Seven radiocarbon dates were derived from the charcoal samples that were selected from both the hilltop and foothill areas of Chumnungwa for AMS dating at the Beta Analytic Laboratory (Figure 4.21 and Table 4.2). Calibration of the dates using the Oxford University's OxCal v4.3

online programme at 95.4% confidence interval (Figure 4.21) shows that the occupation of Chumnungwa was estimated to have spanned from CE 1298 to 1627. Radiocarbon dates derived from both the hilltop area dated the material culture to have been a product of events that likely happened between CE 1298 and 1624 whilst those from foothill area might have stemmed from the period between CE 1413 and 1627 (Table 4.2). Nevertheless, a comparison of the established radiocarbon dates signalling the occupation of Chumnungwa with the archaeological finds recovered from the excavated ashy middens (see Table 4. 2) shows that they were contemporaneous.

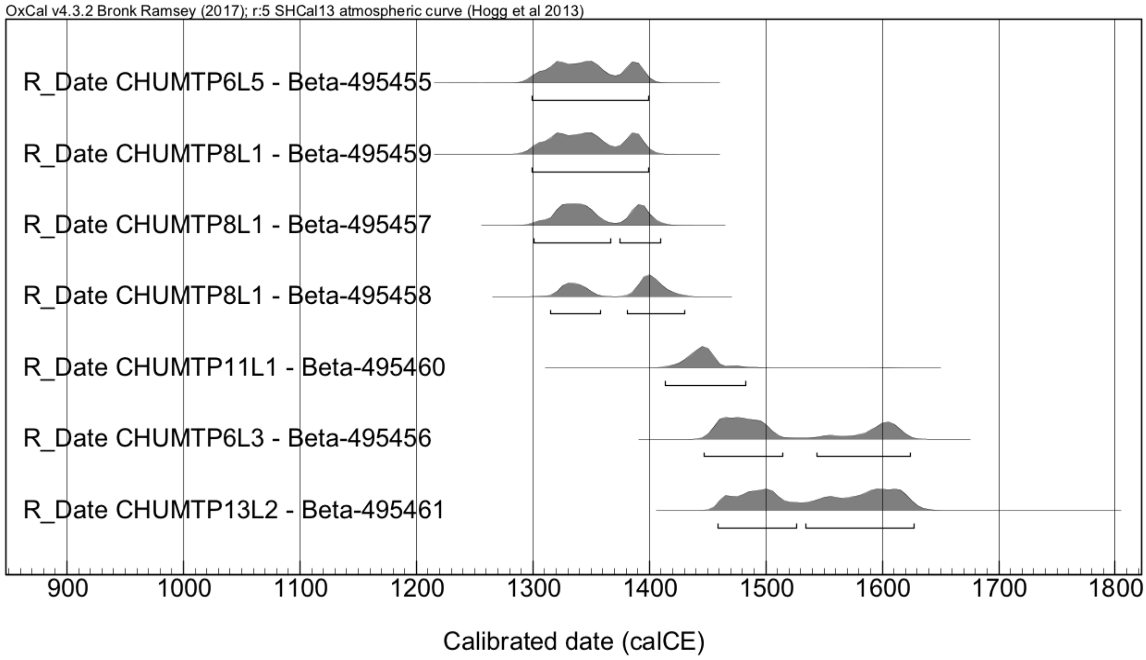


Figure 4. 21: Chumnungwa radiocarbon dates. These were calibrated using the OxCal v 4.3 using the southern hemisphere atmospheric curve (Hogg et al. 2013).

Table 4. 2. Calibrated radiocarbon dates of charcoal samples excavated from the hilltop and foothill areas of Chumnungwa

Accession Number	Provenance	Lab Number	Uncalibrated Dates	Calibrated Dates	Associated Material Culture
Hilltop Area					
CHUMTP6L3	Test Pit 6 Layer 3	Beta-495456	420±30 BP	1446-1624	Fauna, shell beads, metals, crucible, vitrified dung, soapstone bicone bead, glass beads, pottery, & figurine
CHUMTP6L5	Test Pit 6 Layer 5	Beta-495455	660±30 BP	1298-1399	Fauna, gold smelting crucible, shell beads, metals, glass beads, pottery, bead mould fragment & spindle whorl disc fragment
CHUMTP8L1	Test Pit 8 Layer 1 (10 cm)	Beta-495458	610±30 BP	1315-1430	Slag nodules, fauna, worked bone, shell beads, metals, glass beads, pottery, figurine, & lithic
CHUMTP8L1	Test Pit 8 Layer 1 (74 cm)	Beta-495459	660±30 BP	1315-1430	Slag nodules, fauna, shell beads, metals, glass beads, pottery, & lithic
CHUMTP8L1	Test Pit 8 Layer 1 (129 cm)	Beta-495457	640±30 BP	1300-1410	slag nodules, fauna, shell beads, metals, glass beads, pottery, & spindle whorl disc fragment
Foothill Area					
CHUMTP11L1	Test Pit 11 Layer 1	Beta-495460	490±30 BP	1413-1482	Fauna, worked bone, shell beads, metals, glass beads, pottery, figurine, lithic, & spindle whorl disc fragment
CHUMTP13L2	Test Pit 13 Layer 2	Beta-495461	390±30 BP	1458-1627	Fauna, shell beads, metals, glass beads, pottery, lithic, & spindle whorl disc fragment

4.4. DISCUSSION & SUMMARY

Fieldwork conducted on the summit and foothill of Chumnungwa revealed numerous features, structures, and subsurface finds that clearly show that the size of the site was underrated by previous researchers (i.e. Hall & Neal 1904: Matenga & Chikwanda 1999). The presence of ruined homestead structures on the plain such as *dhaka* floors, grain bins, rubbish middens, and a large cattle kraal, shows that the Iron Age settlement at Chumnungwa was not restricted to the hilltop as previously portrayed by Hall and Neal (1904) and others (i.e. Matenga & Chikwanda 1999; Kusimba et al. 2017). As derived from the current survey, there is a possibility that housing on the plain could have extended from the foothill further down to the stretch of land currently inhabited and cultivated by the contemporary community.

A closer review of the housing residues on both the hilltop and foothill of Chumnungwa (Figures 4.3 and 4.19), shows that residents of both hilltop and foothill areas lived in houses that were constructed using similar raw materials. Thus, in as much as the current surveys and the excavations were limited in uncovering all the remains of the surviving housing at Chumnungwa, we know very well from the archaeological record that typical Iron Age societies of southern Zambezia that resided at neighbouring settlements such as Nenga, Mwenezi, and Ndongo built houses made of wooden poles, grass, and *dhaka* (see Huffman 1978; Manyanga 2006; and Shenjere-Nyabezi 2017).

Furthermore, the new site map in Figure 4.5, shows that Chumnungwa had a two-tier settlement layout, which was made up of the summit on the hill and the plain on the foothill. Presence of ashy middens with dense scatters of ceramics, bone fragments, metals, slag, *dhaka* floor rubble, and grain bin foundations show explicitly that the hilltop and foothill were occupied simultaneously. For the obvious reason that the surface area on the hilltop is smaller than that on the plain, a small portion of the residents of Chumnungwa occupied the hilltop whilst the majority of the people occupied the flats. However, unlike the plain dwellers, those who occupied the hilltop must have enjoyed several privileges which included the monumental stone architecture, a good view of the surrounding landscape, and security from dangerous wild animals and livestock raiders.

The study of Chumnungwa's catchment area within a 30 km radius has shown us that the site was strategically located within a well-resourced ecological area. This had abundant wild fruit trees, wild vegetables, wild animals, edible worms and insects, grasses for house thatching, and trees for firewood and construction timber. As demonstrated in Figure 4.22, the residents of

Chumnungwa had also huge deposits of gold, copper, iron, and other rock minerals at their disposal which they probably mined, smelted and fabricated into tools, jewellery, weapons, and other items. These minerals are readily available in the nearby Mberengwa, Buhwa, Filabusi, Gwanda, and Mweza greenstone belts as well as the Doro range (Worst 1956, 1962; Martin 1978; Bickle & Nisbet 1993; Ranganai et al. 2008). Water and aquatic resources were also readily available from the local rivers and springs such as the Bubi, Makori, and Jorodani (Jordan). The adjacent plains probably served as grazing lands and fields for cultivating crops such as sorghum and millet, however, it was very difficult to conduct intensive surveys on these spaces since they are currently occupied and cultivated.

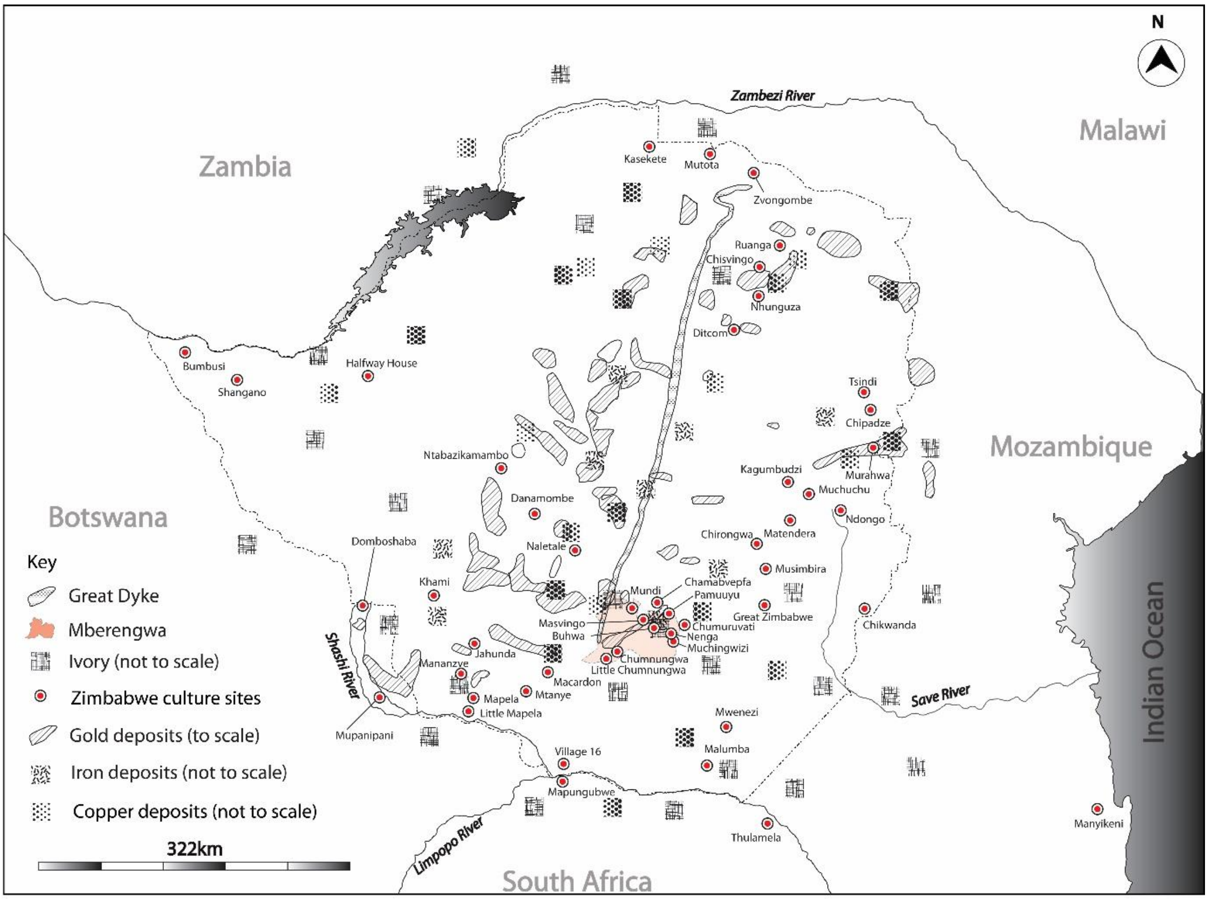


Figure 4. 22: Location of Chumnungwa and other Zimbabwe culture sites in relation to the nearby gold, iron, copper, and ivory resources (Adapted from Huffman 2009:50 and Chirikure 2019).

As indicated earlier, before these excavations, there were no existing radiocarbon dates for Chumnungwa nor any other Zimbabwe type site in Mberengwa. As a result, on the basis of similarities in stone architecture, Chumnungwa was relatively dated as a ‘peripheral district’ of Great Zimbabwe polity which was established some years later when Great Zimbabwe became a major polity in southern Zambezia (sensu Hall & Neal 1904; Hall 1987; Matenga & Chikwanda 1999; Swan 2007; Huffman 2009:51; Kusimba et al. 2017). However, radiocarbon dates generated from this study suggest Chumnungwa (CE 1298-1627) as a contemporary of Great Zimbabwe (CE 1300-1660) (see Chirikure et al. 2016b, 2017a for recent dates for Great Zimbabwe). Nevertheless, ceramic (Chapter 5), glass bead (Chapter 6), and stonewalling (Chapter 7) data in the forthcoming chapters will be used to confirm this position.

A preliminary assessment of the subsurface data suggests that the majority of the material finds which were recovered from the hilltop and foothill areas of Chumnungwa were residential debris that was dumped on the ashy middens as unwanted garbage. The diversity and density of these material finds is a reflection that residents of Chumnungwa consumed various craft objects and animal foods; these included pottery, shell beads, fauna, figurines, musical instruments, metal jewellery, spindle whorls, and metal tools and weapons which they probably produced onsite. We know from Shona anthropology that such typical objects reflected the everyday lifeways of agropastoralist communities (Bullock 1927; Holleman 1952; Posselt 1935; Von Sicard 1953, 1957; Bourdillon 1976; Aschwanden 1982, 1987; Ellert 1984; Ruwitah 1997; Mapara 2007; Shoko 2007; Mavhunga 2014; Mungwini 2017). Part of these livelihoods included pottery making, livestock domestication, fibre spinning and weaving, bead making, metal smithing and smelting, as well as hunting and gathering, which were undertaken for daily subsistence and other secondary reasons. The presence of glass beads is an indicator of participation in Indian Ocean trade, perhaps via local rivers that were navigable such as the Bubi. Furthermore, a preliminary review of the material finds recovered from both the hilltop and foothill areas of Chumnungwa shows that they were generally uniform, hence there is a possibility that those who occupied the hilltop and the foothill were one community that shared similar material culture. Similarly, a comparison of stratigraphy from the different test pits dug across the hilltop and foothill areas of Chumnungwa leads one to envisage their formation as contemporary. The upper layers of most test pits were characterised by light or grey ashy soil whilst the bottom layers comprised of compacted red-brown and dark ashy soils which usually set on a bedrock or house floor. Nevertheless, in as much as all these propositions are plausible, they await scientific verification. Detailed studies on the typology and possible uses and significance of these material finds are presented in the forthcoming chapters including the one undertaken on the stone architecture.

CHAPTER FIVE

CHUMNUNGWA CERAMICS

"I then handed him over some pieces of pottery with geometrical patterns (incised triangle motifs) not all crudely executed, which we have just unearthed, and ask him if the Makalanga[25] *(Shona) made them. For ten minutes, he and his headmen are closely examining the pottery, noting the quality of the clay, the corrections of the pattern, and the glaze on both sides. Yes, the Makalanga made it.... but meningi dara (very old)"* (Hall 1905:40).

5.1. INTRODUCTION

Ceramics (sensu hand-crafted pottery) are one of the numerous forms of material culture that have the power to tell the archaeology of ancient civilisations (Pikirayi 1997; Gosselain 1999; Caple 2006; Tilley et al. 2006; Hicks & Beaudry 2010; Wynne-Jones 2013). Because they served in a variety of everyday routines of most societies who produced and consumed them. Many archaeologists in southern Africa have studied them to answer a wide array of questions about the lifeways of African societies in the Iron Age (Caton-Thompson 1931; Summers et al. 1961; Garlake 1973b; Hall 1984; Sinclair 1987; Pikirayi 1993, 2007; Pwiti 1996b; Manyanga 2006; Huffman 2007; Antonites 2012; Van Waarden 2012; Nyamushosho 2017b; Chirikure et al. 2018; Nyamushosho & Chirikure 2020). Some of these key areas of study include cultural identities, settlement history, and societal entanglements. However, because earliest Iron Age studies were undertaken during the colonial period where local ceramics were discarded by early excavators who prospected for gold as, 'Kaffir rubbish' (see Bent 1892; Hall & Neal 1904:154-155), pottery from some significant places such as Chumnungwa remained unstudied, hence until today, they are largely known through speculation. For instance, the norm has been to assume that because Chumnungwa shares a similar stone architecture building style with Great Zimbabwe, its pottery, like any other material culture recovered from the site, is assumed to be similar to that of Great Zimbabwe (Hall & Neal 1904; Summers 1969; Hall 1987; Matenga & Chikwanda 2000; Swan 2007, 2008; Kim & Kusimba 2008:145; Huffman 2009:50). Whether this is true or false, we do not know, but what we know today is

[25] Hall (1905) was referring to the Karanga-speaking people who are popularly known as Shona.

that in as much as Chumnungwa is celebrated as one of the largest Zimbabwe type settlements in Southern Africa, the character of its pottery remains scientifically unknown. Therefore, since the current study was the first to employ standard archaeological methods of data recovery and analysis, local ceramics recovered from Chumnungwa were studied from a typological dimension in order to generate an understanding of the site settlement history, everyday practices of the Iron Age community that occupied the site and to compare with other sites in the region.

5.2. CERAMIC TYPOLOGY STUDIES IN SOUTHERN AFRICAN IRON AGE: A BRIEF REVIEW

In southern African Iron Age studies, ceramic typology dominates most of the research that was undertaken since the advent of archaeology as a discipline in the 20th century (Pikirayi 1997; Nyamushosho & Chirikure 2020). The earliest research on typology was undertaken during a period when local ceramics were mostly relegated as insignificant to the Iron Age prehistory (see Hall & Neal 1904). However, efforts to describe pottery recovered from spectacular Iron Age settlements such as Mapungubwe, Great Zimbabwe, Khami, and Danamombe (Randall-McIver 1906; Caton-Thompson 1931; Fouché 1936) played a pivotal role in setting up the foundation for future comprehensive typological studies. These efforts coupled with Randall-McIver's and Gertrude Caton-Thompson's success in championing indigenous Bantu-speaking-people as architects of these Iron Age civilisations, such as Great Zimbabwe, inspired the next crop of researchers to develop an interest in local ceramics, hence pottery became the central topic to Iron Age research. These scholars included Schofield (1948), Robinson (1959, 1965b, 1966); Fagan (1967), Garlake (1966, 1968), and Summers et al. (1961). This new crop of researchers relied on typology to trace the archaeological identity of numerous Iron Age groups in Southern Africa through correlating their pottery with that of the contemporary Bantu ethnic groups (Pikirayi 1997). However, despite being influenced by the culture-historical framework developed in Europe (Childe 1939), their work deserves credit since they managed to refine the chronologies of numerous Iron Age sites in southern Africa through establishing a ceramic sequence that was backed by radiocarbon dating.

Later in the second half of the 20th century, research focus on Iron Age ceramics was elevated to a regional scale (Pikirayi 1997; Mtetwa et al. 2013). This time, typology was largely used to examine multidimensional attributes of pottery assemblages within and beyond southern Africa (Huffman 1980; Soper 1971; Maggs 1976; Denbow 1983; Phillipson 1985; Sinclair 1987).

These taxonomies resulted in the creation of north to south migration models to account for the origins and settlement histories of Bantu-speaking communities in Southern Africa (Posnansky 1961; Soper 1971; Phillipson 1985). Similarly, more researchers began to construct local culture histories of several Iron Age landscapes that had been previously assumed not to have supported any significant Iron Age communities (Summers 1960; Phillipson 1969; Beach 1980). Part of these areas included the mid-Zambezi valley (Pikirayi 1993; Pwiti 1996b; Chirikure et al. 2002), Mozambican coast (Sinclair 1987; Morais 1988); the Shashi-Limpopo valley (Garlake 1966; Manyanga 2006; Calabrese 2007; Huffman & Du Piesanie 2011; Chirikure et al. 2014; Nyamushosho et al. 2018; and north-eastern Botswana (Van Waarden 1999, 2011, 2012 Denbow et al. 2008). Though typology-oriented, these studies were instrumental as they developed local ceramic sequences that were fluid and conversant to the established migration models. Most importantly, the manifestation of Iron Age ceramics in these landscapes demonstrated the presence of thriving agropastoral communities that could utilise the resources available for their daily subsistence.

As previously illustrated in the third chapter, it is within the same period when the most comprehensive settlement history of Great Zimbabwe was modelled using a typology of local ceramics. Building upon the works of David Randall-MacIver and Gertrude Caton-Thompson which foregrounded the authorship of Great Zimbabwe to the local Karanga people based on local pottery and other pieces of evidence from locally produced crafts (Randall-MacIver 1906; Caton-Thompson 1931); Keith Robinson (1961:159-235) categorised the settlement history of Great Zimbabwe into five periods of occupation using local pottery he recovered from Great Zimbabwe. This typological sequence blended well with the radiocarbon dates, architectural and oral history, as well as typologies of other material finds which Summers et al. (1961) recovered from Great Zimbabwe. Period I pottery comprised comb-stamped globular pots. Robinson assigned this to the earliest Iron Age people who lived at Great Zimbabwe hilltop during an EIA era commonly referred to as Gokomere, which spanned from the 5th to the 8th centuries. This was followed by Period II pottery which mostly comprised gourd-shaped pots and hemispherical bowls. According to Robinson, this pottery type was produced and consumed between the 9th and mid-12th centuries by the Gumanye people largely known today as the ancestors of the Karanga people (Sinclair 1987). Later, between the 13th and 16th centuries, the pottery evolved into Period III and IV which was generally dominated by graphite burnished pots. The appearance of graphite burnished pots coincided with the beginning of stone-walled settlements on the Hill Complex and these spread into Great Enclosure, Western

Enclosures, and Valley Enclosures. Period V pottery was prominent between CE 1833 and 1900 when the Valley Enclosures were re-occupied by the Karanga people. Summers et al. (1961) concluded that Period III, IV, and V pottery, was a product of the Karanga people, who continuously occupied Great Zimbabwe until the 19th century.

More recently ceramic typology has been used to question the nature of the relationship between Great Zimbabwe and Khami Iron Age sites (Chirikure et al. 2013a, 2017a). Previously the traditional meta-narrative had been that Khami evolved out of Great Zimbabwe (Summers et al. 1961; Huffman 1981; 1996, 2007) hence, they were alleged to share a similar worldview as reflected by their ceramics, and other forms of material culture such as stonewalling, and settlement organisation. However, new data from Chirikure et al. (2013a, 2017a) has shown that despite these groups having different worldviews as reflected in their material culture, particularly the fact that Great Zimbabwe ceramics were rarely decorated with graphite burnishing, but were largely dominated by shouldered pots and short-necked jars, whilst Khami was lavishly decorated with polychrome bands and panels (also see Mukwende et al. 2018); they existed on the landscape during the same time, therefore they interacted on a greater scale. This is supported by new radiocarbon dates from Great Zimbabwe and Khami which show that the chronology of both capitals overlapped (see Chirikure et al. 2018; Mukwende et al. 2018).

Nevertheless, despite being periodically criticised for relegating the social, technological, and functional aspects of prehistoric pottery (Beach 1980; Hall 1984, 1987; Lane 1994/5; Pikirayi 2007; Esterhuysen 2008; Sadr 2008; Mtetwa et al. 2013; Nyamushosho & Chirikure 2020), ceramic typology has contributed immensely to the Iron Age archaeology of southern Africa. To date, it has been successfully used to reconstruct settlement histories, archaeological identities and social networks of Iron Age agropastoralists including those that resided at Khami (see Robinson 1959; Chirikure et al. 2002; Mukwende et al. 2018), Ingombe Ilede (Fagan 1967), Mapela (see Garlake 1968; Chirikure et al. 2014), Chamabvepfa (see Huffman 1978), Gumanye (see Sinclair 1987), Zvongombe (see Pwiti 1996b), Mwenezi (see Manyanga 2001, 2006), and Bosutswe (Denbow et al. (2008). Therefore, as rightfully argued by Pikirayi (1997:69), ceramic typology remains pertinent and the primary objective in under-researched sites such as Chumnungwa which are mostly known through speculation.

5.3. ANALYTICAL FRAMEWORK

Ceramic studies in southern African Iron Age are largely conducted within a material culture framework that conceptualises ceramic style as a proxy of prehistoric group identities, interactions, and movements (Schofield 1948; Robinson 1961; Maggs 1976; Huffman 1980, 1982, 2007; Hodder, 1982; Denbow 1983; Sinclair 1987; Evers 1988; Pikirayi 1993, 2007; Pwiti 1996b; Soper 2002; Phillipson, 2005; Antonites 2012; Van Warden 2012). Within this theoretical framework ceramic style is believed to carry with it codes or design symbols that continually feature on several of their objects such as mural art, musical instruments, beadwork, woodwork, dressing, metal ornaments, housing, and stonewalling (Bent 1892; Robinson 1965b; Evers 1988; Huffman 1980, 1982, 2007). One of the prominent studies to apply this cognitive archaeology framework was that of Mike Evers (1988) which focused on the material culture of the modern-day Gwembe-Tonga, Pedi, and Zulu communities. Evers's ethnographic study showed that decorative art carried symbolic messages within the respective linguistic groups was largely expressed as decorative motif designs on various objects that were used every day. Most importantly, he found out that in as much as a decorative art was expressed on various objects that were used in everyday life, such as headrests, spoons, mats, and wooden drums, its distinctiveness was best expressed through a ceramic style which varied within cultural groups. Since then, Africanists, archaeologists, and anthropologists in southern Africa have continuously relied on ceramic style as the best method of tracking group identities and settlement histories of Iron Age communities in southern Africa (Pikirayi 1997,2007; Huffman 2007; Sadr 2008; Mtetwa et al. 2013). The rationale is that pottery is abundantly recovered in most Iron Age sites since it was active in everyday life (Pikirayi 1997). Huffman (2007) further posits that within the same framework ceramic style can be used to trace group interactions and movements at various levels that range from small to largescale contacts, particularly in situations in which two or more ceramic styles appear in the same strata. According to Huffman (2007:318), typical interactions are facilitated by variables such as intermarriages, trade, and emulation. For, instance Huffman believes that the emergence of triangle motifs on the Great Zimbabwe Period III pottery was not necessarily a product of trade relations between Great Zimbabwe people and those from Mapungubwe, but rather emulation of a new style by potters from Great Zimbabwe. Despite constant criticisms (i.e. Beach 1980; Hall 1987; Lane 1994/5; Mitchell 2002:270; Nyamushosho 2017b), decoding the identities and settlement histories of Iron Age communities in southern Africa has continued to be pursued using ceramic style (i.e. Sinclair 1987; Pikirayi 1993; Pwiti 1996b; Manyanga 2006; Huffman 2007; Van Warden 2012; Shenjere-Nyabezi 2017; Mukwende et al. 2018. However, as cautioned by Huffman (2007:104), this approach is only fruitful when the producers and consumers of the pots are entirely a single cultural entity. Therefore, to maintain consistency and to enable comparison with other related studies (enlisted above), this study adopted this framework as the basis for approaching the ceramics that were recovered from Chumnungwa.

5.4. ANALYTICAL METHOD

A multivariate method was adopted for analysis of the stylistic and decorative attributes of ceramics recovered from Chumnungwa. This method has been widely used in southern Africa for many decades as the standard procedure for reconstructing the cultural history of Iron Age agropastoralists at intra- or inter-site levels (see Robinson 1961; Maggs 1976, Huffman 1980, 1982, 2007; Denbow 1983; Sinclair 1987; Pikirayi 1993; Pwiti 1996b; Manyanga 2006; Antonites 2012; Van Warden 2012; Chirikure et al. 2002, 2018). Due to heavy fragmentation, the ceramics were initially sorted into diagnostic and the non-diagnostic categories. This was done by paying close attention to their stratigraphical context. Diagnostic ceramics included all the sherds from which one could identify the vessel body parts, particularly the rim and decorated sherds (Pikirayi 1993; Chirikure et al. 2002). Non-diagnostic ceramics were treated as those sherds that could not be identified with any vessel body parts, and since not much data could be derived from these, their analysis was mostly limited to quantification (Pikirayi 1993). Ultimately, the analysis was focused on diagnostic sherds. A data capture sheet was designed to record the salient features of the diagnostic sherds (see Appendix 2). These included lipform, texture, surface treatment, colour, vessel shape, decoration motif, placement, and technique. As commonly practiced by many archaeologists (i.e. Huffman 1980; 2007:111; Evers 1988; Pikirayi 1993:121; Pwiti 1996b; Manyanga 2006; Van Warden 2012) vessel shape and decoration (motif, placement, and technique) were prioritised in this study as the salient features that were used to define the character of Chumnungwa ceramic assemblage. However, because the majority of the ceramic shards were recovered in a highly fragmentary state, as generally experienced at most Iron Age sites in southern Zambezia (see Hall 1905; Caton-Thompson 1931; Robinson 1961; Huffman 1978; Chirikure et al. 2018), the other traits such as lipform, texture, surface treatment, and colour, had first to be analysed to comprehend the full character of the vessels before they could be broadly classified (sensu Robinson 1961; Soper 1971, 2002). More importantly, this helped to bridge the major shortfall of the multivariate approach which is embedded in its subjectivity towards complete and decorated vessels (i.e. Huffman 2007). A detailed description of these attributes is presented below.

Lipform

In this study, lipform was characterised and classified using the nine lipform types commonly identified at most Iron Age sites in southern Africa (see Schofield 1948; Robinson 1961; Phillipson 1976; Maggs 1976; Evers 1988; Pikirayi 1993; Pwiti 1996b; Chirikure et al. 2002). These range from rounded to thickened lips as demonstrated in Figure 5.1 below.

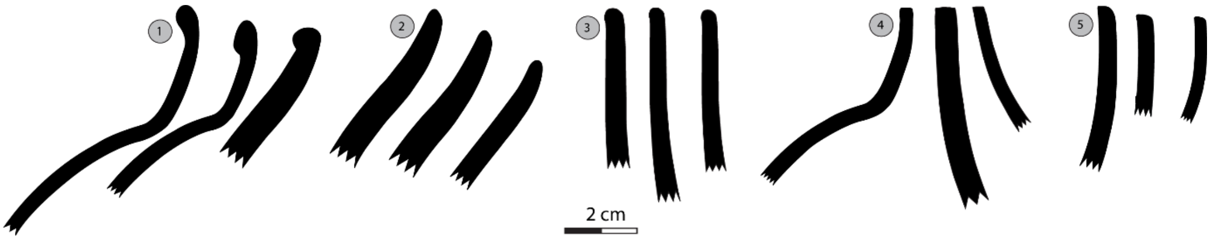


Figure 5.1: Vessel lip forms common at most Iron Age sites in southern African [1] Externally thickened lips, [2] Tapered lips, [3] Rounded lips. [4] Square lips. [5] Bevelled lips

Texture

Texture was characterised as the degree of thoroughness of the paste which was used by the potter to temper a vessel (Shepard 1956; Matson 1965; Rice 1987). Consequently, the texture for each and every diagnostic sherd was measured through visual assessment of the cross-sectional end of a potsherd paying attention to the irregularity and the varying degree of the grain size paste which ranged from fine, medium to coarse (Rice 1987).

Surface treatment

Surface treatment was recorded as the coating applied on the surface of a pottery vessel during pre-firing or post-firing of a pot to make it more appealing or to protect it against abrasion during use (Skibo et al. 1997). Regionally, archaeologists and anthropologists have recorded numerous forms and combinations of treatments applied to clay pots surfaces by potters (see Randall-MacIver 1906; Caton-Thompson 1931; Robinson 1961; Sinclair 1987; Pikirayi 1993; Pwiti 1996b; Van Warden 2012; Chirikure et al. 2018). Some of the common forms recorded in this study included polishing, burnishing, and graphite burnishing.

Colour

Colour recorded on the surface of ceramic potsherds recovered from Chumnungwa was basically a product of a combination of factors that included, clay composition, temperature, and duration of firing (sensu Shepard 1956; Rice 1987). In this study, colour of every potsherd was visually detected through matching the colour on their outer surfaces with that on the Munsell soil colour scheme. However, in cases where more than one colour appeared on a single potsherd, the overriding colour was recorded. Similarly, colouration resulting from soot and other stains caused during use were treated as secondary colours.

Vessel Shape

As commonly practised in the Iron Age of southern Africa, anatomical parts (lip, rim, neck, shoulder, body, or base) ceramic sherds recovered from Chumnungwa were used as the primary unit of analysis to recreate the shapes of the vessels (Figure 5.2). The process of reconstructing these shapes followed procedures used by Caton-Thompson (1931), Robinson (1961:159-235), Huffman (2007:250-257), and Chirikure et al. (2002, 2018. Whilst every effort was made to merge the recreated vessel types into a manageable assemblage (see Figure 5.2), caution was exercised to avoid a likelihood of weeding out the variation.

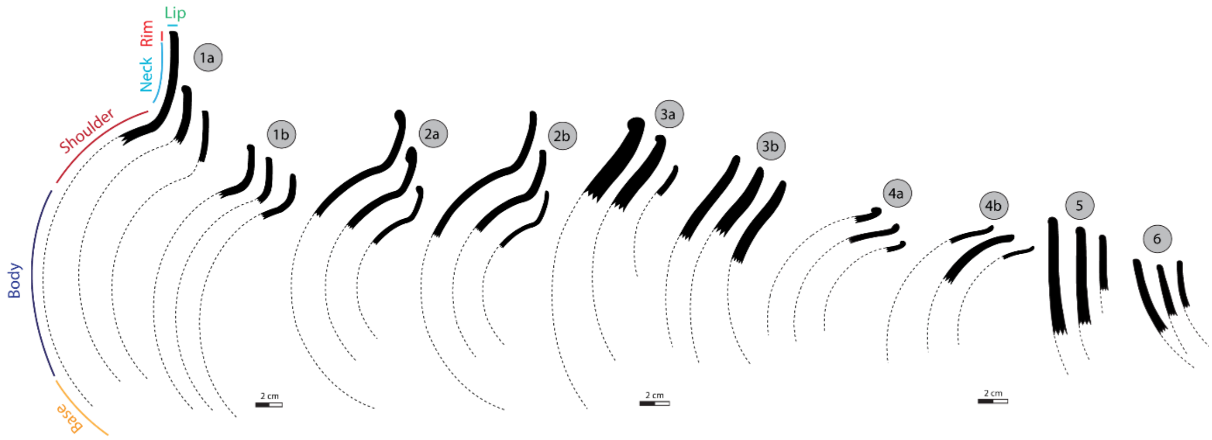


Figure 5.2: Anatomical parts and shapes of reconstructed pottery vessels from Chumnungwa.

Decoration motif

Decoration motif was recorded as the full layout or arrangement of the patterns of the designs that were exerted on the surface of a potsherd. Dominant motifs were recorded in cases where there was more than one motif (Figure 5.3).

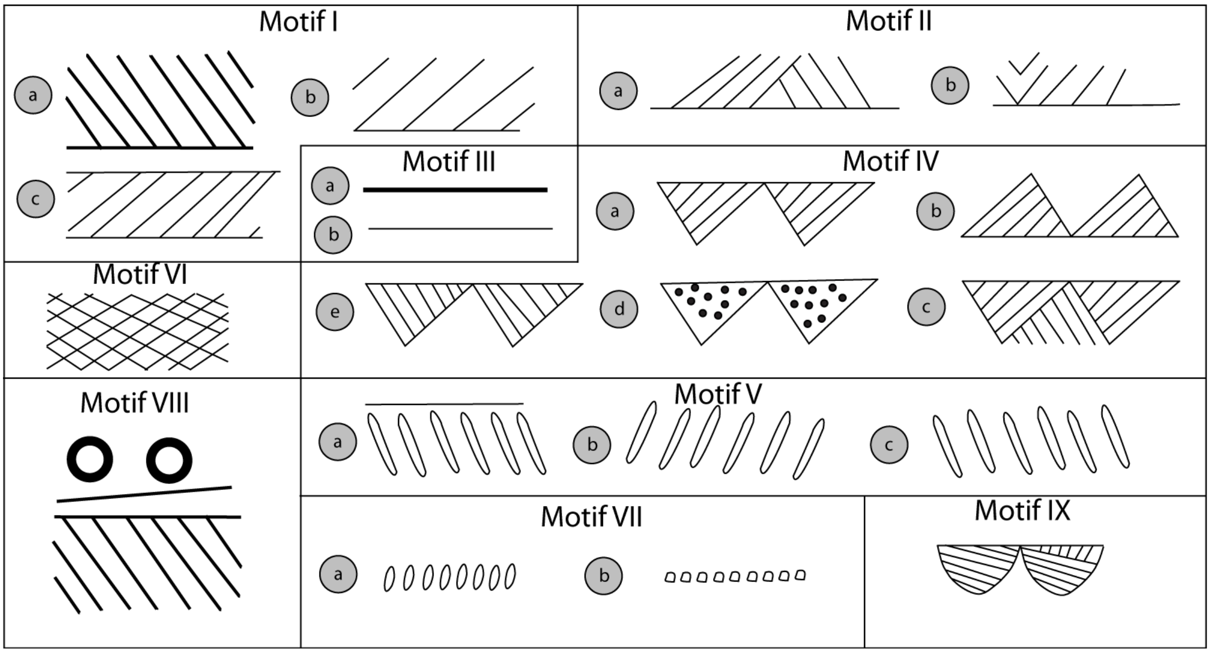


Figure 5.3: Decoration motifs of pottery recovered from Chumnungwa.

Decoration placement

Decoration placement was recorded as the actual location on the surface of a potsherd where the decorations were applied (Pikirayi 1993: 123; Huffman 2007:111). These locations ranged between the lips, rims, necks, and shoulders of the potsherds (see Figure 5.2).

Decoration technique

Decoration technique was treated as the actual method used to exert decoration design on the surface of a ceramic sherd (Soper 1971; Huffman 1980, 2007; Pikirayi 1993). The techniques varied based on the instruments or substances used. These included stabbing, punctate stamping, and incising which were all produced using a sharp tool.

5.5. ANALYSIS AND RESULTS

A total of 4 653 potsherds were recovered from the test pit trenches that were sunk on both the hilltop and foothill areas of Chumnungwa. The bulk of the pottery was recovered from the hilltop area; this resulted from the excavation strategy which was applied at Chumnungwa (see Chapter 4). Due to the high density of fragmentation, the majority of the sherds (90.3%) recovered at Chumnungwa were undiagnostic, and hence, a small sample (9.62%) remained for further studies. Ultimately, all the diagnostic potsherds were examined using the multidimensional approach. A comprehensive analysis of the diagnostic sherds at a stratigraphical level using the natural layers of the excavated units is presented in Appendix 2. For comparison purposes, the results of the multidimensional analysis were presented at test pit level under the headings of hilltop and foothill areas.

5.5.1. CERAMICS FROM THE HILLTOP AREA

A total of 3 261 potsherds were recovered from the surface and eight test pits that were sunk on the hilltop area of Chumnungwa. The majority of these sherds were highly fragmented hence only 311 (9.53%) were diagnostic. A comprehensive analysis of sherds at the test pit level is presented in Table 5.1 and the sections below.

Table 5.1: Summary of the typological attributes of ceramics recovered on the hilltop of Chumnungwa.

Attribute		Surface Finds	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	Total
Provenance	Diagnostic	36	10	19	11	5	8	6	79	137	311
	Undiagnostic	144	165	207	77	98	39	113	955	1154	2952
	Total	180	173	226	88	103	47	119	1034	1291	3261
Lip-Form	Externally thickened	2	1	4	1	2			8	25	43
	Rounded	13	6	8	4	2	2	3	41	62	141
	Tapered	4		1				2	10	12	29
	Bevelled				2		1	1	11	17	32
	Square	8		1	1	1	1		6	18	36
	Total	27	7	14	8	5	4	5	76	134	280
Texture	Fine	30	9	15	8	5	2	5	71	126	271
	Medium	4	1	4	3		4	1	7	10	34
	Coarse	2					2		1	1	6
	Total	36	10	19	11	5	8	6	79	137	311
Surface Treatment	Graphite burnished	12	7	7	4	2	1	1	15	56	105
	Polished	24	3	12	7	3	7	5	64	81	206
	Total	36	10	19	11	5	8	6	79	137	311
Colour	Black	12	5	7	4	2	1	1	18	56	106
	Red	11	1	1	2	1	2	1	7	10	36
	Grey-brown	9	3	6	4	1		3	44	57	127
	Grey	6	1	5	1	1	5	1	10	14	44
	Total	36	10	19	11	5	8	6	79	137	311
Residue	Soot	3	4	11	2	3	5	3	59	98	188
	Carbon	3	2	1	1	2	1		8	14	32
	Total	6	6	12	3	5	6	3	67	112	220

Vessel Shape	1a.	3	1	2	3	1	2		12	37	61
	1b.	3		1	1			1	6	11	23
	2a.	3	1	1	1	2		1	12	26	47
	2b.	9	1	1	1		1	3	17	20	53
	3a.			1					1	4	6
	3b.	2	2	7	2			1	5	19	38
	4a.	3							1	2	6
	4b.	1							1	2	4
	5.	4	1	1			1		12	10	29
	6.		1	2		2			1	3	9
	Total	28	7	16	8	5	4	6	68	134	276
Decoration Motif	I.	8	2		1		1		1	3	16
	II.										
	III.		1		1				3	2	7
	IV.	1		1					2	4	8
	V			1					1		2
	VI									1	1
	VII						3				3
	VIII								2	1	3
	IX									1	1
	Total	9	3	2	2		4		9	12	41
Decoration Placement	Lip										
	Rim										
	Neck	2							1		3
	Shoulder	7		2	2		4		8	12	35
	Total	9	3	2	2		4		9	12	41
Decoration Technique	Incisions	6		1	2				8	11	28
	Stabs						3				3
	Punctuates	3		1							4

	Incisions and impressions						1	1	2
	Total	9	3	2	2	4	9	12	41

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims 2a = Shouldered pots with thickened rims
2b = Shouldered pots with simple rims 3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims 5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions III = fine line and broad line oblique incisions
IV = Interlocking triangles V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades TP = Test Pit

Surface Finds

A total of 144 potsherds were collected from the surface of Chumnungwa hilltop (Table 5.1). Out of the total, only 36 (25%) sherds were diagnostic. The majority of the potsherds had rounded lipforms whilst the remainder had squared, tapered, and externally thickened lips. The fabric of the sherds ranged between course (5.5%), medium (11.1%), and fine-textured (83.3%). The latter mostly characterised sherds with shiny surfaces. Most of the sherds had their surfaces polished, whilst the minority were graphite burnished. Black colour dominated throughout particularly on those sherds treated with graphite burnish, whilst red, grey, and grey-brown colours were prominent on the other sherds. Ultimately, eight vessel-shape classes with varied sizes were reconstructed from the diagnostic potsherds collected from the surface area of Chumnungwa hilltop (Figure 5.3). These comprised shouldered pots with simple rims (32.1%), deep bowls (14.2%), tall-necked pots with flared rims (10.7%), short-necked pots with thickened rolled and beaded rims (10.7%), shouldered pots with thickened rims (10.7%), constricted pots with thickened rims (10.7%), neckless pots with simple rims (7.1%) and lastly constricted pots with simple rims (3.5%). Only a few of these vessels were decorated (25%) with either diagonal incisions or interlocking triangle motifs on their necks and shoulders. (Figure 5.4).

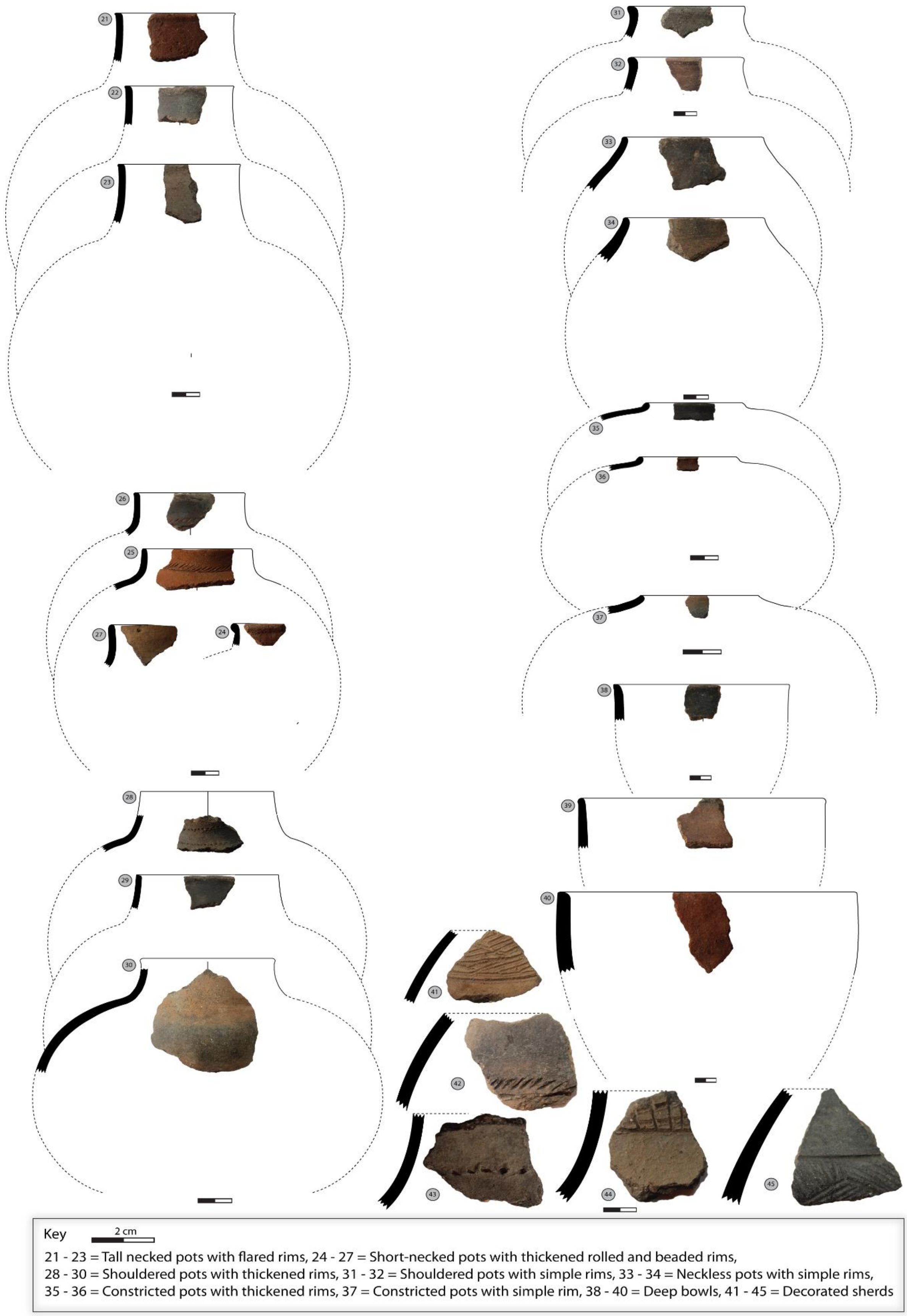


Figure 5.4: Sample of reconstructed pottery vessels recovered from the surface area of Chumnungwa hilltop.

Test Pit 1

A total of 173 potsherds were recovered from Test Pit 1 and only 10% had diagnostic features (Table 5.1). The majority of these had rounded lipforms with only a single sherd designed with an externally thickened lip. Texture density was predominantly fine, although on one sherd it was recorded as medium textured. Seventy-five percent of the sherds were treated with graphite burnishing whilst the remainder were polished. Similar to the pattern observed among surface finds, colours varied from grey-brown, to red, to grey but most sherds had a black colour particularly the graphite burnished ones that had soot on their surfaces. Six vessel classes were reconstructed out of the diagnostic potsherds recovered from Test pit 1 (see Figure 5.5 below). They comprised necked pots with flared rims, shouldered pots with thickened rims, shouldered pots with simple rims, deep bowls, hemispherical bowls, and neckless pots with simple rims whose frequency was highly represented (Table 5.1). Of the vessels, 30% were decorated on their necks and shoulders with incisions which ranged from diagonal to fine line and broad line oblique incision motifs.

Figure 5.5: Sample of reconstructed pottery vessels recovered from Test Pit 1

Test Pit 2

A total of 226 potsherds were recovered from Test Pit 2 (Table 5.1). Although highly fragile, 8.4% of the sherds had diagnostic features. Similarly, to Test Pit 1, the majority of the diagnostic sherds had rounded lipforms, whilst the remainder had externally thickened lips, tapered lips, and squared lips. Of the analysed potsherds, 78.9% were fine-textured whilst the medium textured amounted to 21%. With only a few exceptions of the graphite burnished, most sherds had their surfaces polished. Colour of the sherds ranged from black to grey-brown, to grey, to red, respectively. Eight vessel classes were reconstructed out of the diagnostic potsherds (Table 5.1). These comprised neckless pots with simple rims, hemispherical bowls, tall-necked pots with flared rims, short-necked pots with thickened rolled and beaded rims, shouldered pots with thickened rims, shouldered pots with simple rims, neckless pots with thickened rims and deep bowls. Only two vessels were decorated with punctates and interlocking triangle-incisions on their shoulders respectively (Figure 5.6).

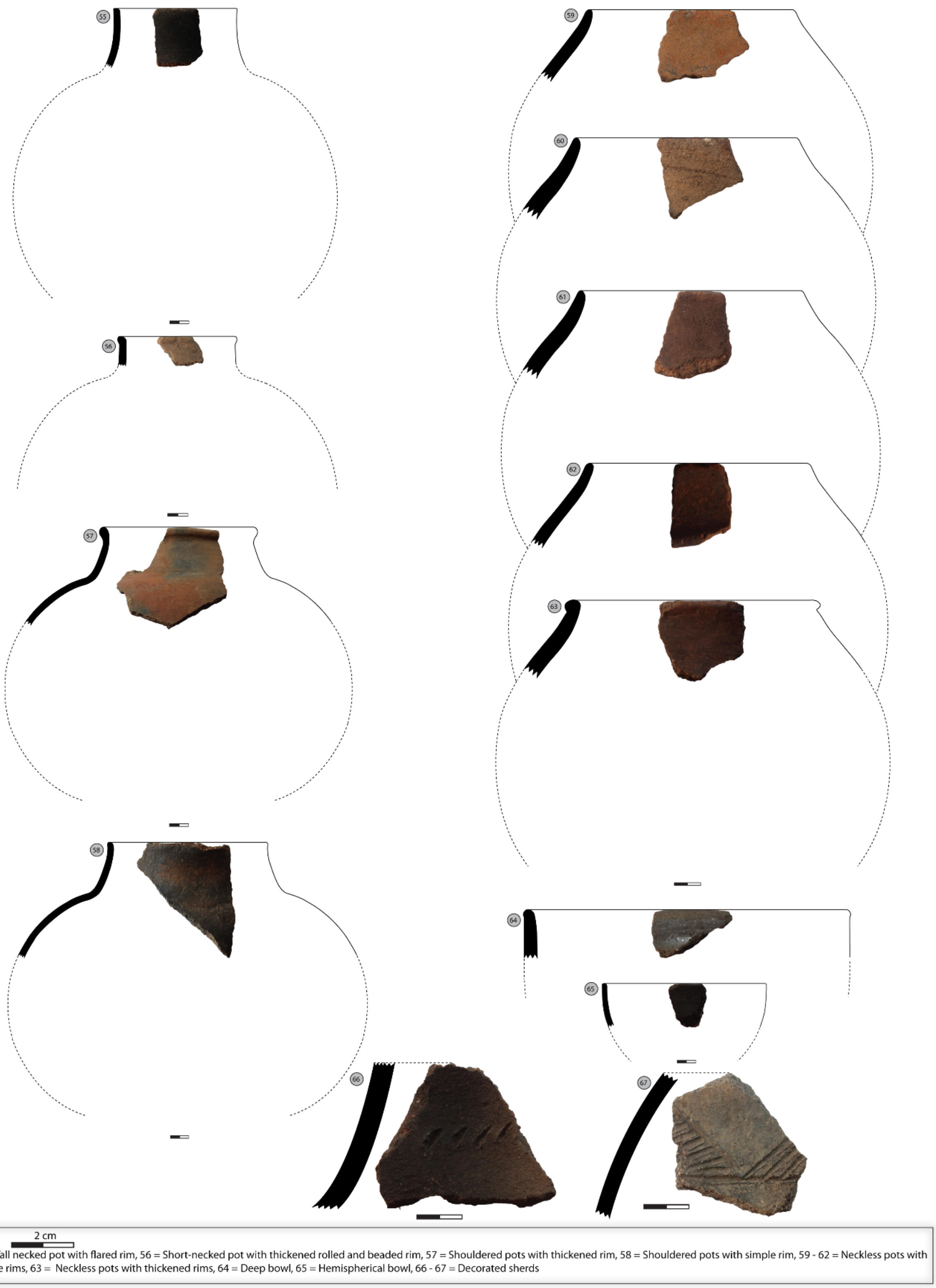


Figure 5.6: Sample of reconstructed pottery vessels recovered from Test Pit 2

Test Pit 3

A total of 88 potsherds were recovered from Test Pit 3. Out of the total, only 11 sherds were diagnostic (Table 5.1). Most of the sherds recovered from the test pit had rounded lipforms, followed by those with bevelled lips, squared lips, and externally thickened. The majority of the sherds had fine-textured surfaces while the rest were medium textured. In terms of surface treatment, most sherds were polished whilst the remainder were graphite burnished. Though one sherd was grey-coloured, black, and grey-brown colours dominated equally. Five vessel categories were reconstructed out of the 88 potsherds recovered and these were fairly represented in both the upper and lower levels of the test pit. Categories of the reconstructed vessels comprised tall-necked pots with flared rims and were the most prominent vessel category, followed by neckless pots with simple rims, short-necked pots with thickened rolled and beaded rims, shouldered pots with thickened rims, and shouldered pots with simple rims respectively (Figure 5.7). Bowls were not recovered from this section of the hilltop area. Perhaps this is best explained by limitations of the excavated ceramic sample. Only two of the diagnostic sherds were decorated with diagonal incisions and fine-line and broad-line oblique incisions on their shoulders.

Key 2 cm
68 - 69 = Tall necked pot with flared rims, 70 = Short-necked pot with thickened rolled and beaded rim, 71 = Shouldered pot with simple rim, 72 = Shouldered pot with thickened rim, 73 - 74 = Neckless pots with simple rims, 75 - 76 = Decorated sherds

Figure 5.7: Sample of reconstructed pottery vessels recovered from Test Pit 3

Test Pit 4

A total of 103 potsherds were recovered from Test Pit 4 and only five (4.8%) of these were diagnostic (Table 5.1). Lipforms of most sherds were fairly thickened (external) and rounded except for one, which had a squared lip (Table 5.1). The fabric of the clay paste was predominantly fine-textured. Regarding surface treatment, most sherds were polished whilst the others were graphite burnished. Colours recorded on the sherds ranged from red to grey-brown, to grey and black. Only three-vessel classes were reconstructed from the potsherds recovered from Test Pit 4, and these were fairly dominated by shouldered pots with thickened rims and deep bowls (Figure 5.8). Not a single decorated sherd was recorded.

Figure 5.8: Sample of reconstructed pottery vessels recovered from Test Pit 4

Test Pit 5

A total of 47 potsherds were recovered from Test Pit 5, and eight of these were diagnostic (Table 5.1). Sherds with squared and bevelled lips were evenly represented whilst those with rounded lips dominated the assemblage and occurred throughout the stratigraphy of Test Pit 5. Half of the sherds recovered from Test Pit 5 were medium-textured (50%), while the remainder were fairly fine and coarse-textured. In terms of surface treatment, most of the diagnostic sherds were consistently polished throughout the stratigraphic layers and only a single sherd in the lower layers had its surface treated with graphite burnishing. Colour varied from grey through red to black probably due to differences in firing temperatures. Although the pottery sample was relatively small, three-vessel classes were reconstructed, and these comprised tall necked pots with flared rims, shouldered pots with simple rims and deep bowls (Figure 5.9). Similarly, half of the diagnostic sherds were all decorated with diagonal incisions and impression motifs on their shoulders.

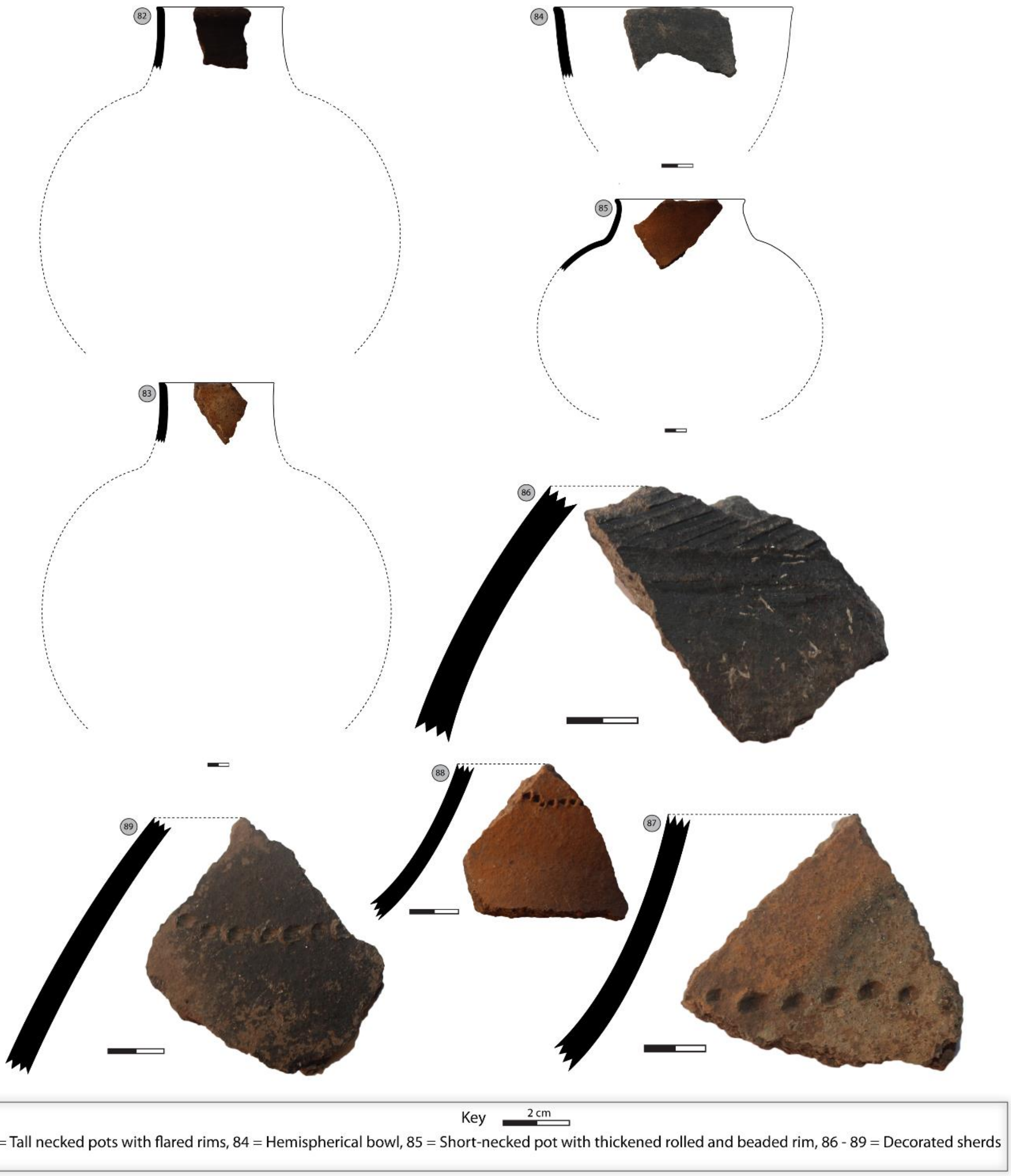


Figure 5.9: Sample of reconstructed pottery vessels recovered from Test Pit 5

Test Pit 6

A total of 119 potsherds were recovered from Test Pit 6 and out of them all, only six (5%) were diagnostic. As demonstrated in Table 5.1, most of these potsherds had rounded lipforms that are present throughout all the stratigraphic layers of Test Pit 6. The remainder had tapered and bevelled lipforms. Fabric recorded on the sherds ranged between medium-textured (16.6%) and fine-textured (83.4%). The latter mostly characterised sherds with polished surfaces which were predominantly represented throughout the stratigraphy of Test Pit 6. The grey-brown colour was predominant particularly on those sherds whose surfaces were polished; black, red, and grey colours were respectively represented on the other sherds. Ultimately, four-vessel shape classes with varied sizes were reconstructed from the diagnostic potsherds (Figure 5.10) but no bowl-shaped vessels were recorded (see Table 5.1). Half of these shapes comprised shouldered pots with simple rims followed by short-necked pots with thickened rolled and beaded rims, shouldered pots with thickened rims, and neckless pots with simple rims. No decorated sherds were recorded.

Figure 5.10: Sample of reconstructed pottery vessels recovered from Test Pit 6

Test Pit 7

A total of 1034 potsherds were recovered from Test Pit 7 and out of the total, only 79 (7.6%) had diagnostic features. The majority of these sherds had rounded lipforms followed by those with bevelled, tapered, externally thickened, and squared lips (Table 5.1). Texture density was predominantly fine (89.8%) but the other sherds were also medium (8.8%) and course (1.2%) textured. In terms of surface treatment, the majority of the sherds were polished whilst the remainder were graphite burnished. Correspondingly, colour varied from the dominant grey-brown to black, to grey, and to red respectively (Figure 5.11). The trend was consistent throughout the bottom and upper layers of Test Pit 7. Ten vessel classes were reconstructed out of the diagnostic potsherds recovered from Test Pit 7 (see Figure 5.4 below) and these were fairly represented throughout the stratigraphic layers (Table 5.1). Shouldered pots with simple rims dominated the assemblage, followed by deep bowls, shouldered pots with thickened rims, tall-necked pots with flared rims, short-necked pots with thickened rolled and beaded rims, neckless pots with simple rims, neckless pots with thickened rims, constricted pots with thickened rims, constricted pots with simple rims and hemispherical bowls. Only nine (11.3%) of the diagnostic sherds were decorated. These had the decorations exerted on their shoulders (88.8%) and necks (11.2%) respectively. Similarly, incisions were the most dominant technique, constituting (88.8%) potsherds whilst the remainder was comprised of a combination of incisions and impressions (see Table 5.1). Three motifs were recorded (Figure 5.12). These constituted fine- and broad-line oblique incisions, alternating oblique incisions, and diagonal incisions.

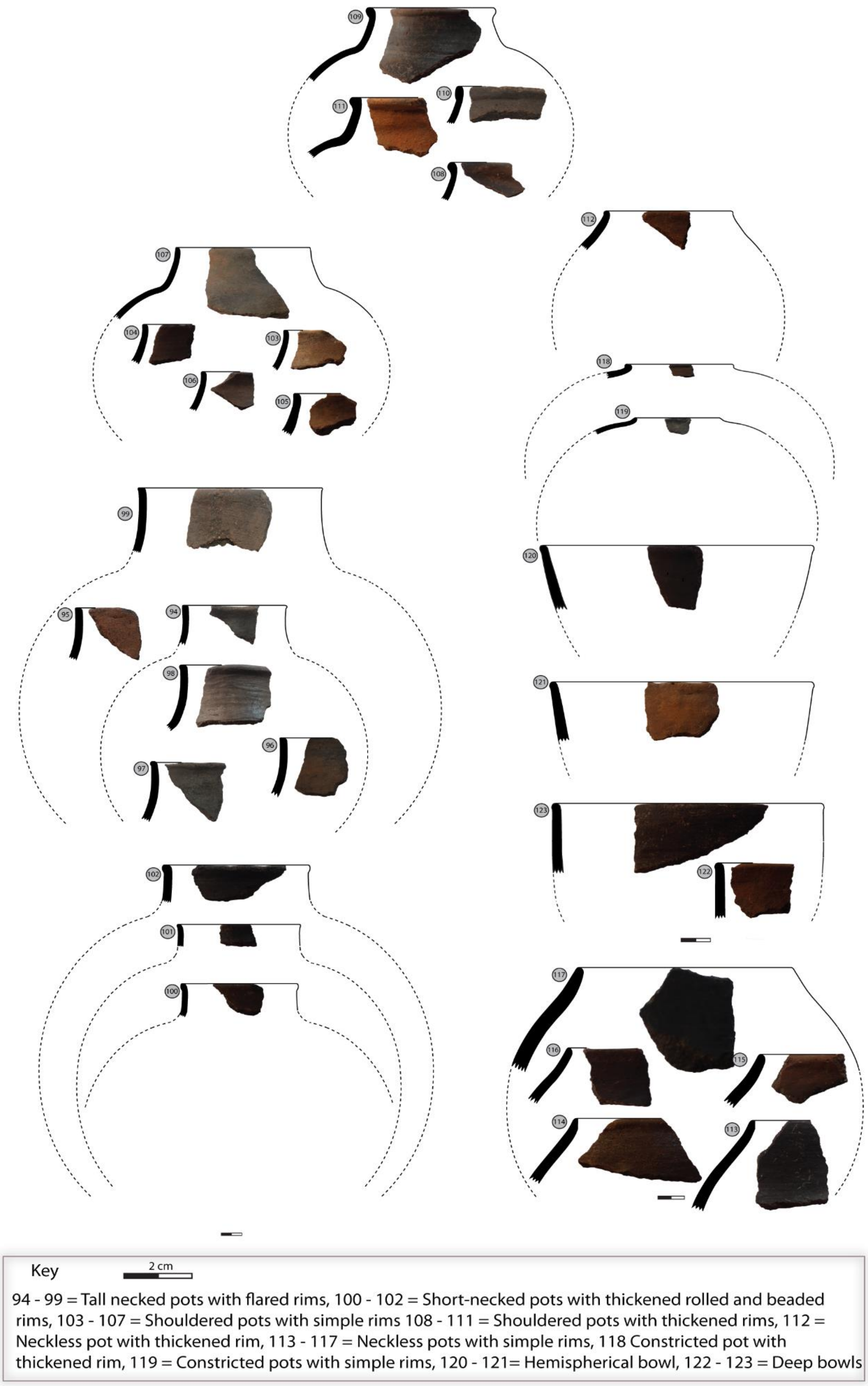
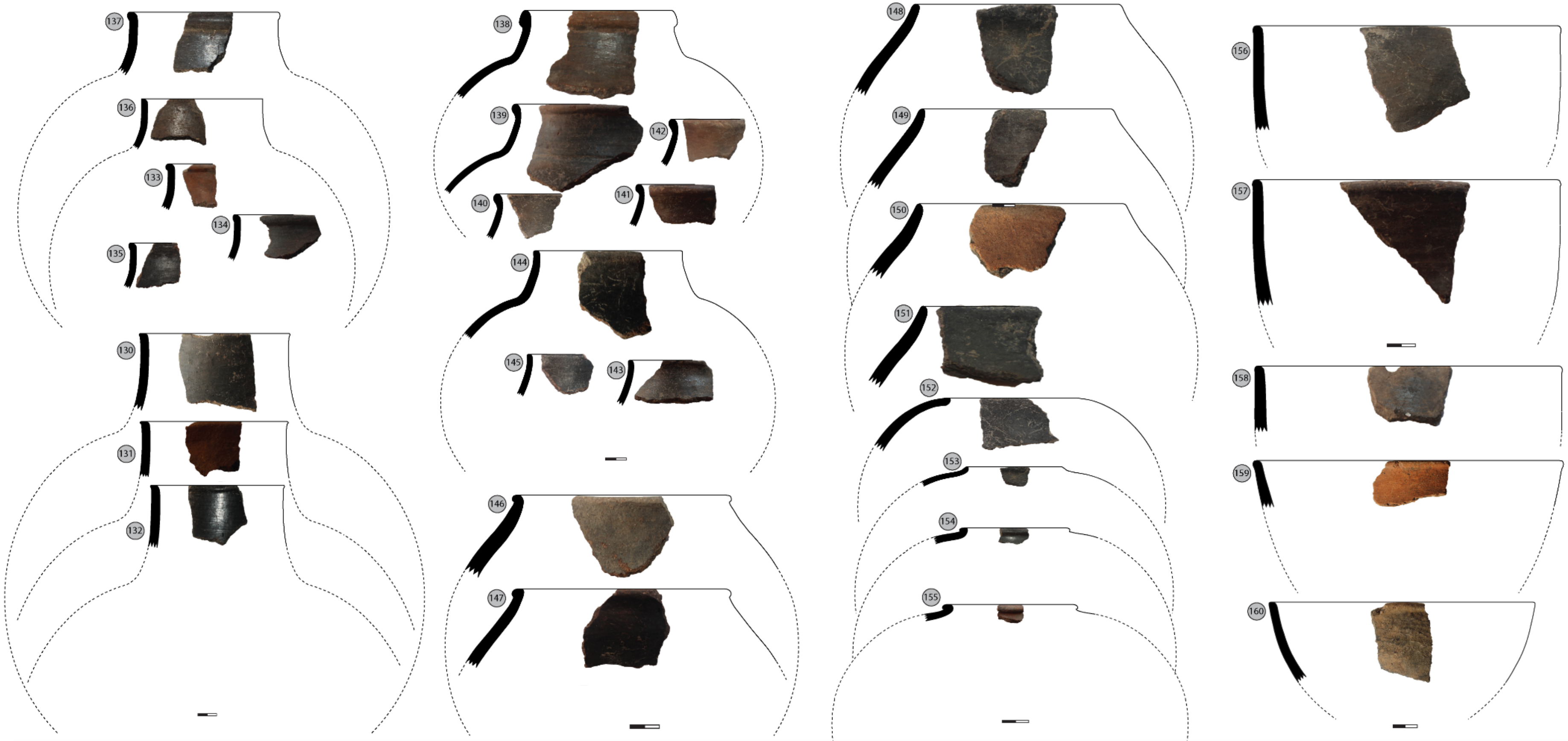


Figure 5.11: Sample of reconstructed pottery vessels recovered from Test Pit 7

Figure 5.12: Sample of decorated sherds recovered from Test Pit 7

Test Pit 8

A total of 1291 potsherds were recovered from Test Pit 8. Out of the total, only 137 (10.6%) sherds were diagnostic while 1154 (89.3%) were non-diagnostic (Table 5.1). The majority of the diagnostics sherds had rounded lipforms, followed by those with externally thickened lips, squared lips, bevelled lips, and tapered lips. The majority of the vessels from the hilltop assemblage had fine-textured surfaces while the rest were medium- and coarse-textured. In terms of surface treatment, most sherds were polished (59.1%) whilst the remainder were graphite burnished (40.8%). Grey-brown colour dominated the assemblage, followed by black, grey, and red colours correspondingly. Ten vessel categories were reconstructed, and these were fairly distributed in both the upper and lower levels of the test pit. Tall-necked pots with flared rims were the predominant category and these were followed by shouldered pots with thickened rims, shouldered pots with simple rims, neckless pots with simple rims, short-necked pots with thickened, rolled and beaded rims, deep bowls, neckless pots with thickened rims, hemispherical bowls, constricted pots with thickened rims, and constricted pots with simple rims (Figure 5.13). Only 12 of the diagnostic sherds had decorations on their shoulders which ranged from interlocking triangles, diagonal incisions, fine-line and broad-line oblique incisions, cross-hatching, incisions and impressions, and arcades (Figure 5.14).



Key 2 cm
130 - 132 = Tall necked pots with flared rims, 133 - 137 = Short-necked pots with thickened rolled and beaded rims, 138 - 142 = Shouldered pots with thickened rims, 143 - 145 = Shouldered pots with simple rims, 146 - 147 = Neckless pots with thickened rims, 148 - 151 = Neckless pots with simple rims, 152 - 153 = Constricted pots with simple rims, 154 - 155 = Constricted pots with thickened rims, 156 - 158 = Deep bowls, 159 - 160 = Hemispherical bowls

Figure 5.13: Sample of reconstructed pottery vessels recovered from Test Pit 8.

Figure 5.14: Sample of decorated sherds recovered from Test Pit 8

5.5.2. CERAMICS FROM THE FOOTHILL AREA

A total of 1 392 potsherds were recovered from the surface and five test pits that were sunk on the foothill of Chumnungwa. Out of the total, only 137 (9.84%) of the sherds were diagnostic. A comprehensive analysis of sherds at the test pit level is presented in Table 5.2 and the sections below.

Table 5.2: Summary of the typological attributes of ceramics recovered from the foothill area of Chumnungwa.

Attribute		Surface Finds	TP9	TP10	TP11	TP12	TP13	Total
Provenance	Diagnostic	24	5	5	12	20	71	137
	Undiagnostic	91	15	243	88	67	751	1255
	Total	115	20	248	100	87	822	1392
Lip-Form	Externally thickened	5	1	2		4	22	34
	Rounded	4	2		10	13	22	51
	Tapered	1			1	2	17	21
	Bevelled	2	1	2			10	15
	Square	3	1	1	1	1		7
	Total	15	5	5	12	20	71	128
Texture	Fine	15	4	5	10	8	44	86
	Medium	9	1		1	12	27	50
	Coarse				1			1
	Total	24	5	5	12	20	71	137
Surface Treatment	Graphite burnished	7	1	2	4	1	27	35
	Polished	17	4	3	8	19	44	95
	Total	24	5	5	12	20	71	137
Colour	Black	6	1	2	5	1	23	38
	Red	5	1			2	13	21
	Grey-brown	6	2	3	5	2	33	51
	Grey	7	1		2	4	2	16
	Total	24	5	5	12	20	71	137
Residue	Soot	13	4	3	11	14	22	67
	Carbon	1	1	2	1	1	3	9
	Total	14	5	5	12	15	25	76
Vessel Shape	1a.	2	2	2		15	8	29
	1b.			1	5		2	8

	2a.	6		1	4	2	7	19
	2b.	1	1		3	1	4	10
	3a.						13	13
	3b.	4		1		1	22	28
	4a.	2					12	14
	4b.	2				1		3
	5.	1	2				3	6
	6.	1						1
	Total	17	5	5	13	20	71	131
Decoration Motif	I.	3			8		2	13
	II.						1	1
	III.							
	IV.	1						1
	V							
	VI							
	VII							
	VIII	1						1
	IX	1						1
	Total	6			8		3	17
Decoration Placement	Lip							
	Rim							
	Neck	2						2
	Shoulder	4			8		3	15
	Total	6			8		3	17
Decoration Technique	Incisions	5			8		2	15
	Stabs	1						1
	Punctuates						1	1
	Incisions and impressions							

Total	6	8	3	17

Key:

1a = Tall necked pots with flared rims   1b = Short-necked pots with thickened rolled and beaded rims   2a = Shouldered pots with thickened rims

2b = Shouldered pots with simple rims   3a = Neckless pots with thickened rims   3b= Neckless pots with simple rims

4a = Constricted pots with thickened rims   4b = Constricted pots with simple rims   5 = Deep bowls   6 = Hemispherical bowls

I = Diagonal incisions   II = Alternating oblique incisions   III = fine line and broad line oblique incisions

IV = Interlocking triangles   V = Punctates   VI = Cross hatching

VII = Stabs   VIII = Incisions and impressions   IX = Arcades   TP = Test Pit

Surface Finds

A total of 115 potsherds were collected from the surface of the foothill area (Table 5.2). Of these, only 24 were diagnostic. Sherds with externally thickened lipforms dominated the collection followed by those with rounded lips, squared, bevelled, and tapered lips. The majority of the sherds were fine-textured (62.5%), while the remainder were medium-textured. Surfaces of most sherds were treated with polish whilst the remainder were graphite burnished. Colour recorded on the sherds varied from grey through black to grey-brown, to red, probably as a result of differences in firing temperatures. Although the pottery sample was fairly small; eight vessel classes were reconstructed. These comprised shouldered pots with thickened rims which were predominant, followed by neckless pots with simple rims, tall-necked pots with flared rims, constricted pots with thickened rims, constricted pots with simple rims, shouldered pots with simple rims, deep bowls, and hemispherical bowls. Six of the diagnostic sherds were decorated with diagonal incisions (50%) whilst the remainder were equally decorated with interlocking triangles, arcades, incisions, and impressions on their necks and shoulders (Figure 5.15).

Figure 5.15: Sample of reconstructed pottery vessels recovered from the surface area of Chumnungwa hilltop.

Test Pit 9

A total of 20 potsherds were recovered from Test Pit 9 and only five (25%) of these were diagnostic. Sherds with rounded lipforms were predominant followed by those with externally thickened, bevelled, and square lips. (Table 5.2). The fabric of the clay paste was predominantly fine-textured. Most sherds were polished except a single sherd which was graphite burnished. Colours of the sherds ranged from predominant grey-brown to black, to red and grey. Only three-vessel classes were reconstructed, and these were fairly represented in both the upper and lower levels of Test Pit 9. Tall necked pots with flared rims were the predominant followed by deep bowls and shouldered pots with simple rims (Figure 5.16). Not a single decorated sherd was recorded.

Figure 5.16: Sample of reconstructed pottery vessels recovered from Test Pit 9

Test Pit 10

A total of 248 potsherds were recovered from Test Pit 10 and out of them all, only five (2%) were diagnostic. As demonstrated in Table 5.2, most of these potsherds had externally thickened lipforms which were fairly represented throughout the stratigraphy of Test Pit 10. The remainder had bevelled and squared lipforms. All sherds recovered in both the upper and lower levels of Test Pit 10 were fine-textured. The grey-brown colour was predominant particularly on the sherds with polished surfaces whilst graphite burnished sherds were predominantly black. Ultimately, four vessel-shape classes with varied sizes were reconstructed out of the diagnostic potsherds (Figure 5.17) but no bowls were recorded (see Table 5.2). The majority of these shapes comprised necked pots with flared rims, followed by short-necked pots with thickened rolled and beaded rims, shouldered pots with thickened rims, and neckless pots with simple rims. Not a single sherd analysed was decorated.

Figure 5.17: Sample of reconstructed pottery vessels recovered from Test Pit 10

Test Pit 11

A hundred potsherds were recovered from Test Pit 11 and, only 12% of the total were diagnostic (Table 5.2). The majority of these sherds had rounded lipforms followed by those with tapered and squared lips. Texture density was predominantly fine (83.3%) whilst the other sherds were equally medium- and coarse-textured. In terms of surface treatment, the majority of the sherds were polished whilst the remainder were graphite burnished. Correspondingly, colour varied from the dominant grey-brown, and black, to grey respectively (Figure 5.18). This trend was consistent throughout the stratigraphy of Test Pit 11. Three vessel classes were reconstructed out of the diagnostic potsherds recovered from Test Pit 11 (see Figure 5.18

below) but not a single bowl was recorded throughout the stratigraphy as previously recorded in both Test Pits 3 and 10 (Table 5.13). Short-necked pots with thickened rolled and beaded rims dominated the assemblage, followed by shouldered pots with thickened rims, and shouldered pots with simple rims. All eight decorated sherds had diagonal incisions on their shoulders.

Figure 5.18: Sample of reconstructed pottery vessels recovered from Test Pit 11

Test Pit 12

A total of 67 potsherds were recovered from Test Pit 12. Out of the total, only 20 (29.8%) sherds were diagnostic (Table 5.2). The majority of the diagnostics sherds had rounded lipforms, followed by those with externally thickened, tapered, and squared lips. Most sherds had medium-textured surfaces while the rest were fine-textured. Polished sherds were predominant whilst a single sherd was graphite burnished. Grey-brown colour dominated the assemblage, followed by grey, red, and black, respectively. Five vessel categories were reconstructed, and these were dominated by tall-necked pots with flared rims, followed by shouldered pots with thickened rims, shouldered pots with simple rims, neckless pots with thickened rims, and constricted pots with simple rims. Not a single sherd analysed was decorated (Figure 5.19).

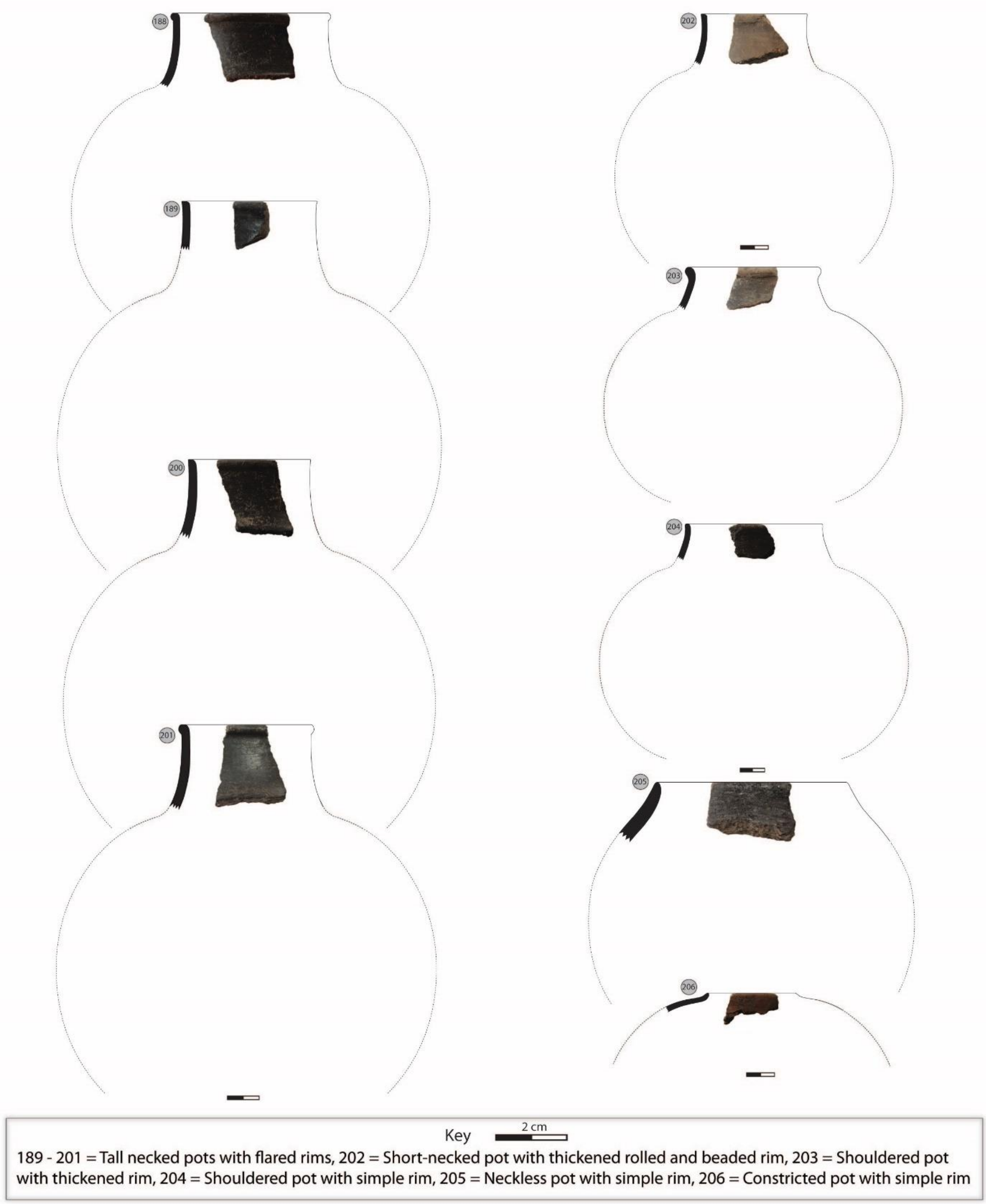


Figure 5.19: Sample of reconstructed pottery vessels recovered from Test Pit 12

Test Pit 13

A total of 822 potsherds were recovered from Test Pit 13 and only 71 (8.6%) of these were diagnostic. Potsherds with externally thickened lipforms dominated followed by those with rounded, tapered, and bevelled lips. (Table 5.2). The fabric of the clay paste was predominantly fine-textured whilst the other 27 sherds were medium-textured. Similarly, the majority of the potsherds were polished, but the remainder were graphite burnished. Colours of the sherds ranged from predominant grey-brown to black, to red and grey. Eight vessel classes were reconstructed out of the potsherds recovered from Test Pit 13, and these were fairly represented in both the lower and upper layers of Test Pit 13. Neckless pots with simple rims dominated followed by, neckless pots with thickened rims, constricted pots with thickened rims, tall-necked pots with flared rims, shouldered pots with thickened rims, shouldered pots with simple rims, deep bowls, short-necked pots with thickened, rolled and beaded rims. Three of the diagnostic sherds were respectively decorated with diagonal incisions and oval punctates on their shoulders (Figure 5.20).

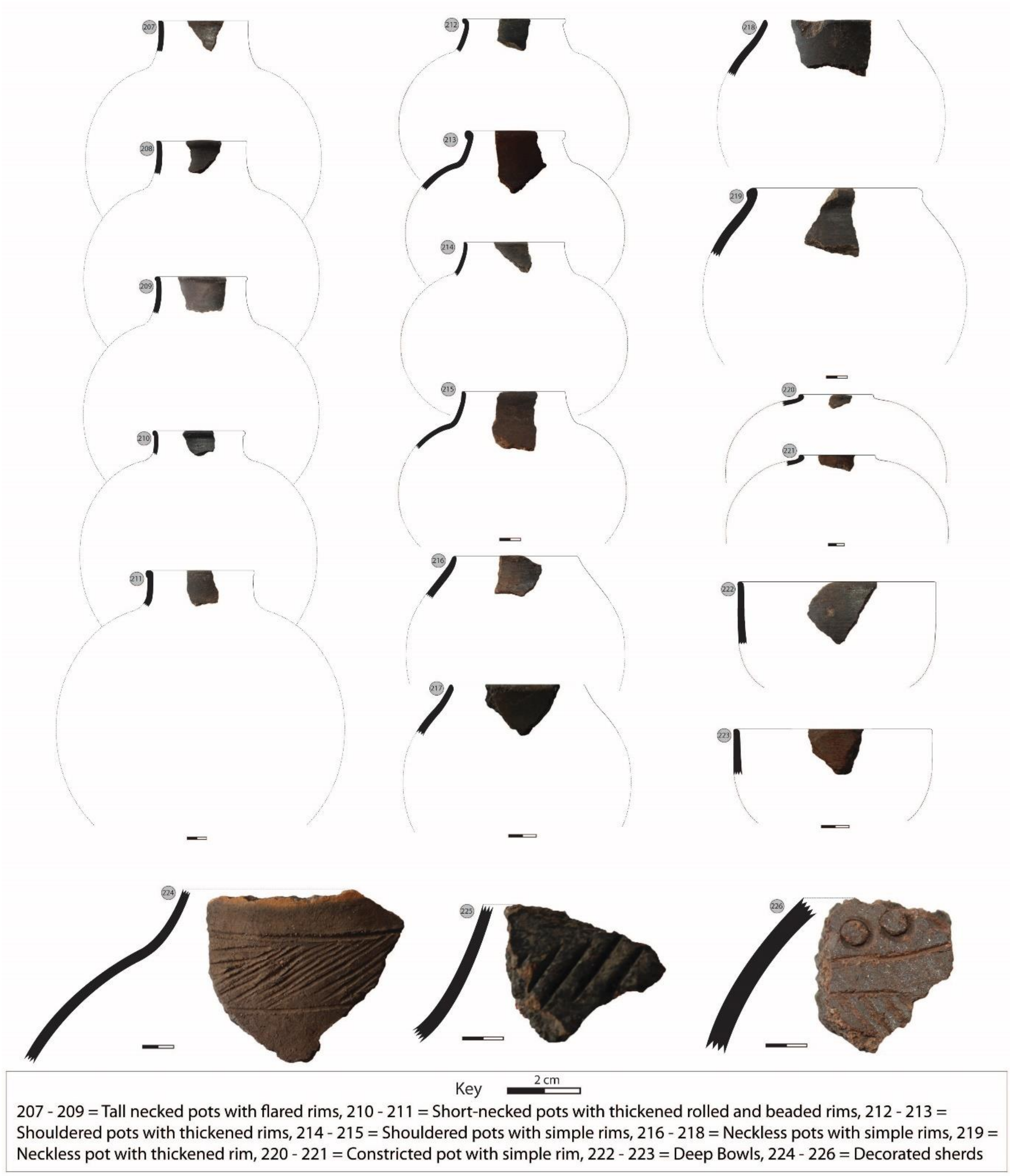


Figure 5.20: Sample of reconstructed pottery vessels recovered from Test Pit 13

5.6. CERAMICS FROM THE HILLTOP AND FOOTHILL AREAS: A COMPARISON

The stylistic attributes of pottery recovered from the hilltop and foothill areas of Chumnungwa were comparatively studied to trace how they related and differed. These similarities and differences were instrumental in determining whether the individuals who resided in these respective areas were related or not. As noted by Shepard (1956:110), ceramic typology helps to create room for comparative studies, particularly when focusing on vessel shape and decorations which reflect relationships between wider networks of contact. Ultimately the comparison was integral in defining the typology of Chumnungwa ceramics as a single entity as undertaken most studies that employ the multivariate approach in southern African Iron Age ceramic studies (Soper 1971; Maggs 1976; Huffman 1980, 2007; Pikirayi 1993). However, it must be noted that the comparative study largely focused on denoting the presence or absence of the stylistic attributes that characterised the pottery rather than quantity since the ratio of test pits sunk on both hilltop and foothill areas was not equal as previously elucidated in Chapter 4. Therefore, to facilitate a comparison between the two assemblages, the emphasis of my analysis was concentrated on the stylistic attributes that were initially used to construct the typology of Chumnungwa ceramics (See Appendix 2).

Lipform

As demonstrated in Figure 5.21 below, rounded and externally thickened vessel lipforms were predominantly present in both the hilltop and foothill areas, otherwise the slight differences in frequency were likely a result of the unequal ratio of test pits sunk on respective areas. Similarly, other lipforms recorded were fairly represented in both areas. Thus, the most interesting aspect portrayed by Figure 5.21 is that lipform frequencies of ceramic sherds recovered from both the hilltop and foothill areas of Chumnungwa tended to harmonise with each other as evidenced by continuous fluctuations that complement each other.

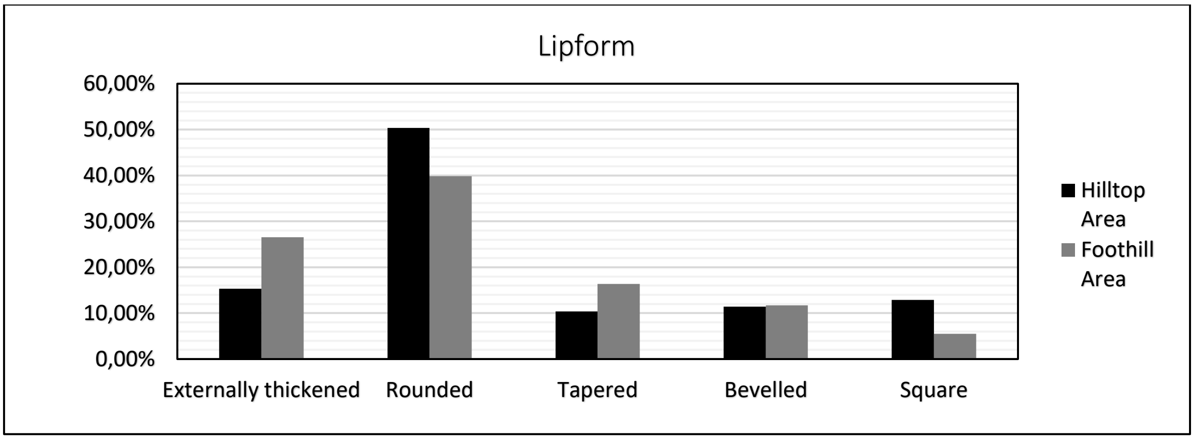


Figure 5.21: Graph showing lipforms frequencies of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Texture

The majority of the sherds recovered from both the hilltop and foothill areas were predominantly fine- and medium-textured (Figure 5.22). Such similarities in fabric demonstrated some considerable relatedness of the production and consumption processes that pottery recovered from both the hilltop and foothill areas underwent. Nevertheless, this remains empirical as it is difficult to tell unless further studies are conducted.

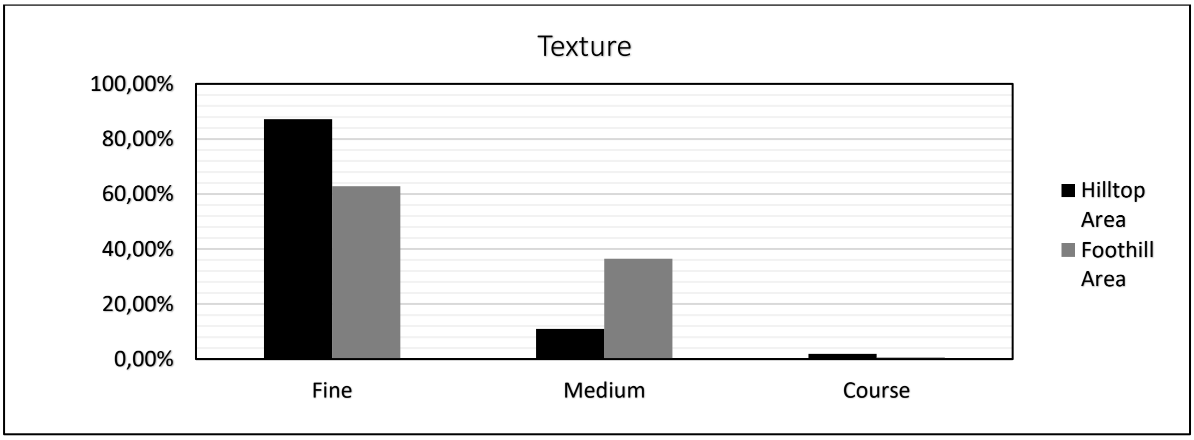


Figure 5.22: Graph showing texture of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Surface Treatment

As illustrated in Figure 5.23 below, pottery from both the hilltop and foothill areas was both polished and graphite burnished. Such overlapping attributes show some level of relatedness between the producers of ceramics recovered from the hilltop and foothill areas of Chumnungwa.

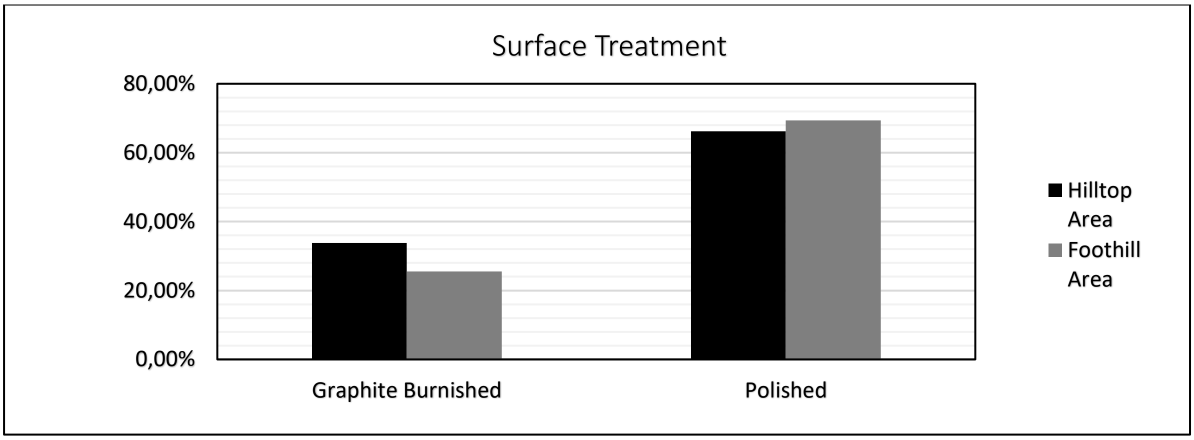


Figure 5.23: Graph showing surface treatment of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Colour

Both assemblages from the hilltop and foothill areas were dominated by grey-brown, and black coloured pots (Figure 5.24). This is a clear sign that pottery from these respective areas was predominantly well-fired under an oxidizing atmosphere. On the other hand, grey and red colours, which are normally associated with poorly fired ceramics, were less frequent in both spaces. Thus, the ratio of well-fired and poorly fired ceramics from both hilltop and foothill areas of Chumnungwa corresponds. Such similarities point to the possibility of a strong connection between those residing on the hilltop and foothill areas.

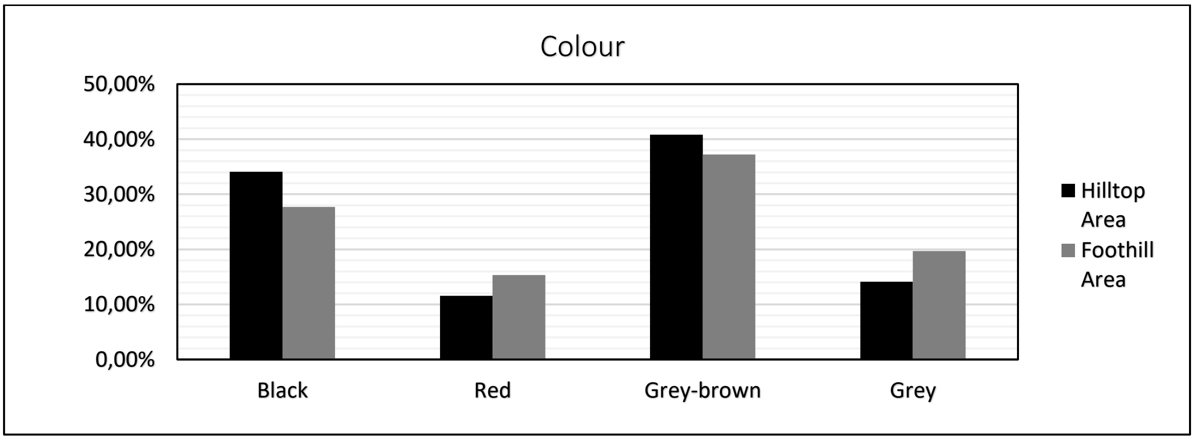


Figure 5.24: Graph showing colour of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Vessel Shape

Data from Figure 5.25 clearly shows that despite the differences in frequency, all the vessel classes reconstructed from the potsherds recovered from Chumnungwa were fairly represented throughout the hilltop and foothill areas. Such a parallel representation shows that residents of these respective areas that make up Chumnungwa likely produced or consumed pottery vessels with similar typology. For instance, statistics from the hilltop and foothill areas clearly show the dominance of tall-necked pots with flared rims (1a). Nevertheless, differences in the distribution of some vessels were recorded (see Figure 5.25). Presumably, the reason why tall bowls (5 and 6) were predominant in the hilltop area, is best explained by the unequal proportion of the excavated area between the hilltop and foothill areas. Other than that, it might be embedded in a variety of choices either by the producers or consumers of these vessels.

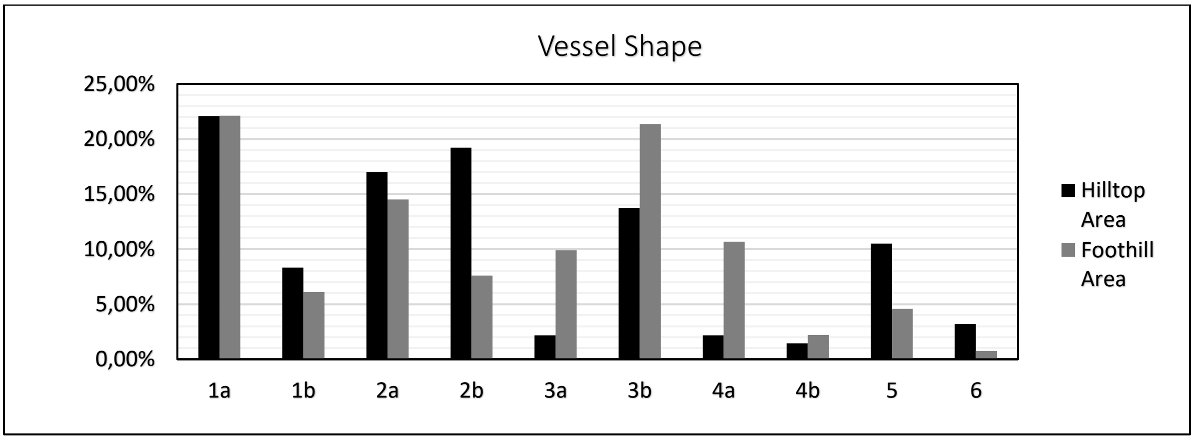


Figure 5.25: Graph showing vessel shapes of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Decoration Motif

Whilst the two assemblages share a considerable number of motifs, in particular, the diagonal incisions (I) which were predominant in both hilltop and foothill areas, many variations were recorded. The most exceptional is the absence of fine-line and broad-line oblique incision motifs (III), punctate motifs (III), cross-hatching motifs (VI), and stab motifs (VII) within the foothill area and oval punctates with incision motifs within the foothill area (Figure 5.26). The disproportion of test pits sunk between the hilltop areas and the foothill areas could have contributed to this variation. Nevertheless, this is not surprising as most of the pottery recovered from Chumnungwa was rarely decorated. Such is a common trend at most LIA sites in southern African (see Robinson 1961; Phillipson 1974; Maggs 1976; Huffman 2007; Denbow 1983; Sinclair 1987; Pikirayi 1993; Pwiti 1996b; Manyanga 2006; Antonites 2012; Van Warden 2012).

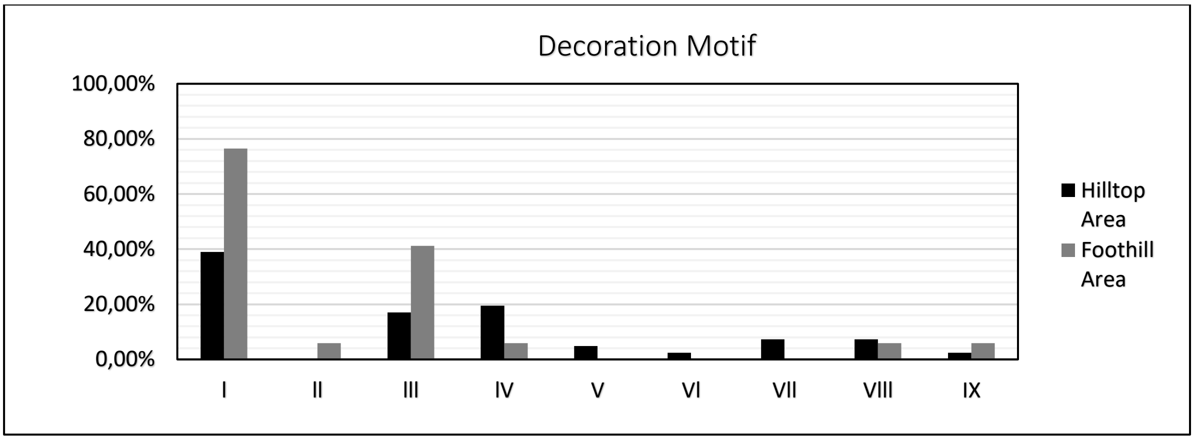


Figure 5.26: Graph showing decoration motif of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Decoration Placement

Both assemblages had strong similarities in terms of the placement of decorations. Thus, all the decorated sherds recovered from both the hilltop and foothill areas had decorations exerted only two places, their necks, and shoulders. What differed was the frequency of representation (see Figure 5.27).

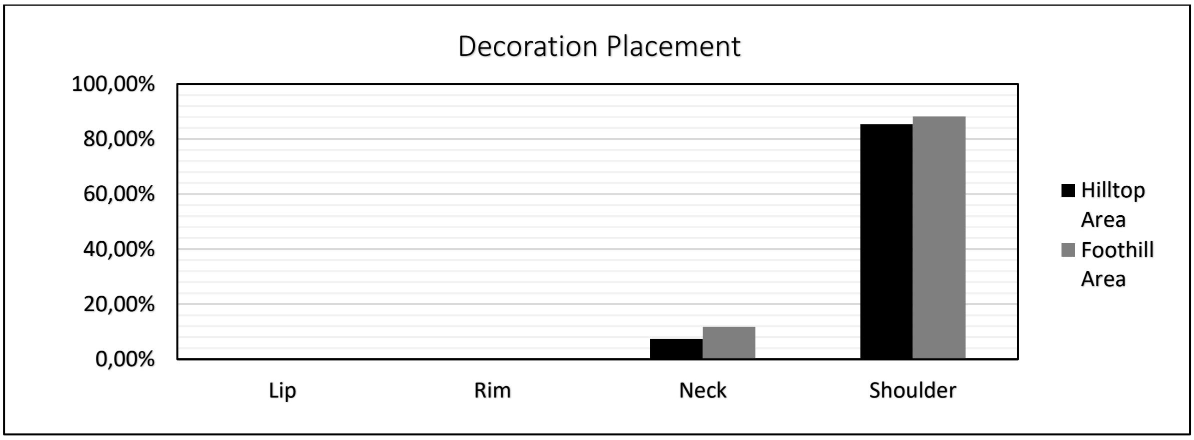


Figure 5.27: Graph showing decoration placement of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Decoration Technique

As demonstrated in Figure 5.28, most techniques used to decorate Chumnungwa pottery were fairly represented in both the hilltop and foothill areas. The exception was the absence of the incision and stab technique on potsherds recovered from the foothill areas.

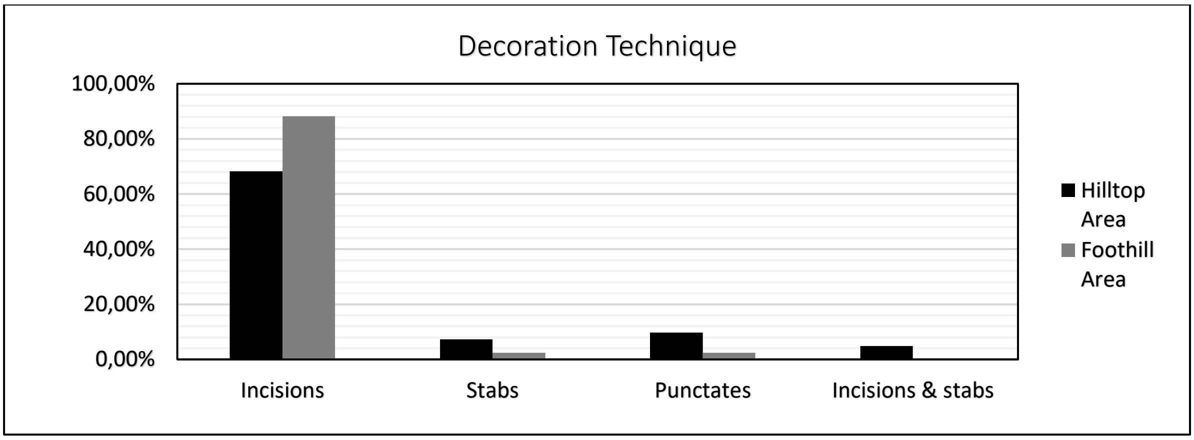


Figure 5.28: Graph showing decoration technique of Chumnungwa pottery from both the hilltop and foothill areas of Chumnungwa.

Such similarities demonstrate some considerable relationships between those who produced and consumed ceramics recovered from both the hilltop and foothill areas but to what level of relationship remains a mystery to be revealed by forthcoming chapters.

5.7. DISCUSSION: THE CHUMNUNGWA CERAMIC ASSEMBLAGE

As demonstrated in the preceding section, ceramics recovered from hilltop and foothill areas of Chumnungwa comprised of a homogenous assemblage made up of pots and bowls that are stylistically identical, and these are fairly represented in both the hilltop and foothill areas of the site. Tall-necked pots with flared rims (Numbers 1, 2, 21-23, 46, 55, 68, 69, 77, 82, 83, 90, 94-99, 130-132, 173, 174, 178, 189-201, 207-209) were the predominant category recorded in both the hilltop and foothill areas. More interestingly, the frequency of these vessels was fairly concentrated in both the upper and lower layers of most test pits. Nevertheless, not a single vessel under this category was decorated. A basic characterisation shows that the majority of these tall-necked pots (with flared rims) had rounded lipforms, and fine-textured black surfaces which were graphite burnished. The fact that they were large-sized and not tainted with soot on most of their surfaces suggest they were likely used by the residents of Chumnungwa for non-culinary roles such as storage of liquid foods.

Shouldered pots with thickened rims (3-5, 28-30, 47, 57, 72, 91, 92, 108-111, 138-142, 180, 185-187, 203, 212-213) were the consequent vessel type which dominated the Chumnungwa assemblage. Similar to tall-necked pots with flared rims, these pots featured in stratigraphical layers of most test pits excavated within the hilltop and foothill areas. However, they were largely concentrated on the hilltop area. Only a single vessel (28) was decorated with punctates on its shoulder. Generally, most of the shouldered pots with thickened rims had thickened lipforms and the vast majority of their surfaces were polished; hence they were fine- and medium-textured. Moreover, because they were well-fired, most vessels had surfaces with colours which ranged from grey-brown to red.

Neckless pots with simple rims (7-9, 33, 34, 50, 51, 59-62, 73, 74, 113-117, 148-151, 181, 205, 216-218) were the subsequent category that dominated the Chumnungwa assemblage. The majority of these vessels had rounded lipforms and polished surfaces whose colour ranged from grey-brown to red, to grey. The latter was prevalent on vessels that were improperly fired. Not a single sherd was decorated, perhaps this signals the utilitarian nature of the vessels since most necked vessels had a considerable residue of soot on their surfaces. Sequentially, shouldered pots with simple rims (6, 31, 32, 48, 58, 71, 103-107, 143-145, 175, 184, 204, 214, 215) dominated the Chumnungwa assemblage. Most of these pots had rounded lipforms. Whilst occasional graphite burnishing was recorded on some vessels, the majority had polished surfaces. Grey-brown colour dominated most vessels, however, some vessels had red and grey colours. Also, though most of the shouldered pots recovered were largely concentrated on the hilltop area, they were fairly represented in most stratigraphical layers of the test pits that were excavated in the foothill areas of Chumnungwa.

The succeeding classes consisted of shouldered pots with simple rims (6, 31, 32, 49, 58, 71, 103-107, 143-145, 175-184, 204, 214, 215), short-necked pots with thickened rolled and beaded rims (6, 31, 32, 48, 58, 71, 103-107, 143-145, 175-184, 204, 214, 215) and deep bowls (13, 38-40, 53, 64, 122, 123, 156-158, 176, 177, 222-223) respectively. Decorated vessels within these respective classes were rare with the exception of one short-necked pot (with thickened rolled and beaded rim) which was decorated with diagonal incised motifs on its neck. Most vessels within these categories had polished surfaces except for a few short-necked pots (with thickened rolled and beaded rims) whose surfaces were graphite burnished. Lipforms of most shouldered pots (with simple rims) and deep bowls, were highly rounded, whilst those of short-necked pots with thickened rolled and beaded rims were predominantly thickened. As noted earlier, the distribution of shouldered pots, short-necked pots, and deep bowls was consistent throughout the stratigraphical levels of the excavated test pits on both the hilltop and foothill areas of Chumnungwa. This is a clear sign that shows that the producers and consumers of these respective vessel types recovered from Chumnungwa from were a single cultural entity.

Constricted pots with thickened rims (10, 11, 35, 36, 118, 154, 155) were scarce but fairly distributed in both the upper and lower layers of the middens excavated in the hilltop and foothill areas of Chumnungwa. These vessels' lipforms were predominantly externally thickened. Their surfaces were mostly polished, hence they ranged from fine- to medium-textured. Lastly, neckless pots with thickened rims (63, 112, 146, 147, 219) and constricted pots with simple rims (12, 37, 119, 152, 153, 206, 220, 221) respectively made up the least dominant vessel categories of Chumnungwa hilltop and foothill areas. These pots were respectively designed with thickened and rounded lips. No single decorated vessel was recorded from these categories; however, they were fairly represented throughout the stratigraphical layers of the test pits that were sunk in both the hilltop and foothill areas of Chumnungwa.

A comparison of the typological traits of Chumnungwa pottery with those from other Iron Age sites in the region (see Table 5.3 and Figures 5.29-2.31) leaves us with no doubt that the Chumnungwa assemblage highly resembles Zimbabwe Period IV ceramics which are conventionally dated between CE 1300 and 1660 (Huffman 2010:324; Chirikure et al. 2018:1062). This is augmented by the presence of stonewalling architecture onsite which is similar to that of Great Zimbabwe and other Zimbabwe type sites listed in Table 5.3 (see Hall & Neal 1904; Garlake 1970). Furthermore, we know from empirical data, that Zimbabwe pottery is largely characterised by graphite burnished ceramics which have heavily beaded and rolled rims, triangle decoration motifs on their shoulders as well as fabrics which are fine-textured and coarse-grained (Bent 1892:173; Hall 1905:40; Randall-MacIver 1906:104-106; Huffman 2007:225; Chiripanhura 2018). The rarity of decorated sherds within the Chumnungwa assemblage is congruent with Robinson's (1961: 204-205) observation that Period IV pottery at Great Zimbabwe is hardly decorated (also see Bent 1892:174; Caton-Thompson 1931: Plate XVIII, 2; Chirikure et al. 2018:1067). As demonstrated in Figures 5.29 and 5.30 below, similar trends were also noted at other Zimbabwe type sites such as Nhunguza, Ruanga (Garlake 1973a), Tsindi (Rudd 1984), and Ndongo (Shenjere-Nyabezi 2017). However, there are other sites, particularly those in close proximity such as Chamabvepfa, Little Buchwa, and Danamombe whose pottery shared some considerable similarities with that of Chumnungwa (see Table 5.3). This certainly shows that the residents of Chumnungwa interacted with the neighbouring Iron Age societies that lived at these places and even beyond. As demonstrated in chapter three, it is now known that different communities settling in the same locale had the capacity to share knowledge on range of things including pottery crafting though various platforms of entanglement that involved trade, intermarriages, and even warfare (Renfrew & Cherry 1986; Chirikure et al. 2013a). In the process, these groups could select decoration traits they wanted from imitated materials and discard what they did not need. Perhaps this explains why some of the stylistic and decoration traits on Chumnungwa ceramics matched those from the neighbouring sites listed in Table 5.3.

Table 5.3: A comparison of key attributes of Chumnungwa pottery with those from other contemporary Iron Age sites in southern Africa. Data was adapted from Randall-McIver (1906), Caton-Thompson (1931:50-51, 132-133, 274-290), Robinson (1959, 1961:159-235), Robins et al. (1966), Cook (1970), Garlake (1972), Huffman (1978, 1979, 2007), Van de Merwe (1978), Rudd (1984), Sinclair (1987), Pwiti (1996b), Manyanga (2001:41-42, 2006), Burret (2006), Van Waarden (1987, 2012), Shenjere-Nyabezi (2017), Chirikure et. al., (2002, 2017a; 2018), and (Scholfield et al. forthcoming).

Site	Key Attributes of Chumnungwa pottery								
	Rims			Fabric		Surface Treatment		Decoration Motifs	
	Heavily beaded	Flared	Heavily rolled	Fine	Coarse	GB	Polished	(Plain) Incised	FL & BL I
Vumba	✓		✓	✓	✓	✓	✓	✓	✓
Great Zimbabwe	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chamabvepfa		✓		✓	✓	✓	✓	✓	✓
Ruanga	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chomuruvati				✓	✓	✓	✓		✓
Ndongo	✓	✓	✓	✓	✓	✓	✓	✓	✓
Danamombe		✓		✓	✓	✓	✓		✓
Tsindi	✓	✓	✓	✓	✓	✓	✓	✓	✓
Khami		✓		✓	✓	✓	✓		✓
Chipadze	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mapela				✓	✓	✓	✓	✓	✓
Zvongombe	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nenga						✓		✓	
Mtanye				✓	✓	✓	✓	✓	✓

Mwenezi	✓		✓			✓	✓	✓	✓
Domboshaba				✓	✓	✓	✓	✓	✓
Selolwe				✓	✓	✓	✓	✓	✓
Mananzve				✓	✓	✓	✓	✓	✓
Mtao Village 16				✓	✓	✓	✓	✓	✓
Kasekete		✓		✓	✓	✓	✓		✓
Gumanye			✓	✓	✓	✓	✓	✓	✓
Ziwa				✓	✓	✓	✓	✓	✓
Mushonganeburi				✓	✓	✓	✓		✓
Little Mapela		✓	✓	✓	✓	✓	✓	✓	✓
Nenga				✓	✓	✓	✓	✓	✓
2030:CB58									
Chivowa				✓	✓	✓	✓		✓
Little Buhwa		✓		✓	✓	✓	✓	✓	✓
Matendera	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nhunguza	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matanga	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key: GB=Graphite burnished, FL & OB OL = Fine line and broad line incisions

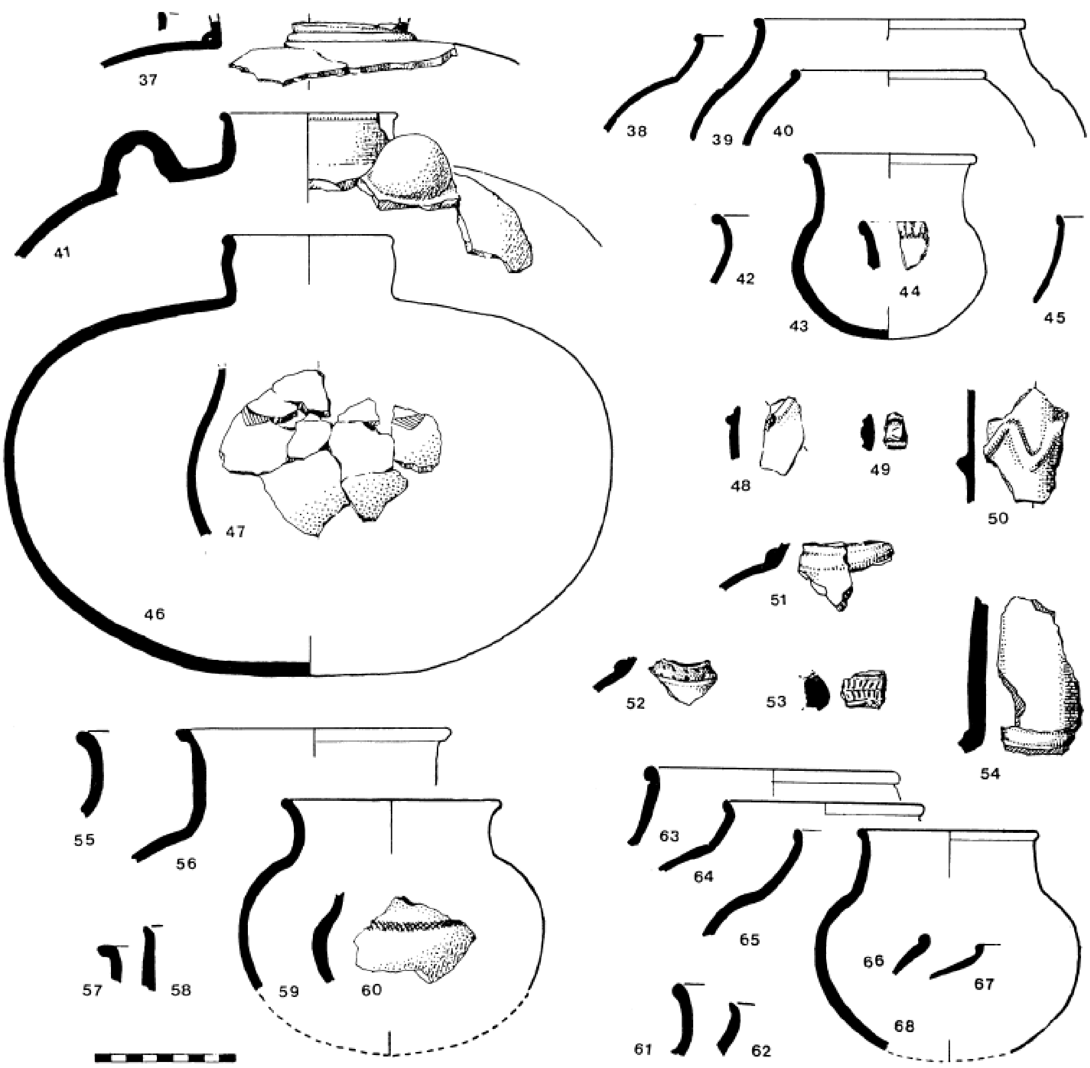


Figure 5.29: Zimbabwe Period IV ceramics from Tsindi (After Rudd 1984:100)

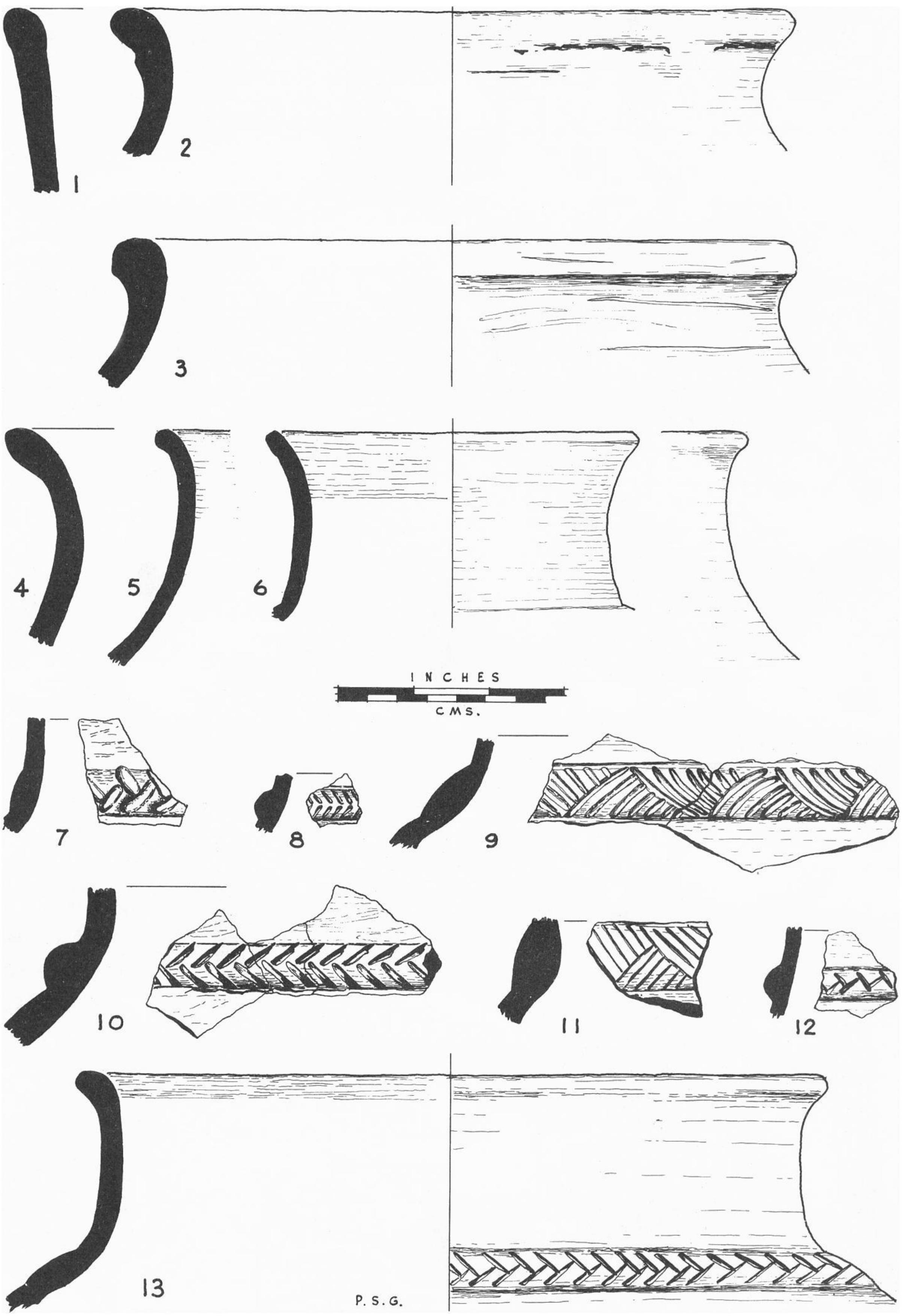


Figure 5.30: Zimbabwe Period IV ceramics from Ruanga (After Garlake 1973a:127)

Figure 5.31: Zimbabwe Period IV ceramics from Great Zimbabwe (After Chirikure et al. 2018:1067)

Consequently, this directly translates to the possibility that, like Great Zimbabwe, the residents of Chumnungwa were ancestors of the Karanga-speaking people who shared the Shona identity. Historically this is highly possible. For instance, as previously demonstrated in Chapter 2, the landscape of Mberengwa was home to numerous Shona polities who co-existed and shared common cultural practices and material culture of everyday life. (Bent 1892; Von

Sicard 1951, 1953; 1955, 1956, 1957, 1958; Beach 1978, 1980; Livneh 1976; Zachrisson 1978; Bhebe 1999; Ruwitah 1997; Shoko 2007; Brisch 2012). Moreover, the typology of the Chumnungwa assemblage suits the general character of Karanga (Shona) pottery which was recorded by early researchers such as Richard Nick Hall. (1909:262-263). The quotation at the beginning of this chapter presents Hall's (1905:40) encounter with the then Chief Mugabe[26] during his excavations at Great Zimbabwe. It demonstrates the typical attributes of Zimbabwe Period IV pottery which were also recorded on the Chumnungwa assemblage.

5.8. SUMMARY

The typological study of ceramics recovered from the hilltop and foothill of Chumnungwa revealed that the site was occupied by a single cultural unit of related people who produced and consumed similar pottery right from CE 1298 to 1627. We now know that that the residents of Chumnungwa were ancestral to the modern Shona-speaking people and most importantly they shared a similar identity with people from Great Zimbabwe, and many other Zimbabwe type settlements such as Tsindi, Nenga, Ruanga, Zvongombe, Chipadze, Ndongo, and Mwenezi, which thrived in this era. The ceramic data also showed us that the residents of Chumnungwa interacted with the neighbouring communities who resided at places such as Little Buchwa, Chamabvepfa, and Danamombe. Whilst considerable efforts have been made thus far towards revealing the chronology, identity, and networks of the residents of Chumnungwa, there is still a need to consult the other material culture datasets to verify what has been revealed so far. A detailed study of the glass beads is presented in the next two chapters.

---

[26] One of the Karanga chiefs whose homestead was situated within Great Zimbabwe.

CHAPTER SIX

THE GLASS BEADS OF CHUMNUNGWA:
TYPOLOGY, EXCHANGE, AND CONSUMPTION PATTERNS

"…Traders tell the smaller the bead the better they are liked. This I imagine is they work up more effectively into sewn patterns: and as our beads from the oldest levels in the ruins, and in some cases so indisputably of the same age, are noticeably small, I have no doubt at all that this too was the manner of their use, a thousand or so years ago…Now in that trade, it is clear that imported glass beads from India, and other junk, was the bait by which purchase of gold and ivory was effected from the Bantu" (Caton-Thompson 1931: 242-243).

"The naked natives swarmed around us like flies, with grain, flour, sour milk, and honey, which commodities can be acquired for a few beads…" (Bent 1892:33)

6.1. INTRODUCTION

Glass beads are one of the forms of exotica that is widely recovered at most Iron Age sites in southern Africa. Research that has been undertaken in the last century shows that these were trade commodities which were brought to southern Zambezia by Swahili and Portuguese merchants from Eurasia to exchange for gold, copper, tortoise shell, ivory, rhino horn, animal skins, iron, and other precious commodities during the Iron Age (Hall 1987, Pwiti 1991; Pikirayi 2001; Bvocho 2005; Huffman 2007; Wood et al. 2012; Chirikure 2014, Denbow et al. 2015; Moffett & Chirikure 2016). Because of their ubiquity and rarity, glass beads occupy a vantage point in Iron Age studies where most archaeologists rely on them as a window into the deep history of precolonial societies that consumed them as ornaments and trade commodities (Beck 1928; Robinson 1961:227-235; Pwiti 1996b; Kinahan 2000; Bvocho 2005; Wood 2005, 2012; Wilmsen 2009; Robertshaw et al. 2010; Sinclair et al. 2012; Denbow et al. 2015; Robertshaw & Wood 2017). For this reason, numerous glass beads from securely dated Iron Age sites in southern Zambezia, spanning the last millennia have been extensively studied and classified into distinct taxonomic series, based on their typological attributes and chemical properties used to manufacture them (see Davison 1972; Saitowitz 1996; Bvocho 2005; Wood 2005, 2011; Dussubieux et al. 2009; Robertshaw et al. 2010; Wood et al. 2012; Koleini et al. 2016, 2017, 2019; Robertshaw & Wood 2017; Bandama et al. 2018). Thus, it is possible today to trace the relative chronology of Iron Age sites using the established glass beads series. More importantly, glass beads have become a departure point for approaching dynamics of power, and everyday life within Iron Age communities (Hall 1987; Pwiti 1991; Wood 2000; Bvocho 2005; Huffman 2007:80) as well as tracing the nature of regional and international trade networks that connected southern Africa's coast-interior gradient with eastern Africa and southern Asia (Robertshaw et al. 2010; Chirikure 2014; Moffett 2017). Thus, glass beads recovered from Chumnungwa were analysed from this vantage point. This provided an opportunity to explore the relative chronology of Chumnungwa, the glass bead typology, as well as the consumption patterns of the Iron Age community that occupied the site. In the same manner, this will enlighten on how the Chumnungwa community networked locally and regionally. More importantly, the fact that possibly the largest Chumnungwa glass bead assemblage that could have ever been recovered in the early 20th century was by antiquarian excavators and treasure hunters such as Richard Nick Hall and W. G. Neal and was lost as a result of poor excavation methods which lacked scientific rigor (see Hall & Neal 1904:227-234). This made the current study imperative.

6.2. SOUTHERN AFRICA'S IRON AGE GLASS BEAD STUDIES & SERIES: AN OVERVIEW

In southern African Iron Age glass bead studies are old as the discipline of archaeology. Over the last century, glass bead typology and chemistry have been extensively studied as avenues for understanding settlement histories of Iron Age sites, status, and how the communities networked with the Indian Ocean world. Pioneering glass bead studies in Southern Africa were more typologically oriented, these were spearheaded in a period before the development of radiocarbon dating hence most of the studies were conducted within a material culture framework that largely perceived glass beads as chronological indicators (see Caton-Thompson 1931). Nevertheless, some efforts were extended on exploring the sources and trade routes of glass bead trade to the southern Africa east coast using archival records which documented trade activities of early Arab travellers such as Al Mas'udi and Ibn Battuta at places such as Kilwa and Sofala where an enormous hoard of gold and other precious objects acquired from the interior of southern Zambezia was stocked around CE 1273 and 1331 (Freeman-Grenville 1962; Summers 1969; Moffett 2017). These earliest studies included that of Beck (1931, 1937); Van Riet Lowe (1955); Van der Sleen (1958); Schofield (1958); Robinson (1959, 1961) and Gardner (1963). In as much as most of these studies misidentified the provenance details relating to places of production and distribution patterns of pre-European glass beads recovered from Iron Age sites in southern Africa, these studies managed to set up the background for characterisation of pre-European glass beads that were undertaken by later researchers (Wood 2005). Amongst the earliest sites to be studied were Mapungubwe, Great Zimbabwe, Matendera, Danamombe, Chiwona, Mshosho, Matendera, and Khami (see Beck 1931, 1937; Van Riet Lowe 1955; Van der Sleen 1958; Schofield 1958; Robinson 1959; Gardner 1963). Beck (1931, 1937) for instance, characterised glass beads excavated from Great Zimbabwe, Mshosho, Chiwona, Matendera, and Ndanga Cave by a team led by Gertrude Caton-Thompson. Aiming to understand the chronology of the respective sites, Beck's major thesis was that though some considerable differences could be noted, glass beads from these respective sites shared a similar typology whose antiquity could be relatively dated to the 9th and 10th centuries (Beck 1931:237). Beck identified the black oblates as the predominant beads followed by blue, green, yellow, reds, orange, greens, and dark blue. He relatively dated the latter to the 17th and 19th centuries, and these were mostly recorded at Matendera and Danamombe. More importantly, Beck highlighted a close relationship between Great Zimbabwe and Mapungubwe glass beads. Thus, basing on this typological relationship, he suggested the two assemblages to have been both manufactured in India (Wood 2005). The same sentiments were shared by Robinson (1961:232-233) who recovered similar bead types at Great Zimbabwe and the adjoining Mtuzu Ruin during the later excavations he co-directed with Roger Summers and Antony Whitty in the 1950s. However, it must be noted that Robinson singled out the transparent cylinder beads as having been sourced from Arabia.

Down south across the Limpopo River, Davison (1972) pioneered chemical analysis of K2 and Mapungubwe glass beads. Her work was built upon the work of Gardner (1963) and others (Schofield 1938, 1958; Van Riet Lowe 1955; Van der Sleen 1958) which had developed a rudimental seriation of the glass-beads recovered from the Shashi-Limpopo Valley. Though lack of high-resolution technology and comparative data hindered Davison from defining trace elements of most pre-European glass beads she sampled from the Shashi-Limpopo Valley and their exact source countries, she successfully determined their chemical signature which showed most of them as soda-lime glass. Likewise, Saitowitz (1996) compared the chemical signatures of rare earth elements in glass beads recovered from the Shashi-Limpopo Valley sites such as K2 and Mapungubwe and those sampled from Sri Lanka, India, Egypt, Palestine, Syria, and other regions. Ultimately despite the shortcomings of her samples and methods she applied in her study, it became conceivable that some of the glass beads consumed during the Iron Age in Shashi-Limpopo Valley could have been traded from distant places such as Fustat (Saitowitz 1996:1-3).

The very fact that glass beads recovered at most Iron Age sites in southern African were a form of exotica, motivated numerous studies that perceived them as indicators of status within and between societies (Pwiti 1991; Pikirayi 2001; Bvocho 2005; Wood 2005, 2012; Huffman 2007; Denbow et al. 2015). Studies that were undertaken at stone walled settlements such as Mapungubwe, Great Zimbabwe, and Khami presented pre-European glass beads as the 'bling[27]' of those days. Thus, as prestige goods (sensu Rowlands et al. I987) their access was believed to have been highly controlled by those who controlled the political economy, hence it was a preserve for the elites, whom we already know from conventional wisdom, to have lived in privileged places such as stonewalled palaces whilst the commoners, who are said to have lived in the unwalled areas did not have much access to glass beads. The point of departure for this perspective was that those elites who controlled the markets automatically ended up gaining political power, therefore, exotic items such as glass beads became a highly valued commodity. Ultimately, it was argued that glass beads became a form of wealth that indicated the 'haves' and the 'have nots' (see Huffman 1972, 2007; Garlake 1978; Hall 1987; Sinclair 1987; Pwiti 1991; Denbow et al. 2015). However, other researchers posited that the position of glass beads in Iron Age studies became overrated as stores of wealth, rather commodities such as cattle, land and other local resources were regarded as better stores of wealth (Garlake 1982; Chanaiwa 1973; Mudenge (1974; Chirikure 2014, Moffet & Chirikure 2016). This was buttressed by Wood's (2012) recent study of Iron Age sites in the Shashi-Limpopo Valley which showed small differences in terms of glass bead frequency between elite and commoner spaces.

More recently, and building upon the earlier glass bead studies, Wood (2000; 2005; 2009, 2011, 2012) developed a comprehensive glass bead seriation that integrated all the bead classes from securely dated EIA, MIA and LIA sites in southern Africa based on their morphological characteristics (see Table 6.1). Further studies were undertaken by Robertshaw et al. (2010) on these glass beads buttressed the Marilee's Wood seriation and even confirmed that each bead series had its unique chemistry (see Table 6.1). More importantly, the study that was undertaken by Robertshaw et al. (2010) and other related researches which were undertaken in the last decade (i.e. Dussubieux et al. 2009; Wood et al. 2012; Koleini et al. 2016, 2017; Robertshaw & Wood 2017; Bandama et al. 2018) have managed to reconstruct some of the

[27] Expensive and ostentatious ornaments (i.e. Bvocho 2005).

trade routes which connected southern Zambezia's coast-interior gradient with the Indian Ocean rim and Europe. Thus, today we now know most areas from which these glass beads were sourced including their morphology (Figure 6.1) and by tracing the provenance of glass beads recovered from Iron Age sites in southern Africa such as Chumnungwa, one can relatively date a site (Wood 2005).

Table 6. 1: southern Africa's bead series (Extracted from Wood 2005, 2009, 2011; Robertshaw et al. 2003, 2010.Koleini et al. 2016).

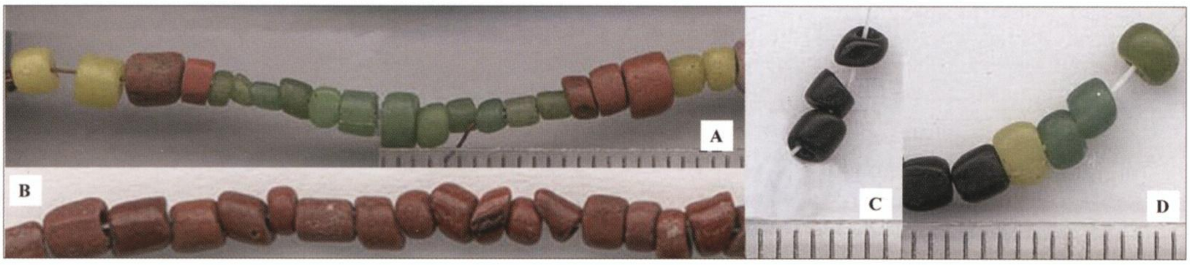
Bead Series	Dates	Method of Manufacture	Colour	Shape	Diaphaneity	Size Range	Composition	Source	Type Sites
Chibuene	AD 700 – 800	Drawing	Dark blue, yellow blue green, turquoise blue	Tubes	Translucent	2.5-4.5 mm	Calcium plant ash glass	Middle East	Chibuene, Nqoma
Zhizo	CE 700 - 950	Drawing	Blue, blue-green, yellow, green and cobalt blue	Cylinders, tubes and oblates	Translucent opaque	2-7.5 mm	Low alumina, high calcium plant ash glass	Middle East	Schroda, Zhizo Hill, Mananzve
K2	CE 900 - 1200	Drawing	beads mostly range between blue-green, and light green	Cylinders, tubes and oblates	Transparent-translucent	less than 3.5 mm	Soda-alumina glass	South Asia	K2, Malumba, Mananzve
Indo-Pacific	CE 1000 - 1250	Drawing	brownish-red, yellow, orange, green, and blue green	Cylinders, tubes and oblates	Opaque translucent	2.5-4 mm	Soda-alumina glass	South Asia	Pont drift, Skutwater, K2
Mapungubwe	CE 1250 - 1300	Drawing	Black brownish-red, blue-green, yellow, light-green, orange and cobalt blue beads	Oblates, cylinder (2.5-3.5 mm) tubes and oblates	Opaque beads transparent and translucent-opaque.	2.5-3.5 mm	High alumina, low calcium plant ash.	South or southeast Asia	Mapungubwe, K2, Tabazikamambo, Malumba, Mananzve, Mapela
Zimbabwe	CE 1275 - 1400	Drawing	black, blue-green, yellow, cobalt-blue and brownish-red	Cylinders, oblates and tubes	Transparent-translucent	2.5-3.5 mm	High alumina, low calcium plant ash.	South or southeast Asia	Great Zimbabwe, Hlamba Mhlonga, Mahilaka, Ingombe Ilede and Thulamela
Khami	CE 1400 - 1700	Drawing	Black, brownish-red, blue-green, green, yellow, and deep-blue	Cylinders, tubes and oblates	Translucent-opaque and opaque-translucent	2 -7 mm	High uranium low barium soda alumina glass	South Asia	Selolwe, Mtao Village 16, Thulamela, Mananzve, Ingombe Ilede

Chibuene Series

Zhizo Series

K2 Series

Indo-Pacific Series (Including the garden roller beads marked B)



Mapungubwe Series

Zimbabwe Series

Khami Series

Figure 6.1. Southern Africa's Bead Series (Adapted from Wood 2011:82-84)

6.3. ANALYTICAL APPROACH TO CHUMNUNGWA GLASS BEADS

The analysis and classification of the glass beads recovered from Chumnungwa followed the conventional method of glass bead analysis in the southern African Iron Age, pioneered by Wood[28] (2000, 2005, 2009, 2011). This assured standardisation, consistency, and cross-comparison with other related studies which were conducted using the same methodology (Bvocho 2005; Wood 2011; Antonites 2012; Sinclair et al. 2012; Koleini et al. 2016, 2017; Robertshaw & Wood 2017; Bandama et al. 2018; Chiripanhura 2018; Mukwende et al. 2018). Thus, priority was centred on morphological attributes germane to the objectives of this study and the data was recorded using data capture sheets attached in Appendix 3. The recorded

[28] The analysis and classification system were premised on earlier methods used by other glass bead researchers in global archaeology (i.e. Van der Sleen 1967; Karklins 1985; Kidd & Kidd 1970).

attributes included the glass beads method of manufacture, shape, size range, colour, and diaphaneity. As argued by Wood (2011:68) these morphological attributes are good enough to define a glass bead assemblage. Nevertheless, a supplementary analysis was done on other attributes such as glass quality, surface finish, lustre, and patination. Insights from these attributes greatly helped in defining the character of Chumnungwa bead assemblage.

Method of manufacture (including end treatment and structure)

Visual and microscopic inspections were used to identify the method of manufacture of the glass beads. According to Wood (2011:68), glass beads of southern Africa were generally manufactured using three methods namely the moulding, winding or drawing method. The latter method appears to have been dominantly used to manufacture most of the glass beads that reached the southern African markets. Moulded beads were rarely found in precolonial southern Africa except at K2, one of the MIA sites in the Shashi-Limpopo Valley where a handful of garden roller beads were re-melted from imported glass beads was recovered (see Gardner 1963). Wound beads were made through twisting a mandrel core in the molten glass inside a crucible (Wood 2005, 2011). Drawn beads were the easiest to make hence mass-produced. These were made by moulding a large globular perforated tube from molten glass which was then chopped into smaller sized glass beads whose ends were reheated (Wood 2011:68).

Shape

Similar to other regions in the world (i.e. Beck 1928), pre-European glass beads in Southern Africa came in different shapes (see Figure 6.2). In this study, the shape of glass beads was determined by the ratio between its length and diameter during the manufacturing process (Wood 2005:31). Cylindrical beads had rounded profiles, whilst oblates had smoothly rounded profiles. Tubular beads had matching straight sides and usually, their ends were untreated or moderately rounded. The latter, spherical, ellipsoids, barrel, and bicone beads were predominantly wound beads, which are rarely recovered from Iron age sites in southern Africa.

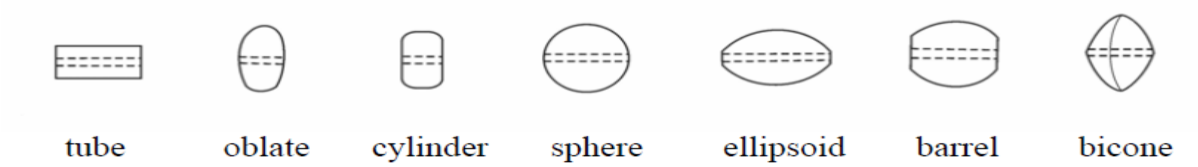


Figure 6.2: Glass bead shapes (Adapted from, Wood 2011:69)

Size

Bead size refers to the measurement of the largest or outer diameter of a glass bead. As noted by Wood (2009:220), glass beads of southern Africa are commonly much smaller in diameter when compared to regions elsewhere, therefore, to create a contextual typology of Chumnungwa glass beads that corresponded with other local glass bead assemblages from Iron Age sites, Marilee Wood's bead size range (Table 6.2) was adopted for the study.

Table 6.2: Size range of glass beads from southern Africa (Adapted from, Wood 2005:34)

Size	Diameter
Minute	<2.5 mm
Small	2.5-3.5 mm
Medium	3.5-4.5 mm
Large	>4.5 mm

Colour

To capture variation, uniformity, and contamination marks at the same time, Chumnungwa glass beads were visually and microscopically inspected hence their colours were determined using a combination of the Munsell colour chart and Marilee Wood's (2005) categories.

Diaphaneity

Diaphaneity defines the transparency of glass beads when exposed to light (Wood 2011). The seven categories of diaphaneity identified by Wood (2005) were used to characterise the glass beads recovered from Chumnungwa (see Table 6.3)

Table 6.3: Diaphaneity of glass beads from southern Africa (Adapted from, Wood 2005:35)

Diaphaneity	Description
Transparent	objects can be seen through the glass
Transparent-translucent	glass is slightly cloudy (often due to bubbles)
Translucent-transparent	glass is cloudy but light passes easily through the bead
Translucent	light passes through the entire bead
Translucent-opaque	the glow of light from most of the bead
Opaque-translucent	the slight glow of light at edges of the bead
Opaque	no light is seen through the edge of the bead

6.4. ANALYSIS, AND RESULTS

A total of 60 glass beads were recovered from the midden test pits that were sunk on both the hilltop and foothill areas of Chumnungwa. However, most of these beads were recovered from the hill summit because the ratio of test pits sunk on both areas was not equal as previously elucidated in Chapter 4. The density of glass beads recovered at Chumnungwa is lower and this is not surprising considering the fact that the areas targeted for exactions were mainly used for settlement purposes. In most cases, the highest densities of glass beads in the Southern African Iron Age feature mostly in burial sites like those at Mapungubwe (Fouché 1937), Thulamela (Steyn et al. 1998), and Ingombe Ilede (Du toit 1965; Fagan 1967; Robertshaw & Wood 2017). Thus, there is a high possibility that numerous if not thousands of Chumnungwa glass beads were lost, particularly from the burials which were vandalised as a result of the antiquarian excavations and treasure hunting activities (see Hall & Neal 1904). Furthermore, no standard sieving methods were applied to facilitate the recovery of glass beads since the early investigators lacked scientific rigor in data recovery methods. Thus, the focus by then was on monumentality, and recovery of gold objects (including beads) but not on glass beads. Nevertheless, the current study managed to salvage the little that was left at the site from those areas whose stratigraphy was undisturbed. Ultimately, all the glass beads were visually examined using an Optical Microscopy (OM). A comprehensive analysis of the glass beads at a stratigraphical level using the natural layers of the excavated units is presented in Appendix 3. For comparison purposes, the results of the glass bead analysis will be presented at test pit level under the headings of hilltop and foothill areas.

6.5.1. GLASS BEADS FROM THE HILLTOP AREA

A total of 46 glass beads were recovered from the eight Test pits that were sunk on the hilltop area of Chumnungwa. Ultimately these formed the majority of Chumnungwa glass beads (76.6%).

Method of Manufacture

Except for one glass recovered from Test Pit 8, the majority (98%) of the glass beads recovered from the hilltop area had simple structures made of single layers which clearly showed that they were mostly manufactured using the drawing method (Figure 6.3). Interestingly the structure of the exceptional glass bead clearly shows that it was manufactured using re-melted glass.

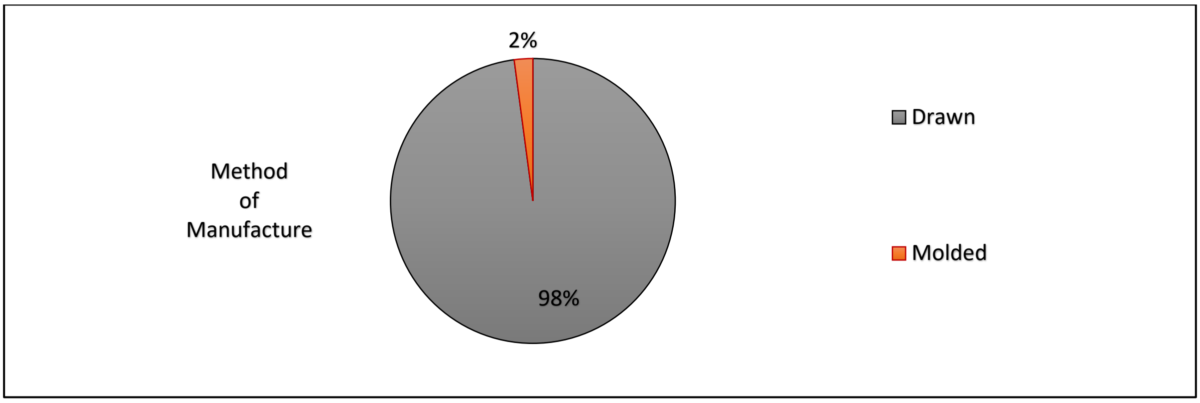


Figure 6.3*:* Frequency of method manufacture of glass beads recovered from the hilltop area

Shape

Most of the glass beads recovered from both the upper and lower layers of the hilltop area were oblate shaped (60%). These had smoothly rounded profiles and their lengths were mostly shorter than their diameters. Cylinder-shaped glass beads were the next dominant category (Figure 6.3) and most of these had rounded profiles with straight sections. The remainder were tabular shaped. These had straight sides and ends which were untreated or moderately rounded.

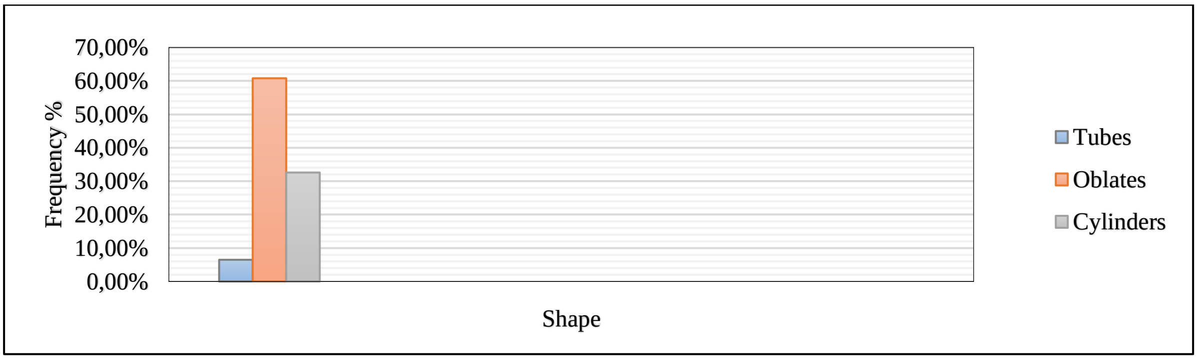


Figure 6.3: Frequency of the shape of glass beads recovered from the hilltop area

Size

Glass beads recovered from the hilltop area had small diameters and fairly uniform small sizes (Figure 6.4), nevertheless, a few of the glass beads were large-sized (4.3%).

Figure 6.4: Frequency of the sizes of glass beads recovered from the hilltop area

Colour

A wide range of colours were recorded from glass beads recovered from the hilltop area of Chumnungwa. Turquoise-green (36.9%) dominated, followed by yellow (23.9%), green (17.3%), turquoise-green-blue (10.86%), brown-red (4.34%), black (4.34%), and blue beads (2.17%). All these colours were fairly represented in all the stratigraphical layers of the excavated middens (see Appendix 3).

Figure 6.5: Frequency of the colour of glass beads recovered from the hilltop area

Diaphaneity

As presented in Figure 6.6, diaphaneity of most glass beads recovered Chumnungwa hilltop area was transparent-translucent (71.7%). The remainder respectively ranged between transparent (10.8%), opaque (8.6%), and translucent (8.6%).

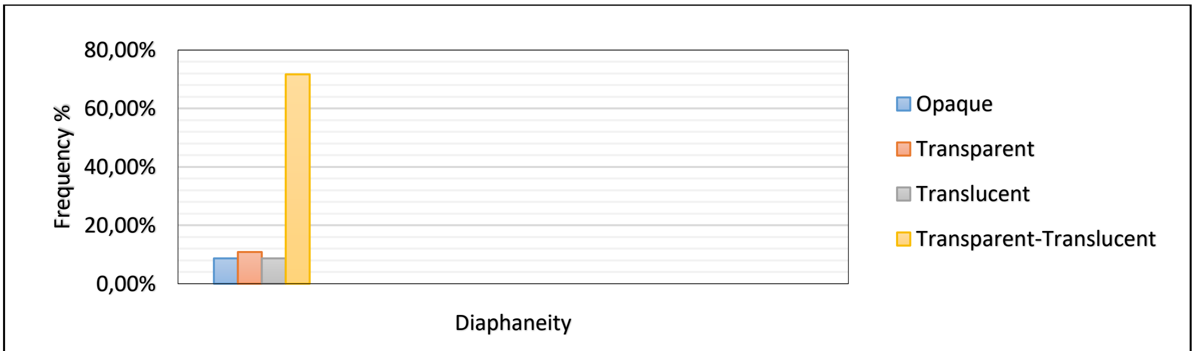
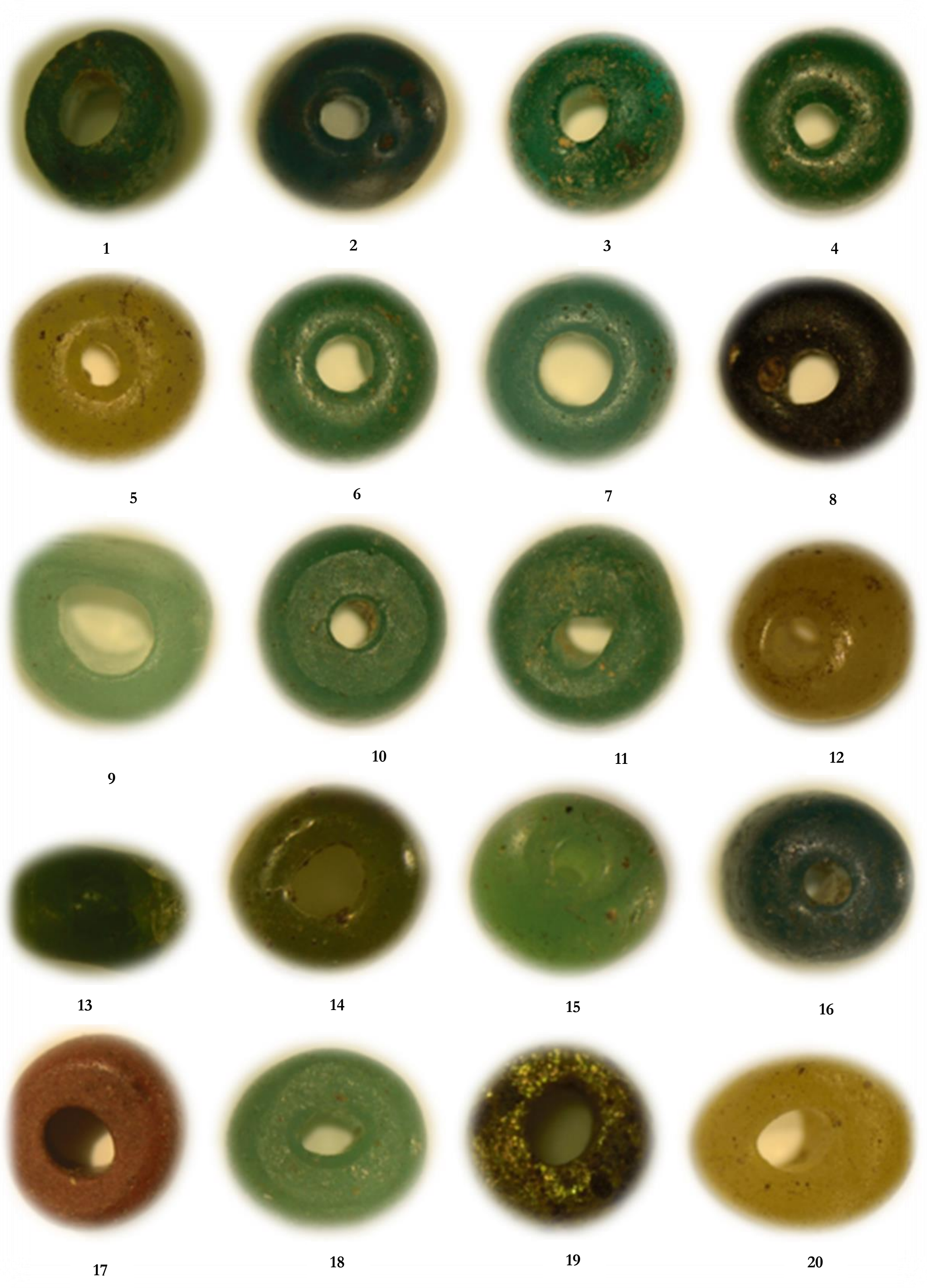
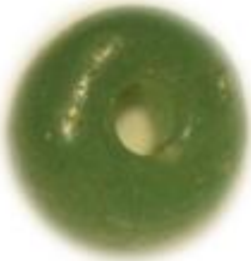


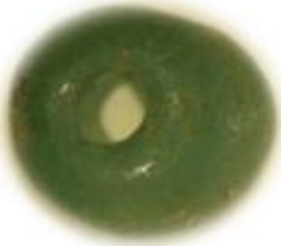
Figure 6.6: Frequency of the diaphaneity of glass beads recovered from the hilltop area

Ultimately the glass beads from the hilltop area of Chumnungwa (see Figure 6.7) were grouped according to the method of manufacture, diaphaneity, colour, and shape. This was done to capture the variation of bead morphology and consumption patterns within the hilltop area. As described in Figure 6.8, it became clear that drawn transparent-translucent/transparent/ turquoise-green oblates were more common and heavily consumed.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20


21

22

23

24

25

26

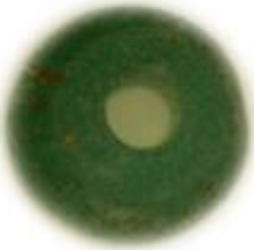
27

28

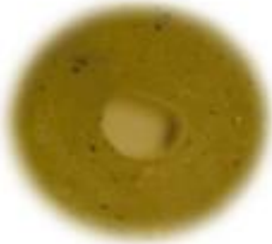
29

30

31

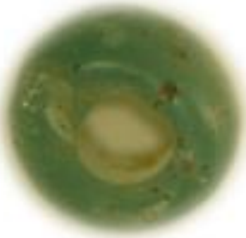
32

33

34

35

36

37

38

39

40

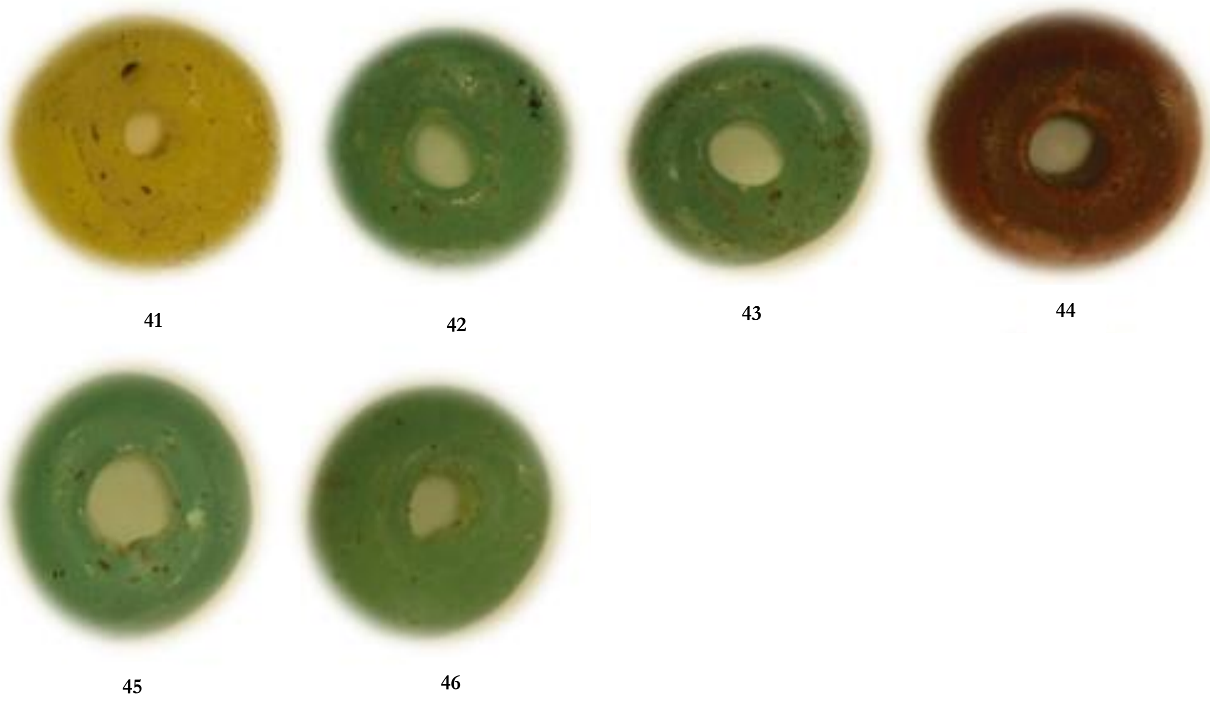


Figure 6.7: Optical microscopic images of glass beads from Chumnungwa hilltop area

A. Drawn transparent-translucent/ transparent green oblates
- (2,4,11,37)

B. Drawn transparent-translucent green cylinders
- (1,10,33)

C. Drawn transparent-translucent/ transparent/ turquoise-green oblates
- (3,6,13,14,15,22,24,43,45,46)

D. Drawn transparent-translucent/ transparent/ translucent yellow oblates
- (5, 12, 23, 26, 31, 34, 36)

E. Drawn transparent-translucent/ translucent turquoise-green-blue oblates
- (7, 42)

F. Drawn opaque black oblates
- (8)

G. Drawn translucent turquoise-green-blue tubes
- (9)

H. Drawn translucent blue oblates
- (16)

I. Drawn opaque brown-red oblates
- (17,44)

J. Drawn transparent-translucent/ transparent turquoise-green cylinders
- (18,21,30,32,38)

K. Drawn opaque black cylinders
- (19)

L. Drawn transparent-translucent yellow cylinders
- (20,25,35,41)

M. Drawn transparent-translucent turquoise-green tubes
- (27,28)

N. Drawn transparent-translucent/ transparent turquoise-green-blue cylinders
- (39, 40)

O. Moulded transparent-translucent green oblates
- (29)

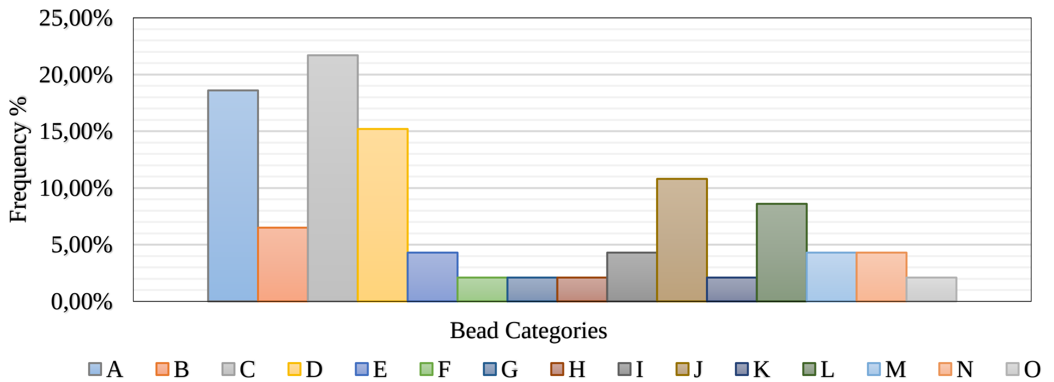


Figure 6.8: Frequency of glass bead categories from Chumnungwa hilltop area

6.5.2. GLASS BEADS FROM THE FOOTHILL AREA

Fourteen glass were recovered from the five Test pits that were sunk within the foothill area of Chumnungwa. These formed the least dominant category totalling to 23.3%.

Method of Manufacture

All the glass beads recovered from the foothill area had simple structures made of single layers of molten glass. According to Wood (2005:), this is a clear sign which shows that they were all manufactured using the drawing method (Figure 6.9).

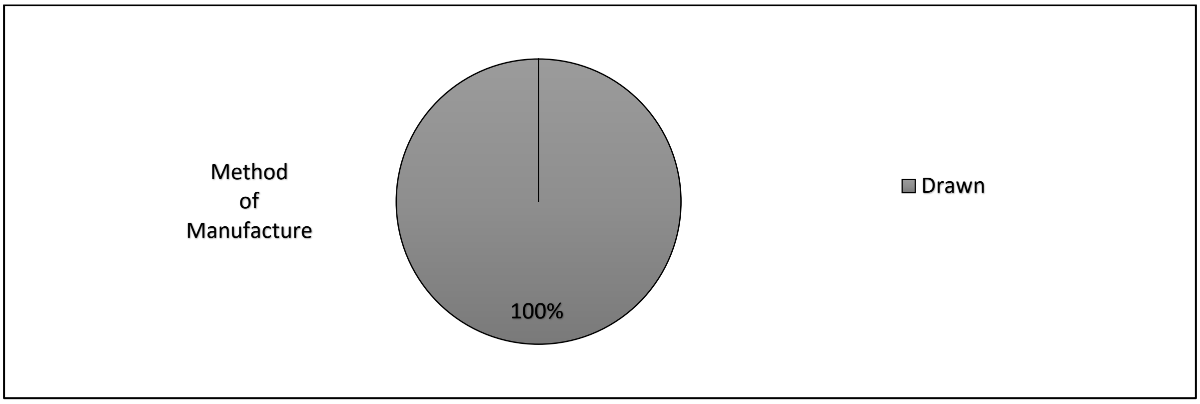


Figure 6.9: Frequency of the method of manufacture of glass beads recovered from the foothill area

Shape

As elaborated in Figure 6.10, shapes of glass beads recovered from the foothill area were predominantly oblates (50%). The remainder respectively was comprised of cylindrical (35.7%) and tubular beads (14.2%).

Figure 6.10: Frequency of the shapes of the glass beads recovered from the foothill area

Size

As demonstrated in Figure 6.11, most glass beads had small sizes (42.8%; 14.2%) whilst the remainder had large sizes (35.7%; 7.10%). All the bead size ranges were fairly represented in all the stratigraphical layers of the excavated middens from the foothill area (see Appendix 3).

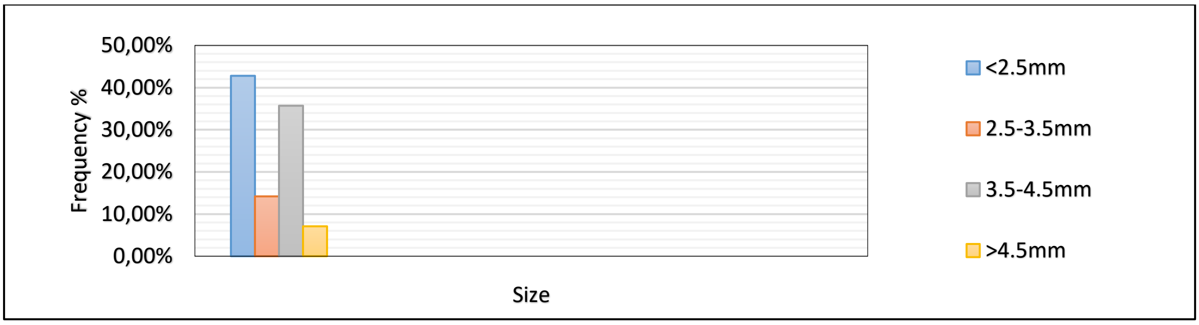


Figure 6.11: Frequency of the sizes of the glass beads recovered from the foothill area

Colour

Four bead colour categories were recorded. As summarized in Figure 6.12, these respectively comprised of turquoise-greens (50%), green (28.5%), turquoise-green-blue (14.2%), and brown-reds (7.1%).

Figure 6.12: Frequency of the colour of the glass beads recovered from the foothill area

Diaphaneity

As depicted in Figure 6.13, most of the glass beads recovered from Chumnungwa were transparent (57.1%), followed by those with transparent-translucent surfaces (21.4%), translucent (14.2%) and opaque (7.14%).

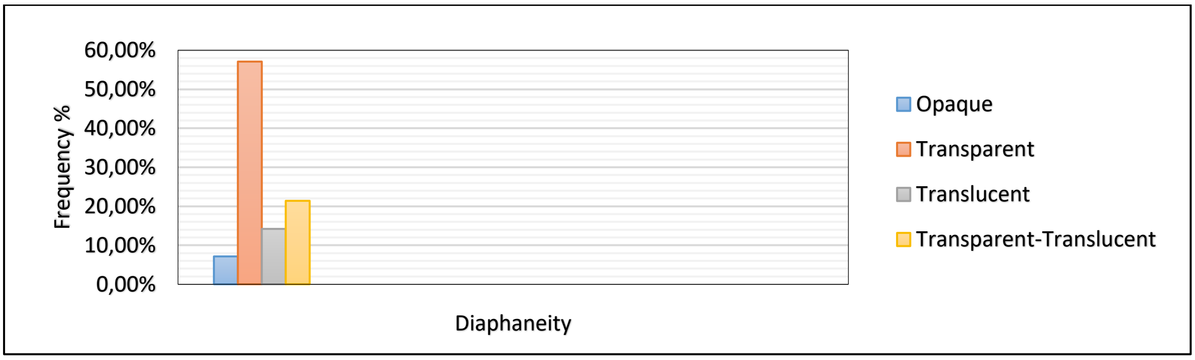


Figure 6.13: Frequency of the diaphaneity of the glass beads recovered from the foothill area

To capture the variation of bead morphology and consumption patterns, the glass beads recovered from the foothill area of Chumnungwa (see Figure 6.14) were grouped according to the method of manufacture, diaphaneity, colour, and shape. This was done to capture the variation of bead morphology and consumption patterns within the hilltop area. As demonstrated in Figure 6.15, drawn transparent-translucent/ transparent turquoise-green cylinders were more popular and widely consumed.

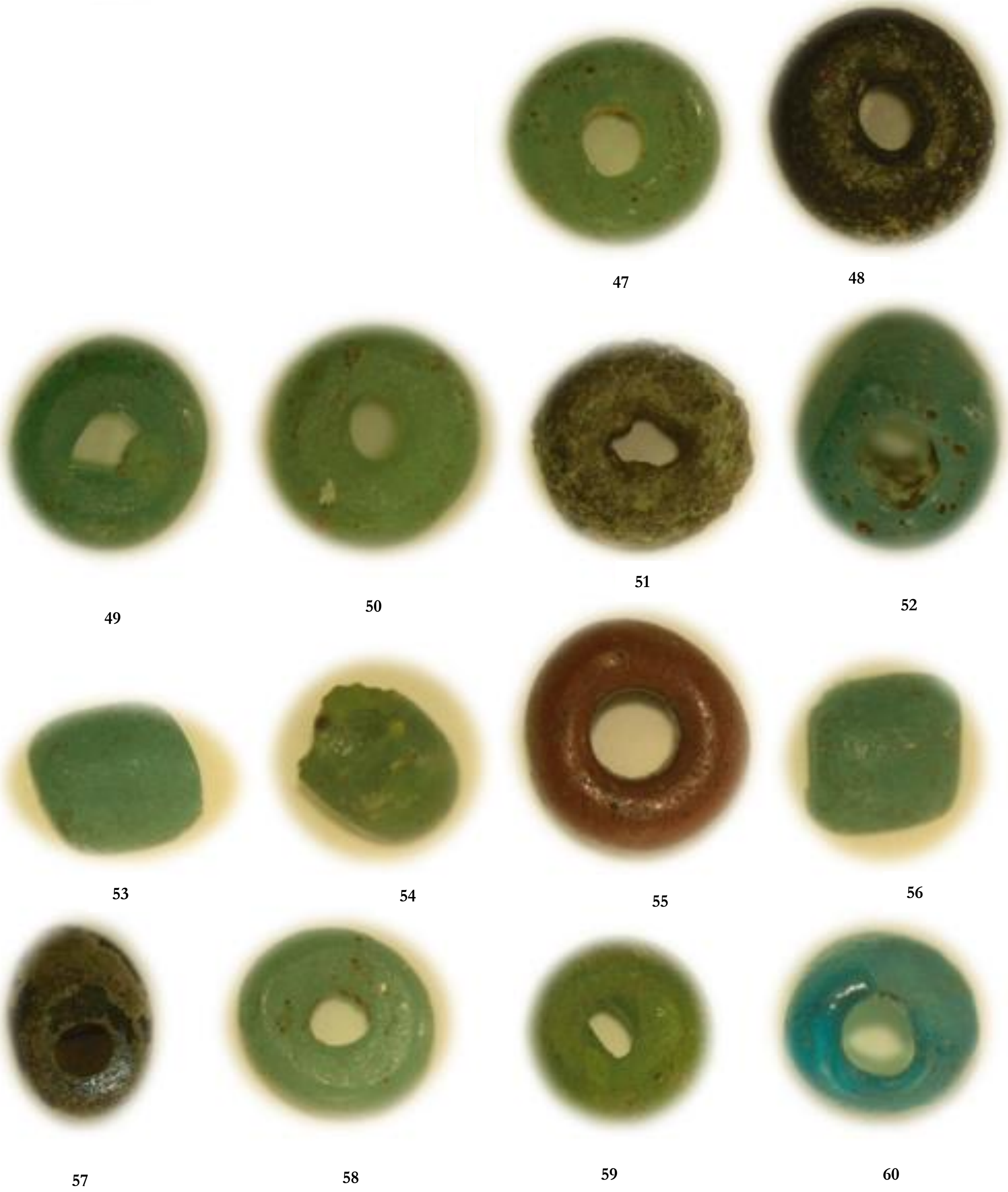


Figure 6.14. Optical microscopic images of glass bead from Chumnungwa foothill area

A. Drawn transparent-translucent/ transparent green oblates
- (48,49,51)

B. Drawn transparent-translucent/ transparent/ turquoise-green oblates
- (47,50,59)

C. Drawn translucent turquoise-green-blue tubes
- (52)

D. Drawn opaque brown-red oblates
- (55)

E. Drawn transparent-translucent/ transparent turquoise-green cylinders
- (53,54,56,60)

F. Drawn transparent-translucent/ transparent turquoise-green-blue cylinders
- (58)

G. Drawn transparent-translucent green tubes
- (57)

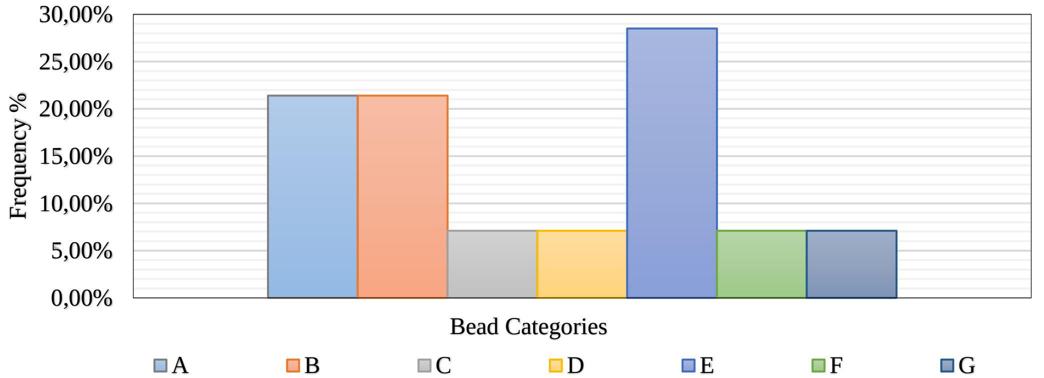


Figure 6.15: Frequency of glass bead categories from Chumnungwa foothill area

6.6. GLASS BEADS FROM CHUMNUNGWA HILLTOP AND FOOTHILL AREAS: A COMPARISON

The morphological attributes of glass beads recovered from hilltop and foothill areas of Chumnungwa were comparatively studied to trace how they related and differed. This provided data that was used to determine whether individuals who resided in both the hilltop and foothill areas of Chumnungwa consumed the same range of glass beads. The comparison also enabled the characterisation of Chumnungwa glass beads as an assemblage. Nevertheless, because of the unequal proportion of the surface area excavated between the hilltop and foothill areas, the comparative study largely focused on the representation of the morphological attributes than the totals of the beads. Thus, the study was more qualitatively oriented than quantitative. Consequently, the emphasis of the comparison was placed on the same attributes that were initially analysed to trace the morphology of Chumnungwa glass beads (See Appendix 3).

Method of Manufacture

Most of the glass beads that were recovered from both the hilltop and foothill areas of Chumnungwa had simple structures made of single layers which clearly showed that they were mostly manufactured using the drawing method. Only one glass recovered from the hilltop area was moulded using re-melted glass. The statistical patterns in Figure 6.16 clearly show that most beads from the hilltop and foothill areas were fairly manufactured using the same method.

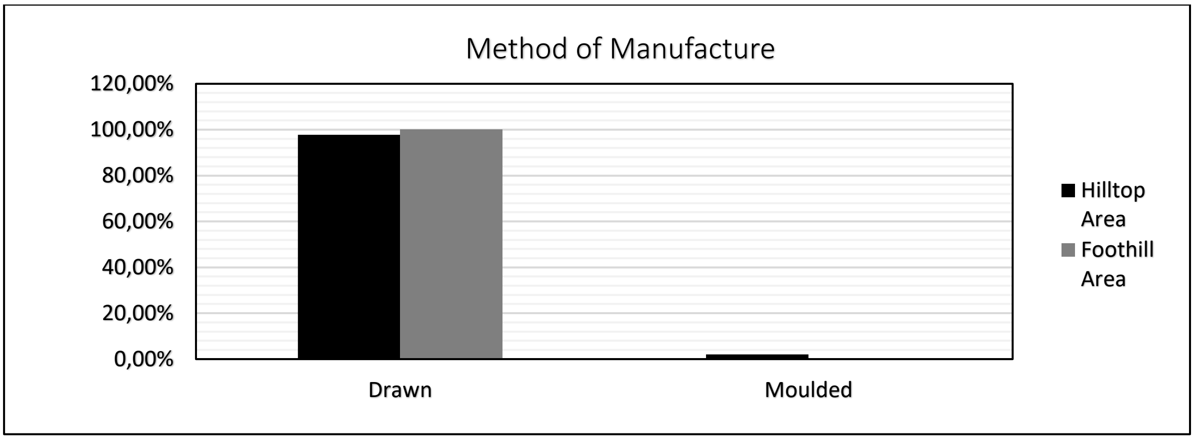


Figure 6.16. Graph showing method of manufacture of Chumnungwa glass beads from the hilltop and foothill areas.

Shape

As elaborated in Figure 6.17, oblate shaped glass beads dominated in both the hilltop and foothill areas of Chumnungwa. These were followed by cylindrical and tubular beads. Thus, in as much as the statics from both the hilltop and foothill areas greatly differed, the overall trend suggests that residents of both spaces consumed glass beads with corresponding shapes.

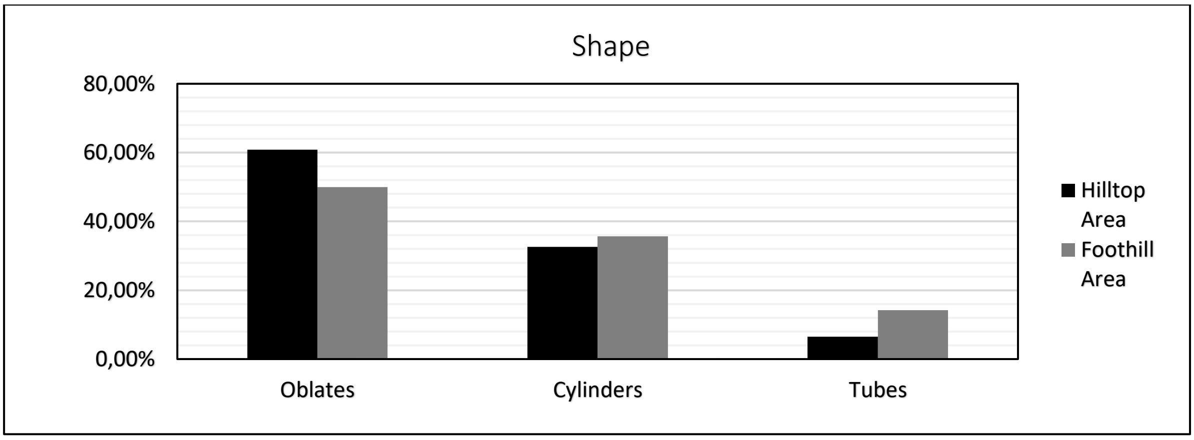


Figure 6.17. Graph showing shapes of Chumnungwa glass beads from the hilltop and foothill areas

Size

Glass beads recovered from the hilltop and foothill areas of Chumnungwa had uniform sizes (Figure 6.18), nevertheless, small-sized beads were widely represented inside the hilltop areas.

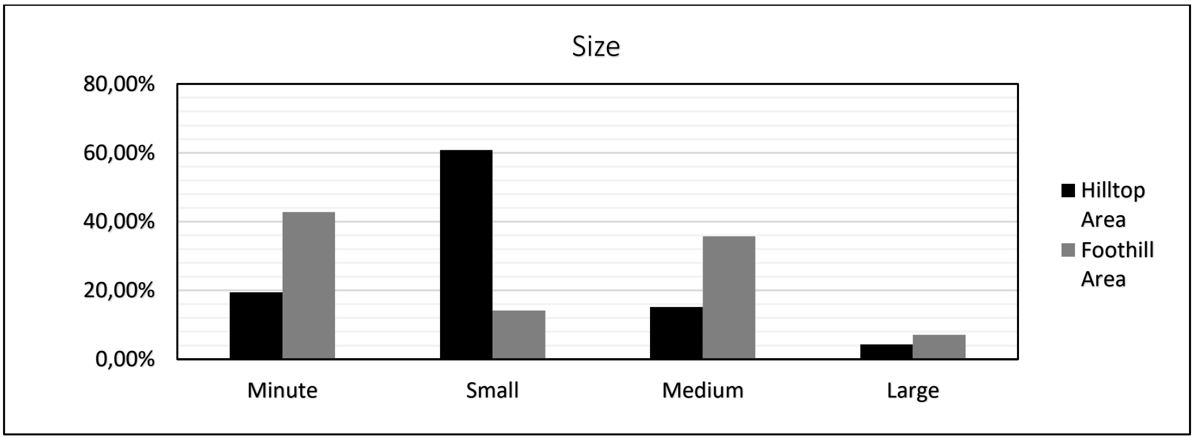


Figure 6.18. Graph showing sizes of Chumnungwa glass beads from the hilltop and foothill areas

Colour

As demonstrated in Figure 6.19, the wide range of glass bead colours recorded at Chumnungwa were prevalent in both the hilltop and foothill areas. However, yellow, black, and blue beads were absent within the foothill area. Presumably, the reason why is best explained by the uneven proportion of the surface area excavated between the hilltop and foothill areas or consumer choices, market forces governing the supply and demand of the glass beads.

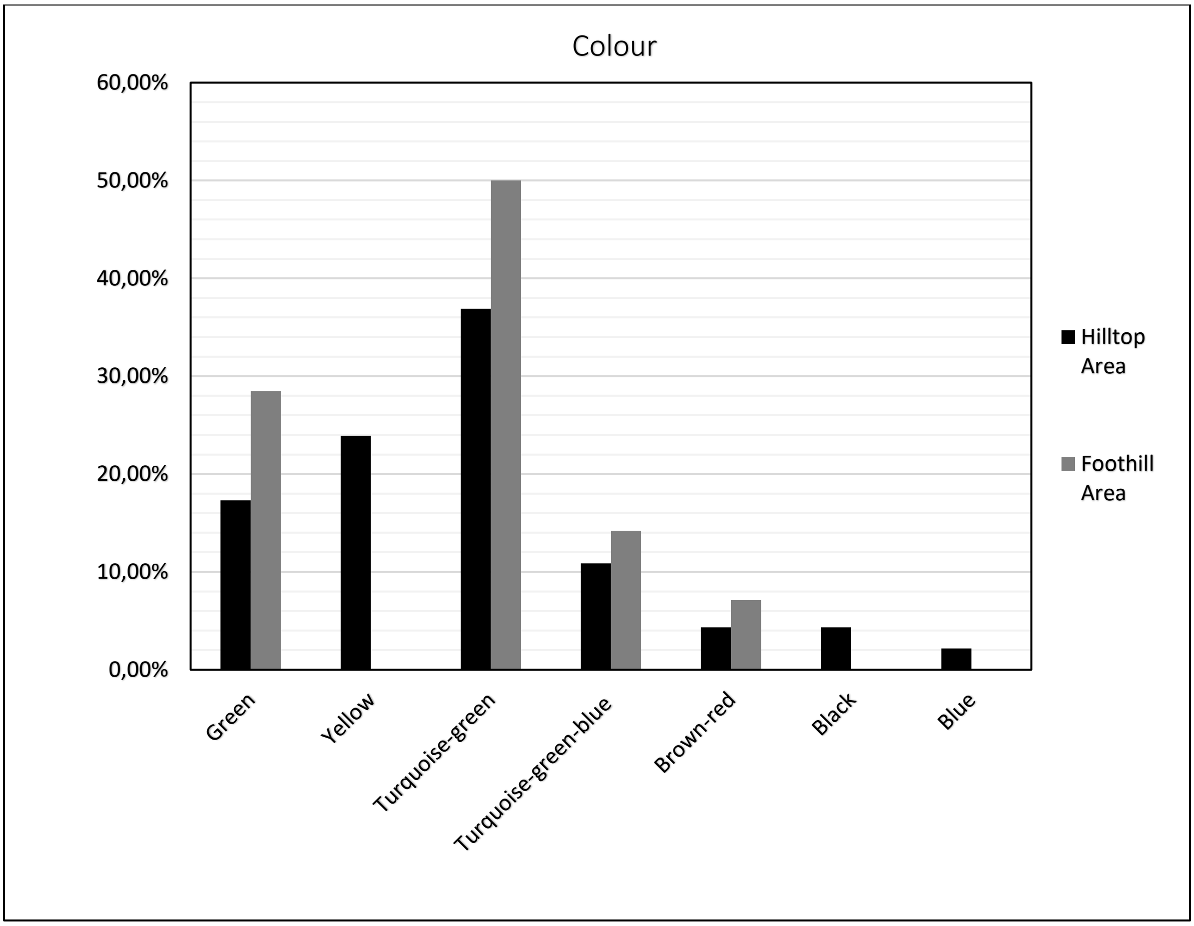


Figure 6.19. Graph showing colours of Chumnungwa glass beads from the hilltop and foothill areas

Diaphaneity

As depicted in Figure 6.20, the levels of transparency of glass beads recovered from both the hilltop and foothill areas of Chumnungwa were congruent. However, a remarkable difference between the two assemblages was that most glass beads recovered from the hilltop area were transparent-translucent whilst those from the foothill area were transparent. Such a huge difference could reflect the market forces or simply the limitations of the samples used in the study.

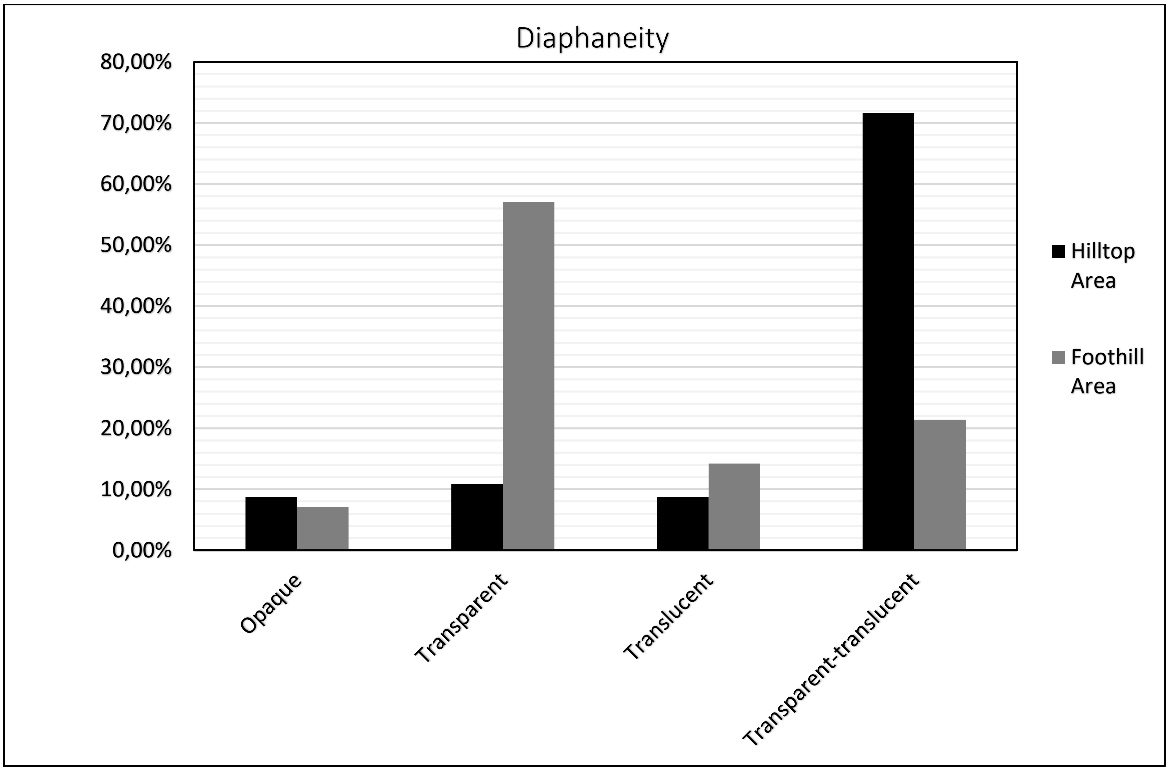
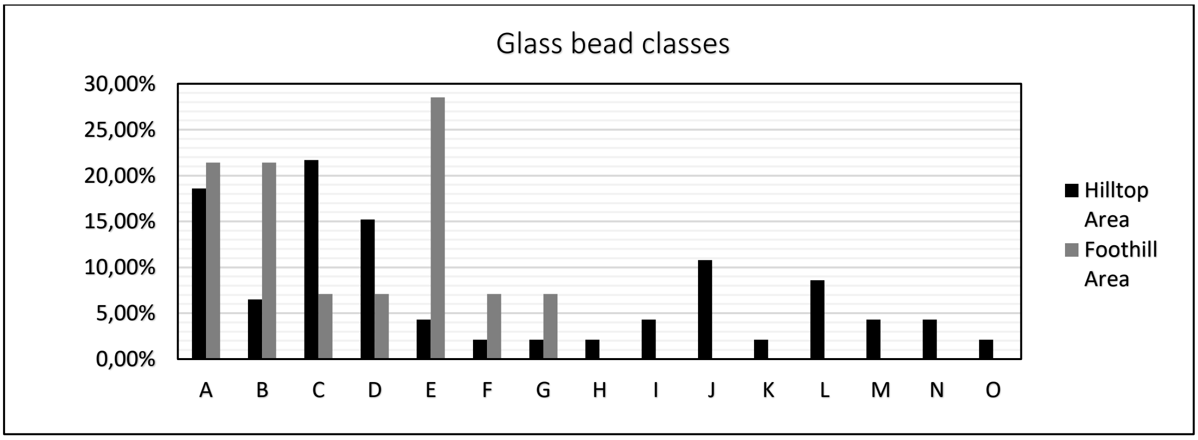


Figure 6.21. Graph showing diaphaneity of Chumnungwa glass beads from the hilltop and foothill areas

Ultimately the typological classes of the glass beads from both the hilltop and foothill areas of Chumnungwa were grouped together for comparison. The comparison in Figure 6.22, clearly showed that the individuals who resided in both the hilltop and foothill areas of Chumnungwa shared the same networks that connected them with the glass beads though few glass beads were recovered from the foothill area. Whilst this outcome is preliminary, it is not surprising given that we now know through the established radiocarbon dates and ceramic typology that Chumnungwa hilltop and foothill areas were an abode of a single Iron Age community that was culturally related.



A. Drawn transparent-translucent/ transparent green oblates
B. Drawn transparent-translucent green cylinders
C. Drawn transparent-translucent/ transparent/ turquoise-green oblates
D. Drawn transparent-translucent/ transparent/ translucent yellow oblates
E. Drawn transparent-translucent/ translucent turquoise-green-blue oblates
F. Drawn opaque black oblates
G. Drawn translucent turquoise-green-blue tubes
H. Drawn translucent blue oblates
I. Drawn opaque brown-red oblates
J. Drawn transparent-translucent/ transparent turquoise-green cylinders
K. Drawn opaque black cylinders
L. Drawn transparent-translucent yellow cylinders
M. Drawn transparent-translucent turquoise-green tubes
N. Drawn transparent-translucent/ transparent turquoise-green-blue cylinders
O. Drawn transparent-translucent green tubes

Figure 6.22. Graph showing classes of glass beads from Chumnungwa hilltop and foothill areas

6.7. DISCUSSION: CHUMNUNGWA GLASS BEADS IN TIME & SPACE

When classified using Wood's (2005, 2009, 2011) seriation scheme in Table 6.1, the glass beads assemblage recovered at Chumnungwa comprised a mix of K2, Mapungubwe, Zimbabwe, and Khami series (see Table 6.1).

Table 6.4: Glass beads recovered from Chumnungwa based Wood's (2005, 2009, 2011) seriation scheme

	K2	Mapungubwe	Zimbabwe	Khami	Total
Hilltop area	1.6%	1.6%	66.6%	6.6%	76.4%
Foothill area			21.6%	1.6%	23.2%
Total	1.6%	1.6%	88.2%	8.2%	100%

The bulk of the glass beads (Numbers 2-22, 24, 26-43, 45-50, 52-60) had more affinities with the Zimbabwe series. These were mostly characterised by a range of colours that included green, black, blue-green, yellow, brown-red, blue, turquoise-green-blue, and turquoise greens which were concentrated on both the hilltop and foothill areas (see Appendix 3). Most of the glass beads were small-sized, and their diaphaneity was transparent-translucent. However, the most intriguing aspect of the Zimbabwe series from Chumnungwa was that they mostly comprised oblates rather than cylinders. Whilst this made it difficult to separate them from Mapungubwe oblates whose morphology is much more similar (Wood 2011:77), their mix suggested that they were morphologically similar (sensu Chirikure 2014). Most importantly this clearly showed that the residents of Chumnungwa had access to both Zimbabwe and Mapungubwe glass bead series. Elsewhere, Zimbabwe bead series were recovered at Hlamba Mhlonga (Wood 2009:222), Mapungubwe (Wood 2009), Thulamela (Steyn et al. 1998), Ingombe Ilede (Du toit 1965; Robertshaw & Wood 2017), Matendera, Chiwona, Mshosho, (Caton-Thompson 1931), and Great Zimbabwe (Beck 1937; Robinson 1961; Chiripanhura 2018; Chirikure et al. 2018). According to Robertshaw et al. (2010), the Zimbabwe series was originally manufactured in India. They are likely to have been brought to southern Africa by Swahili traders using ocean sailing vessels. Perhaps the Bubi-Limpopo or Mwenezi-Limpopo River routes could have connected Chumnungwa and the coastal trade centres such as Sofala on the Mozambique coast, which linked the Indian Ocean trade rim and Europe (Wood et al. 2012).In exchange, the residents of Chumnungwa likely traded their gold, ivory, animal skins, tortoise shell, copper, and iron. A 10th-century travel diary from Al Mas'udi already highlights the Mozambican coast as a major contributor of gold, ivory and many other precious objects which were couriered to India and China (Freeman-Grenville 1962: 15; Summers 1969; Wood et al. 2012). Similarly, the 14th and 15 centuries in southern African Iron Age are highly esteemed as the; ‘golden age of the Swahili trade’ (Huffman 2007:76). There is possibility that one of the major contributors to this gold from the interior is likely to have been the greenstone belts in Mberengwa where Chumnungwa is situated (see Hall & Neal 1904:228; Summers 1969).

The subsequent dominant bead category (Table 6.4) was the Khami series. These ranged from opaque brown-red, turquoise-green oblates, and cylinders beads with variable sizes (see Appendix 3). Although the Khami bead series were recovered in few numbers, they were fairly represented in both the hilltop and foothill areas which clearly shows that Chumnungwa too had access to Khami beads. Other contemporary sites where typical beads were recovered included Khami, the type site (Robinson 1959; Mukwende et al. 2018), Zinjanja (Koleini et al. 2019); Hlamba Mlonga (Wood 2009), Mtao Village 16 (Manyanga 2006), Thulamela (Steyn et al. 1998), Mananzve (Nyamushosho et al. 2018), Great Zimbabwe (Beck 1937; Chiripanhura 2018; Chirikure et al. 2018) and Baranda (Koleini et al. 2017). According to Wood (2011), Khami glass bead series were originally manufactured in South Asia or South-east Asia and similar to the Zimbabwe series, they were brought to southern Africa via the Indian Ocean trade routes, passing through trade centres such as Kilwa, until they reached Chibuene (Wood et al. 2012). Part of these glass beads may have been brought into southern Africa’s interior by *vashambadzi* (local middlemen traders) who acquired the beads from the Portuguese merchants who in turn obtained the beads from Indian entrepots such as Negapatam[29] and Cambay around the 16th century after realising the locals distaste in European beads (Theal 1898; Van der Sleen 1956/1958; Schofield 1958; Freeman-Grenville 1962; Mudenge 1988).

A green transparent-translucent fragment of a K2 garden roller bead (Number 29) and a Mapungubwe glass bead (Number 1) were also recorded at Chumnungwa (Table 6.4). Conventionally, it was known from established knowledge that the circulation of garden roller beads in southern Africa was believed to have ceased around CE 1200 (Wood 2005). The recovery of one bead fragment in a stratigraphical layer that post-dated the 2nd half of the 13th century suggested that their consumption still likely to have continued into the 15th century. Another reason why the K2 garden roller and the Mapungubwe bead over-lapped their conventional periods of circulation was possibly sociological (Bvocho 2005). Thus, like heirlooms or valued items of adornment, they were passed from one generation to another through time; hence, their use-life continued beyond the 13th century. According to Wood (2005:30-47), garden rollers are by nature fragmentary and these are the only glass beads that were locally manufactured in southern Africa using glass melted from K2-Indo-Pacific beads which were imported from South or South-east Asia. Typical beads were recovered at several sites in the region including K2, Mapungubwe, Great Zimbabwe, Ntabazikamambo, and Bosustwe (Robinson 1966; Wood 2009; 2011). So far K2 and Ntabazikamambo[30] are the renowned production sites in southern Africa where clay moulds used to produce these garden roller beads were recovered (Gardner 1963; Robinson 1966). Similarly, there is possibility that some of the garden roller beads (including the one recovered onsite) were also manufactured onsite. Nevertheless, the presence of various glass bead series onsite implies that Chumnungwa was a powerful actor in local, regional, and international trade right from the last quarter of the 13th century until the first half of the 17th century. Thus, like most Iron Age sites it was entangled in a web of inland and coastal networks that enabled it to access K2, Mapungubwe, Zimbabwe, and Khami glass bead series.

Since we now know the series, and exchange patterns of glass beads recovered at Chumnungwa, one key area that remains unknown is their consumption patterns. One avenue to achieve this was by exploring the recorded ethnography and anthropology of glass beads in

---

[29] Also known as Nagapattinum.
[30] Also known as Manyanga

the last 500 years among the contemporary Shona sub-groups whose ancestry is historically and archaeologically connected with the residents of Chumnungwa (Von Sicard 1952, 1953, 1955; Beach 1978, 1980, 1994; Bhebe 1999; Shoko 2007). As I generally noted within the broader Shona community, glass beads are commonly and locally known as *zvuma*[31]. They serve in a variety of contexts but what determines their roles is mostly restricted to their colour and size, hence, to the Shona these two attributes are what matters most as far as glass beads consumption is concerned. However, in some instances it is not always the case; beads of conflicting colours and sizes can be strung together to make ornaments. As reflected in the everyday lives of the Shona (Bent 1892:35-36; Aschwanden 1982, 1987; Bvocho 2005), the majority of the glass beads recovered at Chumnungwa might have been used for personal adornment purposes in both life and death contexts. For instance, the Chumnungwa bright coloured beads with uniform sizes in Figure 6.23 might have been used for making necklaces with *ndoro* (conus shell) attached as pendants; bracelets, and decorating hair (Bent 1892:34) or combined and carefully threaded on bark of fibre to form geometric designs on skin or cloth/skin aprons *(nhembe)*, wrist bands, or headbands (*tsungare*) (see Figure 6.24).

Figure 6.23. Chumnungwa glass beads.

[31] Also known as *chuma* (singular).

Figure 6.24. *Tsungare* decorated with bright coloured glass beads arranged in a chevron pattern (Photograph by S. Chirikure)

According to Beck (1931:242), such small-sized beads were highly suitable for adornment beadwork. Archaeologically, the use of glass beads for making necklaces is demonstrated at Matanga, situated in north-eastern Botswana where both men and women burials were uncovered with glass bead necklaces made from yellow and translucent turquoise oblates (Van Waarden 1987). Typical Zimbabwe oblates with uniform sizes were recovered within the gold burials at Mapungubwe (Wood 2009:222-223) as well as Great Zimbabwe (Robinson 1961). It is common among the Shona that the dead are buried with their personal belongings and this includes their ornaments and jewellery which are used to adorn the bodies of the deceased (Aschwanden 1987:238; Shoko 2007). Thus, in the same light, it is probable that the seven burials which were unearthed at Chumnungwa also contained glass bead necklaces that were used for adornment purposes, as was recorded at Matanga, Mapungubwe, Great Zimbabwe and many other Iron Age sites within the region of southern Zambezia (Bent 1892; Caton-Thompson 1931; Robinson 1959; Fagan 1967).

Apart from adornment, glass beads within the Shona societies, are also used as part of the liturgical regalia used in traditional religious ceremonies (Bent 1892; Gelfand 1979; Bvocho 2005; Chirikure et al. 2017b). For instance, it is a common practice among the spirit mediums, *(masvikiro)* to wear a special necklace (s) of black and white beads, locally known as *chuma*, as part of their regalia which includes black and white vestments (Figure 6.25), when officiating important ceremonies such as *mukwerera* (Gelfand 1966: 30; Chirikure et al. 2017b). Karl Mauch (Burke 1969:215-217) recorded an account from one of the spirit mediums Bebereke who operated among the Nemanwa who lived next to Great Zimbabwe where local communities conducted rain-asking ceremonies *(mukwerera)*. These ceremonies were officiated by spirit mediums who sacrificed black bulls and offered opaque beer to their ancestry. The regalia of these mediums is reported to have been black vestments which included *chuma*. Apart from *masvikiro*, bead necklaces made of a combination of black, white, and red beads are also worn by traditional healers and diviners who are locally known as *n'anga* (Gelfand et al 1985; Shoko 2007). Thus, the possibility is very high that the black beads recovered at Chumnungwa might in one way or the other have been used as regalia for religious rites.

Figure 6.25. A *svikiro* (spirit medium,) wearing a black and white bead neckless (Adapted from Ellert 1984:27)

Both bright and dull coloured glass beads within the Shona societies are also used for medicinal and spiritual reasons. Usually, they are used by *n'anga* as a medical and spiritual prescription for their patients for healing ailments *(matenda)* and protection against troubling evil spirits locally known as *mashavi* (Gelfand 1979; Gelfand et al 1985; Aschwanden 1987; Bvocho 2005: Shoko 2007). Thus, because glass beads came from the coast, it was believed they were purified (by the oceans) and thus contained mystical powers that could bring personal protection, and well-being as well as healing to both the young and the old (Gelfand 1979; Gelfand et al 1985; Shoko 2007). For instance, in cases where a baby is suffering from sunken fontanelles *(nhova)*, or umbilical hernia *(guvhu-dende)*, *n'anga* prescribes a necklace of glass beads *(chipande)* which will be tied on the baby's wait or wrist (Gelfand 1979; Shoko 2007). Similar glass bead necklaces locally known as *chifumuro*, or *mazango* could be also prescribed to an adult or infant as protection against evil spirits (Gelfand et al 1985; Gombe 1986; Aschwanden 1982, 1987; Shoko 2007). Thus, the bright coloured glass beads recovered at Chumnungwa (Figure 6.23) could have been used as medicinal prescriptions too.

The Shona also uses glass beads for sexuality and intimate relationship purposes. Usually, young ladies of marriageable age adorn their bodies with *zvuma* made of yellow, green, and other bright coloured beads to entice young bachelors to fall in love with them (Gelfand 1979; Bvocho 2005). In the event of courtship, a girl could give her *chuma* to the boy as a sign of the sincerity of her affection (Holleman 1952:76; Gelfand 1979). During the marriage contract ceremony, the son-in-law in some instances was required to bring a typical *chuma* to the in-laws as part of the payment for the bride wealth *(roora).* Upon completion of the marriage rites, the new bride was given a similar glass bead necklace or waist belt by her aunts, locally known as *mutimwi*[32] to wear privately on her waist to protect her fertility particularly during pregnancy (Gelfand 1979; Aschwanden 1982, Collet 1993). It is also believed *mutimwi* acted more like a sex toy that aroused the sexual desire of husbands whenever they caressed their wives during intercourse. In some instances, young ladies without *mutimwi* were teased by the young man as not being sexy (Bvocho 2005:420). *Mutimwi* is also reported to have been worn by young boys from birth until adolescence as protection and reinforcement of their fertility (Aschwanden 1982, Collet 1993). Thus, the bright coloured glass beads recovered from Chumnungwa (Figure 6.23) could have been used in similar contexts.

6.8. SUMMARY

Similarly, to most Iron Age sites in southern Africa (see Caton-Thompson 1931; Robinson 1961; Pikirayi 1993; Pwiti 1996b; Bvocho 2005; Chiripanhura 2018; Chirikure et al. 2014, 2018; Mukwende et al. 2018; Nyamushosho et al. 2018), pre-European glass beads were recovered in both the hilltop and foothill areas of Chumnungwa. Whilst it is a fact that most of the glass beads were recovered from the hilltop area, this is not surprising since the ratio of test pits that were excavated on the hilltop and foothill areas was not equal, as previously explained in detail in Chapter 4. Nevertheless, based on the similarities of the morphological attributes of glass beads recovered from both the hilltop and foothill areas of Chumnungwa, it is undeniable that individuals who resided in both areas had access to the same range of glass

[32] Also known as *mukanda* see Bvocho (2005:420).

beads that were consumed at Chumnungwa. Thus, as previously suggested by the radiocarbon chronology and the seriation of Chumnungwa ceramic assemblage in the previous chapters, Chumnungwa was an abode of a single Iron Age community that had access to K2, Mapungubwe, Zimbabwe, and Khami bead series. More importantly, the typological variation of the glass bead assemblage reveals that the residents of Chumnungwa were entangled with the coastal world. Whilst the original uses of the glass beads recovered at Chumnungwa is difficult to model, there is a possibility that they were mostly consumed for ornamentation purposes. However, as time went on it seems the glass beads gained more secondary uses hence their use was extended to medicinal, spiritual, sexual, and intimate relationships purposes. There is also a possibility that glass beads recovered at Chumnungwa were also used as heirlooms and currency in exchange for grain to offset food scarcity whenever there was a drought (Huffman, 2007:387).

CHAPTER SEVEN

STONE WALLED ARCHITECTURE AT CHUMNUNGWA

"Standing structures are the material products of human behaviour and as such are the subject of archaeological investigations." (Davies 1987:54)

7.1. INTRODUCTION

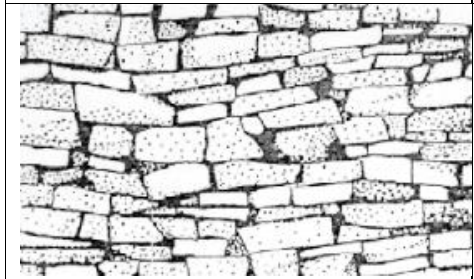
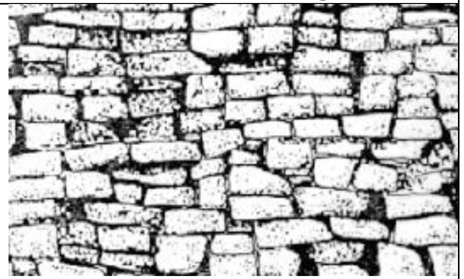
As illustrated in the introductory chapter, southern Zambezia, the landscape drained by Zambezi, Limpopo, Shashi, and Save Rivers has more than 200 Zimbabwe culture ruins with stone walled monumental architecture whose antiquity dates back to the last millennia (Bent 1892; Hall & Neal 1904; Whitty 1959; Garlake 1970; Huffman 1996; Matenga & Chikwanda 2000; Pikirayi 2001; Phillipson 2005; Pwiti et al. 2013). Among these is Chumnungwa, which is approximated the largest dry-stone walled ruin in Mberengwa (Hall & Neal 1904; Matenga & Chikwanda 2000). Whilst the monumentality of Chumnungwa has attracted some cursory research over the last century (i.e. Garlake 1970), most of what we know about the archaeology of Chumnungwa stone architecture is based on the work of Hall and Neal (1905) which was largely regarded by Summers (1969) and other professional archaeologists as unscientific. Therefore, this chapter is an attempt to revisit the stone architecture of Chumnungwa to generate a detailed understanding of its typology, relative chronology, and function. Also, as discussed in Chapter 2, the very fact that Chumnungwa walling has been heavily threatened by vandalism from treasure hunters, dam constructors, and illicit miners, (see Matenga & Chikwanda 2000) made this study a necessary mitigation exercise to salvage the remaining architectural data. Moreover, as noted by several archaeologists who have dealt with built material culture, (Whitty 1961; Garlake 1970; Davies 1987; Chipunza 1994; Ndoro 2001; Huffman 1996, 2007; Monroe 2013; Van Waarden 2011; Pikirayi 2013), stone-walled enclosures are repositories of layers and layers of archaeological and historical events. Just like in any other archaeological study, the expectation was that by re-examining Chumnungwa architecture as material culture, we would be in a position to answer a wide array of questions. Most of these revolved around questions of the archaeological identity of the builders of the stone walls and the construction sequence of the walling. Pursuing these sets of basic questions was useful as it provided direction in achieving the objectives that informed this study.

7.2. DRY-STONE WALLING STUDIES IN SOUTHERN AFRICAN IRON AGE: A BRIEF REVIEW WITH SPECIFIC REFERENCE TO THE ZIMBABWE CULTURE

The earliest investigations on the architecture of dry-stone walled Iron Age sites in southern Africa were undertaken towards the late-nineteenth and early-twentieth centuries (see Mauch 1874; Bent 1892; Willoughby 1893; Hall & Neal 1904). This was the same period when most parts of southern Africa were coerced under British colonial rule. As discussed earlier (see Chapter 1), most researchers were by then mainly focused on revealing the archaeological identity of the builders of the several Zimbabwe culture sites that populated most parts of the southern Zambezian landscape including Great Zimbabwe, Khami, Danamombe, Chumnungwa, and Naletale. Efforts to provide answers to this question resulted in the Zimbabwe controversy (Garlake 1982; Pikirayi 2001). Antiquarian researchers who were sponsored by Cecil Rhodes, and other colonialists, advocated for an exotic origin of the builders of the Zimbabwe culture sites (see Bent 1892; Hall & Neal 1904). Unfortunately, most of these investigators were amateur archaeologists who were largely unprofessional in their approach to stone-walling and other associated material culture. Mostly they were influenced by racial biases that downplayed African novelty in dry-stone masonry, hence they attributed the construction of the walling to Serbians, Phoenecians and other foreign civilisations which were thought to have occupied the ruins. Ultimately, only the poorly constructed stonewalling was associated with the local Shona-speaking people, whom they regarded as recent migrants to southern Africa (see Bent 1892). This racial belittlement of the local people was what Peter Garlake termed, *"the settler paradigm,"* (Garlake 1982:3). It was meant to alienate the locals from such architectural innovation. This worked to the amateur archaeologists' advantage as it enabled them to freely loot valuable items (i.e. gold objects) that had been left by those who resided at these sites. In the process, many sites including Chumnungwa were vandalised and numerous stone blocks were stripped from some walls (Matenga & Chikwanda 2000). However, this propaganda and approach to Zimbabwe culture sites was short-lived, proper scientific archaeological work carried out by David Randal-McIver (Randall-McIver 1906), John Schofield (Schofield 1929), Gertrude Caton-Thompson (Caton-Thompson 1931) championed the local Shona people as the builders of the dry-stone architecture.

Later in the second half of the 20th century, the second generation of researchers arose who largely focused their studies on the typology and chronology of Zimbabwe culture sites (i.e. Whitty 1957, 1959; Robinson 1961; Summers & Whitty 1961; Garlake 1970, 1972). Priority was given to many architectural variables that included the walling type, raw material used, building technique, entrance types, decoration, and distribution. In as much as the likes of Schofield (1926) and Stevens (1931) had initially realised the possibility that the construction of dry-stone walling at Great Zimbabwe and related sites were typologically sequential, it was only confirmed after the seminal work of Antony Whitty (1961) which resulted in the periodisation of Zimbabwe walling into four architectural types (see Table 7.1). According to Whitty, P-type walling was the earliest followed by the PQ type, a transitional phase between P and Q type walling. Q type was regarded as the best of all, these were followed by the R type walling which was the last (Table 7.1). Whitty's relative chronology and typology of Great Zimbabwe stone architecture corresponded with that from other objects excavated at Great Zimbabwe (Table 7.1) by Roger Summers and Keith Robinson (Summers et al. 1961). Ultimately, Whitty's relative chronology and typology was commonly adopted by many researchers as they studied the architecture of other Zimbabwe culture sites including Mapungubwe (Huffman 2007), Chipadze (Robins et al. 1966), Nhunguza, Ruanga (Garlake 1973a), Tsindi (Rudd 1984), Chamabvepfa (Huffman 1979), Manyikeni (Sincalir 1987), Zvongombe (Pwiti 1996b), Mwenezi (Manyanga 2006), Mupanipani Ruin (Van Waarden 2011); Ndongo (Shenjere-Nyabezi 2017) and many other ruins whose architectural styles were cross-examined by Garlake (1970). The effectiveness of Whitty's relative chronology and typology was even confirmed by a later study which was conducted by Kundishora Chipunza (1994) on walling from Great Zimbabwe's Hill complex using the Harris Matrix model. As had been demonstrated by Whitty, Chipunza's study clearly showed that the stone buildings at the Hill complex were constructed in successive stages, starting with P styled, followed by PQ and Q style. Thus, today Whitty typology and relative chronological framework remain the key method of classifying stone walled architecture at most Zimbabwe culture sites (Pikirayi 2001; Huffman 2007).

Table 7.1: Architectural styles of dry-stone walling at Zimbabwe culture sites and associated material culture (Adapted from Summers et al. 1961; Whitty 1961; Garlake 1970; Chipunza 1994; Ndoro 2001, and Chirikure & Pikirayi 2008).

Class P Walling	Class PQ Walling	Class Q Walling	Class R Walling
			
• CE 1085-1275 • Blocks forming the face are irregullar in shape and size • Barter inconsistent, irregular • Mostly characterised by squared entrances • Rectangularity was not a priority, however a nice face is maintained • Herringbone decoration is mostly prominent	• CE 1300-1450 • Style is intermediate between P and Q • Undressed and dressed blocks but more frequently the latter • Blocks are loosely fitted • Entrances are usually squared, and occasionally rounded • Numerous decoration styles including cord • Glass beads, celadon, porcelain, brass, bronze,	• CE 1300-1550 • Stone blocks are more regular and cube shaped • Coursing and bonding is better than other styles • Dressed blocks lain with considerable care, • Mostly characterised by rounded entrances • Mostly constructed as freestanding walls • Mostly decorated with chevron pattern	• CE 1450-1900 • Most of the stone blocks are irregular shaped and they are poorly fitted • Frequent use of small wedges to butress the wall • There is no systematic batter on the walls • Blocks forming the face are irregullar, craggy and rough • Whitty classdify the as 19th century walling build

• Glass beads, gold, copper, iron, soapstone, Period III pottery • Sites include Matendera, Great Zimbabwe Hill complex, Great enclosure and Upper valley enclosures, Chumnungwa, Tsindi, Chipadze, Chiwona, Nhunguza	gold, copper, iron, soapstone, Period III &IV pottery • Sites include Great Zimbabwe Hill complex, Great enclosure, Mtshabezi, Chumnungwa, Muchuchu, Matendera, Rupunguhwe	• Glass beads, celadon, porcelain, brass, bronze, gold, copper, iron, soapstone, Period IV pottery • Sites include Great Zimbabwe Hill complex, Great enclosure, Nhunguza, Chisvingo, Chumnungwa, Tsindi	by groups such as Mugabe and Nemanwa • Glass beads, bronze, copper, iron, Period V pottery • Sites include Great Zimbabwe Lower valley enclosure, Chumnungwa, Nemanwa

Towards the last quarter of the 20th century, more research emphasis was placed on the function and symbolism of stone architecture of the Zimbabwe culture sites. The meta-narrative coming out in most researches confirmed the earlier propositions which suggested that stone architecture at these sites were mostly constructed to shield and screen elite housing as well as symbolise their status and show-off their political authority (see Whitty 1959, 1961; Garlake 1970, 1973; Huffman 1996; Chipunza 1994; Muringaniza & Ruwitah 1996; Beach et al. 1998). As part of this thinking, it was also suggested that resources to finance the construction of the stonewalling at Great Zimbabwe and other Zimbabwe culture sites were harnessed from the profits garnered from regional and long-distance trade (Chipunza 1994). Thus, stone architecture became conventionally regarded as one of the indicators of urbanism and socio-political complexity in southern African Iron Age (Huffman 1986; Hall 1987; Sinclair 1987; Sinclair et al. 1993; Connah 2001; Pikirayi 2001; Ndoro 2001; Manyanga 2006; Manyanga et al. 2010; Chirikure et al. 2013b; Monroe 2013).

In as much as the majority of the scholarly fraternity shared these same viewpoints, their perspectives on how the residents of the Zimbabwe culture sites used space inside the dry-stone walls greatly differed. For scholars like Huffman (1981, 1996), space inside the stone walled enclosures was ordered based on a preconceived architectural blueprint that was informed by a universal, cognitive, structuralist worldview which he summarised as the Zimbabwe Pattern (ZP) after Great Zimbabwe. This model was derived from his initial interpretation of the use of space at Great Zimbabwe (Huffman 1981, 1984a,b, 1986) which he later superimposed on other Zimbabwe culture sites on the pretext that similarities in stone architecture directly meant that they shared a similar worldview. Within Huffman's ZP model space was strictly governed by an elite-commoner and male-female dichotomy in which the stone architecture was mainly used to demarcate class distinction and sacredness of the ruling leadership. Thus, all the walled places within these settlements were regarded as elite spaces that were constructed to cater for their housing and ritual activities such as rain propitiation and premarital initiation *(domba)* of the youth, whilst the commoners lived outside the walled areas. However, in as much as the ZP model was popularised by other structuralists (i.e. Van Waarden 1998; 2012) , many researchers including Beach et al. (1997, 1998) regarded it as imaginary history which was out of touch with Shona anthropology, history, and archaeology (also see Pwiti et al. 2013). For instance, the notion of *domba* which Huffman adhered to, based on Venda ethnography, was heavily criticised as inapplicable and non-existent among Shona religious practices (see Blacking 1984; Beach et al. 1997; Beach et al. 1998). Thus, Huffman's thoughts on the use of space at Zimbabwe culture sites were concluded as ‘broad brushing’ yet restricted to Great Zimbabwe (Beach et al. 1998).

Alternately, the early argument by Garlake (1978, 1982) and others (Whitty 1961; Summers 1963; Collett et al. 1991; Chipunza, 1994) which argued that the various enclosures at the Zimbabwe culture sites spread across southern Zambezia were *mizindas* for different leaders that succeed each other was opted by Beach et al. (1998). More recently, this argument has been revived by Chirikure et al. (2012) study of precolonial polities in southern Africa using a combination of Bayesian modelling, and political anthropology of the Shona which showed that hundreds of Zimbabwe culture stone buildings were palaces of different leaders that succeeded each other. Thus, in all these contributions, the function and symbolism of Chumnungwa dry-stone walling have never been engaged.

More recently, some of the earliest propositions on the architecture of the Zimbabwe culture sites have been revised and further investigated. For instance, Van Waarden (2011) has argued against the popular thinking in southern Zambezia’s Iron Age studies which alluded the novelty of Zimbabwe tradition stone architecture to Mapungubwe. Her main line of argument was centred on the presence of P style walling at Mupanipani Ruin, one of the Zimbabwe traditional sites in north-eastern Botswana which dated between CE 1256 and 1277. Thus, Van Waarden (2011) argued that the Mupanipani walling was part of the earliest manifestation of the Zimbabwe tradition stone architecture that predated Great Zimbabwe. Apart from that, new debates have also intensified. Pikirayi (2013) expanding from his earlier thesis (Pikirayi 2001) now argues that construction of stone walled Zimbabwe tradition sites was not necessary to show-off power but rather an act of reinforcement of both social and political power by the elites. On the other hand, Kim & Kusimba (2008) revived an old argument initially postulated by Masey (1911) which interpreted the stone walling at various Zimbabwe tradition sites as a form of investment in military power that helped elites and rulers to buttress their political and ideological power (see also Kim & Kusimba 2008). Thus, to Kim and Kusimba (2008:143) freestanding walls were fortifications erected to provide security to the elites and not necessarily to demarcate their status, as has been argued by previous researchers (also see Manyanga 2006:8).

7.3. ANALYTICAL METHODS OF CHUMNUNGWA DRY-STONE WALLING

The architectural analysis of Chumnungwa dry-stone walling was undertaken using a stepped methodology. The initial stage of the analysis focused on examining the typology of

Chumnungwa stonewalling. Vegetation was cleared first to facilitate systematic surveying and mapping of the walling. Ultimately each wall was examined individually, and every effort was made to capture their various architectural features using a combination of data capture sheets, Global Positioning System (GPS Garmin's GPSMAP 64s) receivers, and digital cameras (see Appendix 4). Among the architectural features recorded included the metric dimensions (height, width, and length), physical status of the walling, decoration, raw material, walling name, type, and style (construction technique) (see Appendix 4 for a detailed inventory). These features were selected since they matched the study's objectives, and most importantly they are the standard methods used to analyse dry-stone walling in southern African Iron Age sites (Robins et al. 1966; Garlake 1973a; Rudd 1984; Sinclair 1987; Pikirayi 1993, 2001; Chipunza 1994; Huffman 1996, 2007; Pwiti 1996b; Manyanga 2006; Van Waarden 2011; Chirikure et al. 2016b; Shenjere-Nyabezi 2017) which are foregrounded on the work of Whitty (1957, 1959, 1961). Following Chipunza (1994), the contemporaneity and synchrony of the stonewalling were also recorded paying special attention to the sections that abutted and adjoined the walling. In cases where some walls were heavily collapsed, old photographs in Matenga and Chikwanda (2000) and descriptions in Hall and Neal (1904) were consulted; these helped in mapping some of the collapsed walls which had been initially recorded as intact. Ultimately, a detailed map of the walling was produced using Adobe Illustrator.

The second stage of the analysis was centred on tracing the construction sequence of Chumnungwa stone walling using the Harris Matrix Composer v2.0b. Originally, the Harris Matrix was devised by Edward Harris to adopt the laws of stratigraphy to excavated archaeological sites (Harris 1989; Harris et al. 1993; Harris 2013). This seminal work on urban sites in England made great strides towards developing a sound method of dealing with archaeological sites whose layers of stratigraphy were complicated and numerous. This greatly helped in separating archaeological from geological stratigraphy which merely championed the stratification process as series of layers that were organised into stratigraphic units that sequentially accumulated on top of each other with old deposits at the bottom and youngest at the top. The refined details that account for the development of a (buried) matrix within an archaeological excavation are fully elaborated in Harris (1975, 1989) and Harris et al. (1993). In this study, the matrix was customised to generate an understanding of the stratification of Chumnungwa stone walling following the work of Davies (1987, 1993), Simmons et al. (1993), and Chipunza (1994). Chipunza's study on the Hill Complex at Great Zimbabwe was critical in guiding the application of the Harris Matrix model to the current study as it stands out as the only Iron Age work undertaken so far in southern Africa regarding the archaeology of dry-stone walling. However, in southern Africa there are no recorded histories to help in tracking the construction sequences of Zimbabwe tradition sites such as Chumnungwa. Therefore, as with Chipunza's study, I had to rely on relative and absolute dates from associated material culture. Even though the stratigraphy of Chumnungwa stonewalling was predominantly linear and not horizontal, the Harris Matrix was useful in exploring the stratigraphical relationships between the different stone enclosures at Chumnungwa, which enabled me to relatively date the walling and place it within the existing relative chronological sequence.

Based on applicability, only the Laws of Superposition and Original Continuity were adopted in this study from Harris (1989) to trace the architectural relationships of Chumnungwa walling. Originally, as denoted by Harris (1989), the Law of Superposition is strictly concerned about the depositional order of archaeological deposit. However, to make it relevant to the current study as similarly undertaken by Davies (1987) and Chipunza (1994), it was customised as Matrix 1 to capture synchrony between the walls summarised in Table 7.2. As common at most Zimbabwe types sites (Garlake 1970) different walls at Chumnungwa lean or abut on each other (particularly those with straight joins), as a result, it was possible to determine the nature of relations between two or more walls. However, in some cases, it was very difficult to apply this Law of Superposition because standing structures are mostly constructed in vertical prose. Thus, to redress these shortcomings, as cautioned by Chipunza (1994:42), serious attention had to be given to the finer details used to make, abut and adjoin the walling in every stage of the construction to determine the spatial connectivity of the walling. In instances where it was difficult to track the sequence of construction, particularly on those walls which were collapsed, archived architectural data from Hall and Neal (1905) was consulted to reconstruct these obliterated walls. On the other hand, the law of the Original Continuity entails similarity of strata in an archaeological deposit (Harris 1989; Davies 1987). In this study, this law of archaeological stratigraphy was used to identify walls that had contemporary relationships. These wall relationships were captured in phases as Matrix 2 and they mostly manifested as entrances, paired buttresses, and subdivisions (see Table 7.2). However, the temptation to simplify related attributes of the stonewalling by grouping them into one matrix was avoided by paying attention to the little things such as coursing of the stone blocks used to construct the walling. Thus, the law of the Original Continuity was useful in capturing what Chipunza (1994:42) terms as "*construction affinity*". Following Chipunza (1994), the third matrix (Table 7.2) captured the architectural succession of Chumnungwa walling based on Whitty's (1961)

P, PQ, Q, and R walling classification styles. To make the data more meaningful and manageable, the architectural styles datasets were modelled in light of the contemporaneity and synchrony of the walling.

Table 7.2: Harris matrices used to trace the architectural relationship between the dry-stone walls at Chumnungwa (Adapted from Whitty 1961; Harris 1989; Harris et al. 1993; Harris 2013; Davies 1987; Chipunza 1994)

Matrix	Applicable laws of archaeological stratigraphy and architectural classification systems	Targeted physical attributes of the walling
1	The Law of Superposition largely focused on synchrony between walls to determine spatial connectivity between (i.e. wall 1a is above, below, or equal to wall 2a).	• Natural boulders connected to the walling • Joins that connected the walling
2	The Law of the original continuity largely focused on the contemporaneity of walling	• Subdivisions and passages • Entrance walls • Paired buttresses
3	Architectural stylistic succession (P, PQ, Q, R)	• Coursing and bonding of the walling blocks • Entrances types

Ultimately the data captured using the three matrices were then fed into Harris Matrix Composer 2.0 software which projected a graphical layering of the walling following the Harris theory (Harris 1989). Lines that were graphically illustrated as bi-directional represented contemporary architectural relations whilst those illustrated as vertical represented ‘above ‘and below relationships. The established relationships were authenticated using the validation checks, however, in some instances, contextual data was used in lieu of these for authenticity reasons.

The final stage of the analysis was focused on tracing the functions of Chumnungwa dry-stone walling meanings using Shona anthropology captured in historical archives, folklore, philosophy and cultural practices (Randall-McIver 1906; Caton-Thompson 1931; Holleman 1952; Whitty 1961; Garlake 1973b, 1982; Beach 1980; Gombe 1986; Mudenge 1988; Hannan 1994; Huffman 1996; Beach et al. 1997, 1998; Chimhundu & Mangoya 2001; Ndoro 2001; Fontein 2006; Mapara 2007; Sinamai 2009; Chirikure et al. 2012, 2015, 2017b; Pikirayi 2013).

7.4. ANALYSIS AND RESULTS

7.4.1. TYPOLOGY

A total of 21 freestanding dry-stone walls with 14 subdivisions were mapped on the hilltop of Chumnungwa and these were numbered arbitrarily (see Figure 7.1 and Appendix 4). As demonstrated in Table 7.3, the majority of the walls were still intact and visible but partially collapsed at the same time. A demonstrated in Table 7.3 the metric attributes of the walling varied from wall to wall, however, it is among walls 1 (a-f) where the maximum length, width, and height were recorded. In terms of raw material, 96.8% of the walling at Chumnungwa walling was predominantly constructed using granite[33], however, given the fact that not every stone block onsite could be individually examined as the time needed to complete such a task was beyond the expected timeline of this study, it was evident that some blocks were hewn out of the dolerite rocks. Most of the walls including 1a, 1b, 1c, 1d, 1e, 1f, 5, 7a, 7b, 10, 12, 13 were built on top of protruding flat granite outcrop bedrocks and abutted to natural rock boulders for stability and access purposes (Figure 7.2). Thus, the stonemasons took advantage of the natural boulders to reinforce their works. It must be noted that the area with stonewalling approximately makes up 20% of the site and there is the widespread presence of granite rock outcrops onsite and the immediate areas surrounding Chumnungwa. The majority of the walling (1a, 1b, 1c, 1d, 1e, 1f, 2, 3a, 3b, 7a, 7b, 8a, 8b, 18) was constructed on the northern-end platforms and slopes of the hill summit (Figure 7.2)., whilst the remainder extends from the western-end (Walls 10, 11), to the southern-end (Walls 12, 13, 14, 15, 16, 17a, 17b), and ultimately to the eastern end (Walls 4a, 4b, 4c, 5, 19, 20, 21). Most of these walls encircle the summit of Chumnungwa Hill which is relatively flat and oval.

[33] Mostly gneissose.

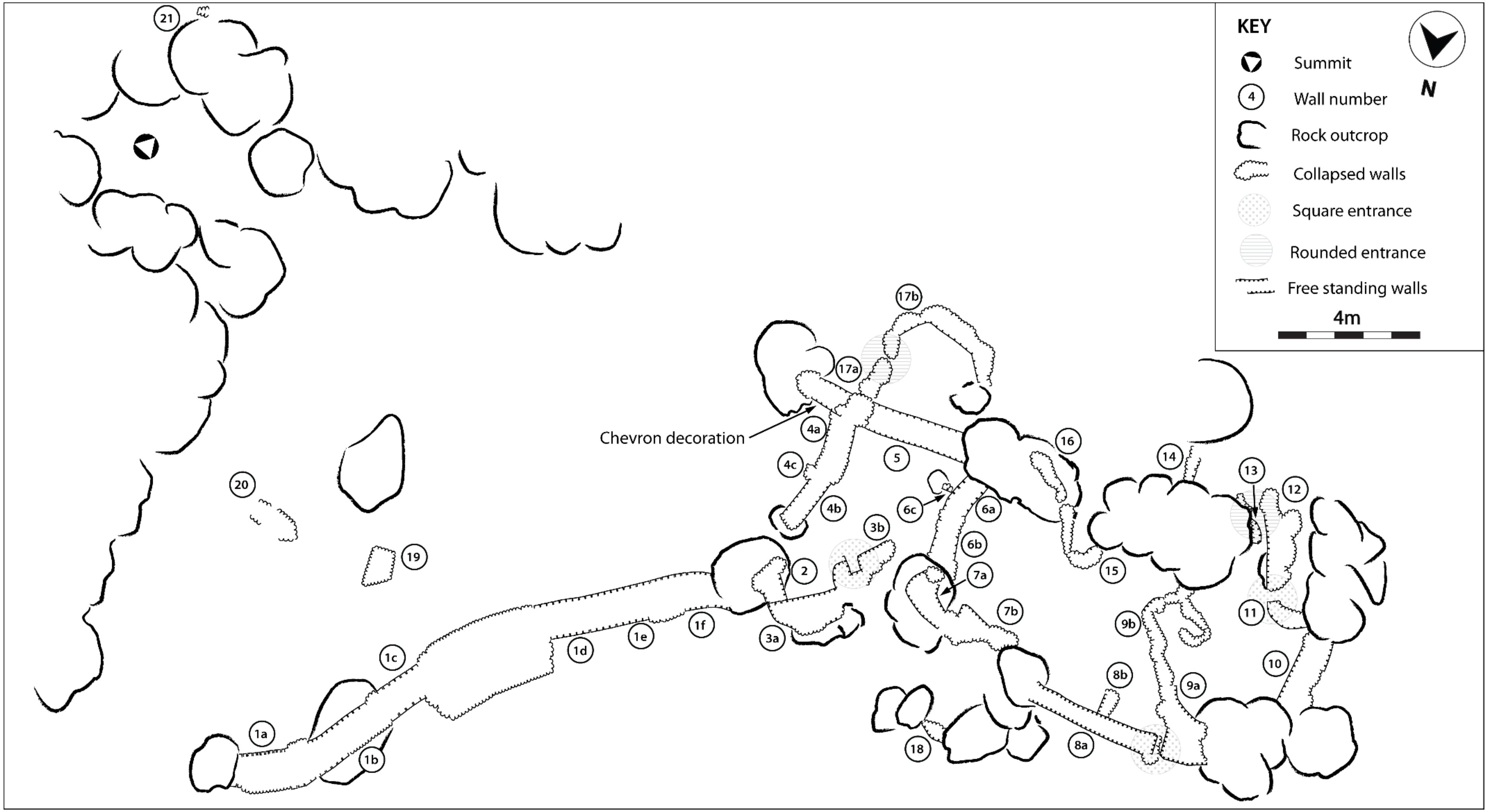


Figure 7.1: Chumnungwa site map showing the spatial layout of the mapped dry-stone walls.

Table 7.2: Summary of the architectural attributes of Chumnungwa drystone walling.

Wall Number	Hight	Width	Length	Status	Decoration	Type	Raw Material	Style
1a	0.72 m	1.34 m	2.32 m	Original/Collapsed		Free-standing	Granite	PQ
1b		1.21 m	2.3 m	Original/Collapsed		Free-standing	Granite	PQ
1c	1.45 m	1.27 m	1.85 m	Original/Collapsed		Free-standing	Granite	PQ
1d	3.03 m	1.43 m	4.21 m	Original/Collapsed		Free-standing	Granite	PQ
1e	3.21 m	1.34 m	1.13 m	Original/Collapsed		Free-standing	Granite	P
1f	3.53 m	1.37 m	3.89 m	Original/Collapsed		Free-standing	Granite	PQ
2		0.92 m	1.44 m	Original/Collapsed		Free-standing	Granite	PQ
3a	1.23 m	1.11 m	3.12 m	Original/Collapsed		Free-standing	Granite	PQ
3b	1.23 m	1.15 m	2.12 m	Original/Collapsed		Free-standing	Granite	PQ
4a		1.07 m	2.11 m	Original/Collapsed		Free-standing	Granite	PQ
4b		0.94 m	1.98 m	Original/Collapsed		Free-standing	Granite	PQ
4c				Collapsed		Free-standing	Granite	PQ?
5	2.81 m	1.12 m	6.21 m	Original/Collapsed	Chevron	Free-standing	Granite	Q
6a	2.11 m	1.08 m	1.41 m	Original/Collapsed		Free-standing	Granite	Q
6b		0.96 m	1.23 m	Original/Collapsed		Free-standing	Granite	Q?
6c				Original/Collapsed		Free-standing	Granite	Q?
7a	2.23 m	1.03 m	3.09 m	Original/Collapsed		Free-standing	Granite	PQ
7b			2.33 m	Original/Collapsed		Free-standing	Granite	PQ
8a	2.56 m	0.89 m	5.13 m	Original/Collapsed		Free-standing	Granite	PQ
8b			1.03 m	Original/Collapsed		Free-standing	Granite	PQ
9a	1.25 m	1.41 m	3.2 m	Original/Collapsed		Free-standing	Granite	Q
9b			7.2 m	Collapsed		Free-standing	Granite	Q?
10	1.88 m	1.27 m	2.73 m	Original/Collapsed		Free-standing	Granite	PQ
11	1.35 m		2.31 m	Original/collapsed		Free-standing	Granite/Dolerite	PQ
12	1.40 m		3.84 m	Original/collapsed		Free-standing	Granite	PQ
13		0.53 m	1.26 m	Original/Collapsed		Free-standing	Granite	Q
14				Collapsed		Free-standing	Granite	R?

15			Collapsed	Free-standing	Granite	R
16			Collapsed	Free-standing	Granite	R
17a		1.33 m	Original/Collapsed	Free-standing	Granite	PQ
17b	1.25 m	7.11 m	Original/Collapsed	Free-standing	Granite	PQ
18		0.96 m	Original/Collapsed	Free-standing	Granite	PQ
19			Collapsed	Free-standing	Granite	PQ
20			Collapsed	Free-standing	Granite	PQ
21			Collapsed	Free-standing	Granite	R

As commonly recorded on most Zimbabwe culture sites, Chumnungwa walling was constructed without binding mortar, probably to facilitate a degree of elasticity upon pressure from nature and humanity (sensu Whitty 1959). From a stylistic perspective, it is evident from the recorded architectural attributes (Figure 7.3) that the majority (65,7%) of Chumnungwa walling was constructed using a combination of undressed and dressed stone blocks whose style is equivalent to Whitty's (1961) PQ walling. Class PQ walling was mostly characterised by the outer walls with squared, and occasionally rounded entrances particularly those that were abutted to the natural rock boulders. The rest of the walling respectively comprised of Q, R, and P-type walls and these featured as both outer and inner walls. Q type walls were characterised by rounded entrances (i.e. 17a, 17b, 13). Stone blocks used to construct Q type walling were more regular and cube-shaped hence the coursing and bonding of the walls were the best compared to all other recorded styles (Figure 7.4). Most of the stone blocks that made up R and P-type walls were irregular and poorly shaped. In some cases (ie Wall 15) it was evident that the architects used small wedges to buttress the R-type walling. However in as much as both R and P-type walling at Chumnungwa were both constructed with irregular stone blocks, the coursing of latter had maintained a nice face (see Appendix 4).

Figure 7.2: [a] part of the dry-stone walling at Chumnungwa (including the conical buttress) built on top of protruding flat granite outcrops, [b] One of the squared entrances with a dolerite stone slab used by stonemasons as lintels for buttressing the squared entrance at Chumnungwa.

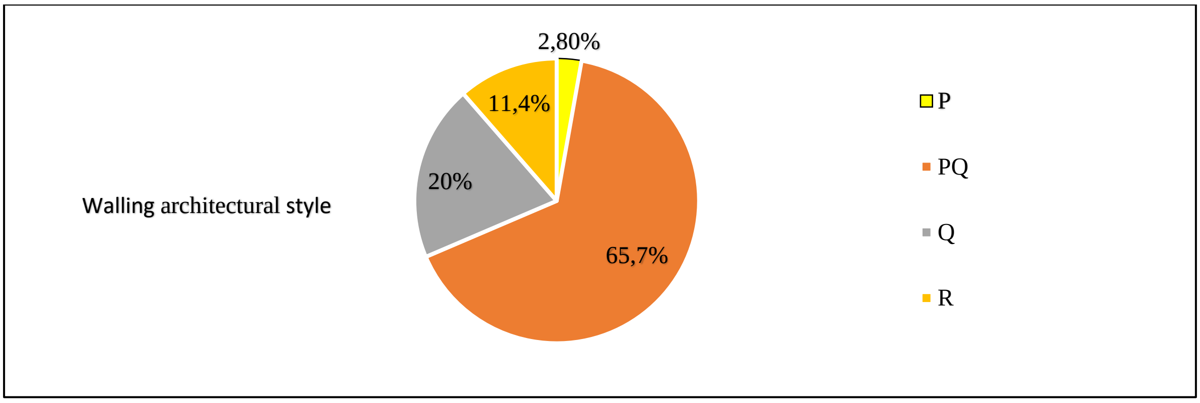


Figure 7.3: Frequency of the architectural style of Chumnungwa drystone walling.

In terms of decorations, only one of the recorded walls (Number 5) was decorated with a chevron pattern (Figure 7.4). As initially recorded by Hall & Neal (1904:228), the chevron decoration used to extend to walling 4a which is butted by wall 5 (see Figure 7.1), however, due to the massive collapse of the upper part of the walling over the years, the decoration had long vanished. A conical buttress was also recovered on Wall 7a which gives a good a commanding view of the surrounding area (see Figure 7.2).

Figure 7.4: [a] Wall 5 constructed in Q-style of Whitty (1961) and decorated with chevron pattern [b] South facing walled parallel passage with a collapsed rounded entrance

Most of the surveyed stone walled entrances at Chumnungwa were collapsed and buried under collapsed stone blocks. However, the few visible ones show that squared entrances were much preferred than the rounded ones (Figures 7.2 and 7.4). Most importantly, the rubble of a dolerite stone lintelled entrance that was once reported by Hall and Neal (1902:228) on Walls 3a and 3b was recovered during the survey (Figure 7.3). Thus, it became apparent that dolerite stone slabs were used by Chumnungwa stonemasons as lintels for buttressing entrances.

7.4.2. RELATIVE CHRONOLOGY

Matrix 1

The analysis of synchrony between Chumnungwa dry-stone walling resulted in modelling of 17 phases of spatial connectivity. As demonstrated in Figure 7.4, the majority of the walls (52.9%) were indirectly connected, whilst the remainder (47.1%) were directly related. Perhaps the manipulation of natural boulders to abut and buttress the walling by the stone wall builders of Chumnungwa was one of the reasons why many of the walls were not synchronous.

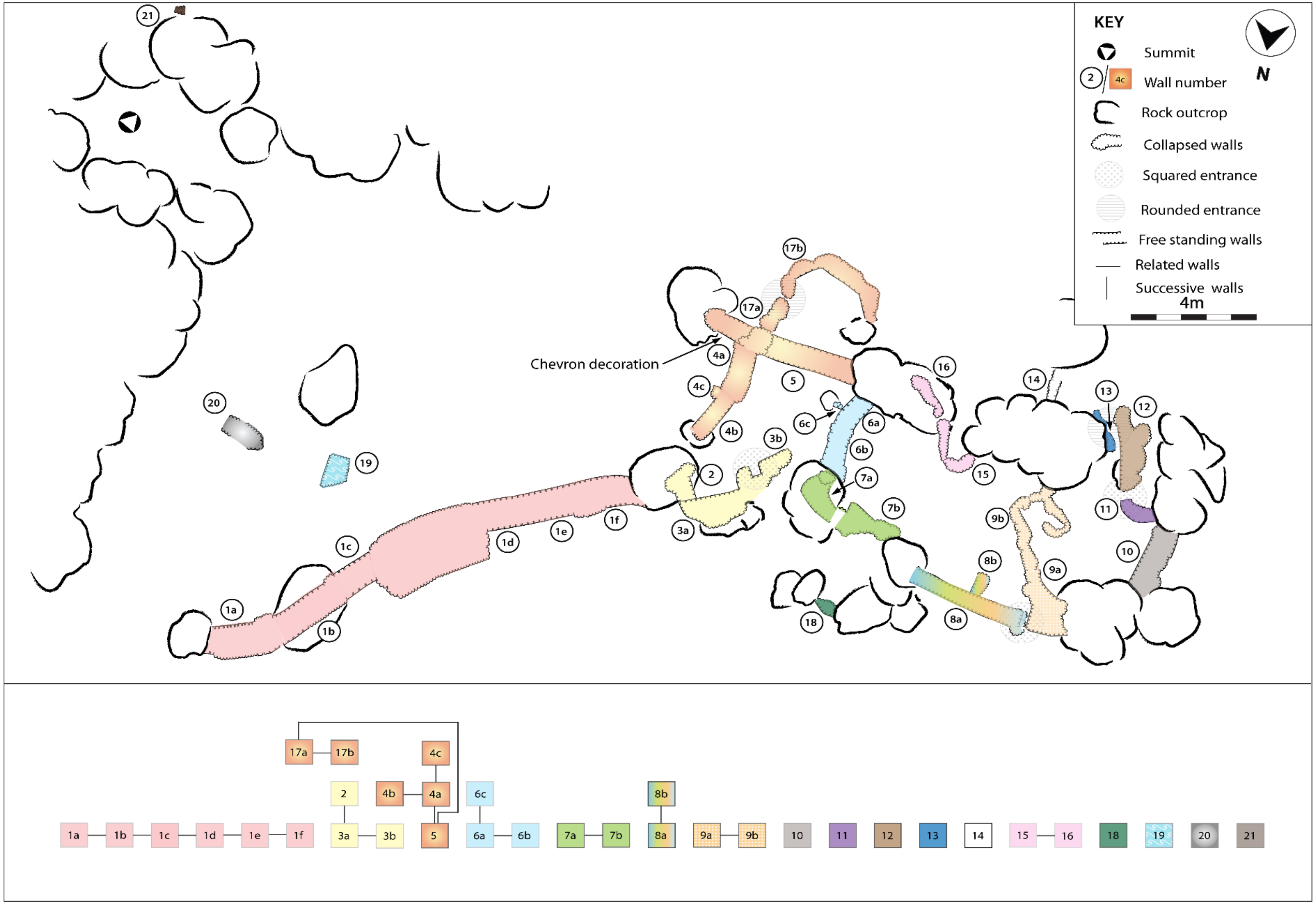


Figure 7.4: The spatial connectivity of Chumnungwa dry-stone walling as demonstrated in Harris Matrix 1.

Matrix 2

Analysis of the contemporaneity of the relationships of Chumnungwa walling revealed five phases or sequences in which the stonewalling might have been constructed (Figure 7.5). The majority of the walls (45.7%) – particularly those encircling the summit of Chumnungwa Hill might have been sequentially constructed together first[34]. Likewise, this respectively applied to those marked blue (20%), brown (17.1%), yellow (8.57%), and grey (8.57%).

[34] Starting from Walls 1a to 13.

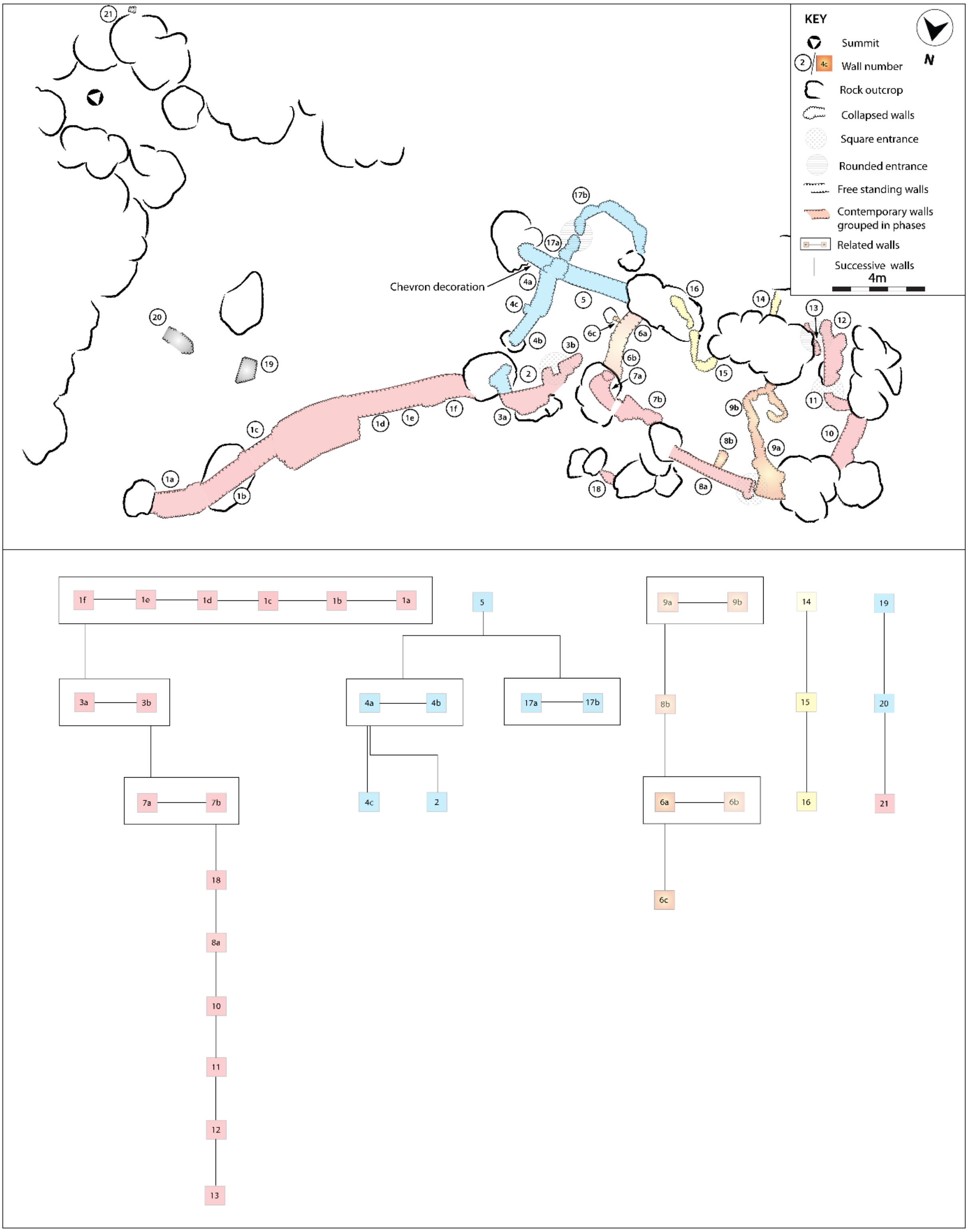


Figure 7.5: The construction affinity of Chumnungwa drystone walling as demonstrated in Harris Matrix 2.

Matrix 3

In terms of stylistic succession, 16 phases were reconstructed that showcased the architectural relationships between the drystone walls that were recorded at Chumnungwa (Figure 7.6) Basically, P (though the oldest style), and PQ, as well as PQ and Q walling types, contemporarily appeared together. In some cases, PQ and Q appeared separately. Only R-type walling consistently appeared as a solo (see Figure 7.6). Thus, the picture portrayed was more of an architectural trajectory that combined most of the walling styles rather than separately employing them. Furthermore, not much analysis could be done, particularly when it came to the aspect of correlating the (Chumnungwa) radiocarbon data with the walling, as was undertaken at Great Zimbabwe by Chipunza (1994) since the stratigraphy of all the walls were heavily disturbed by antiquarians and treasure hunters who dug the site in both the colonial (see Hall & Neal 1904) and post-colonial times (see Matenga & Chikwanda 2000).

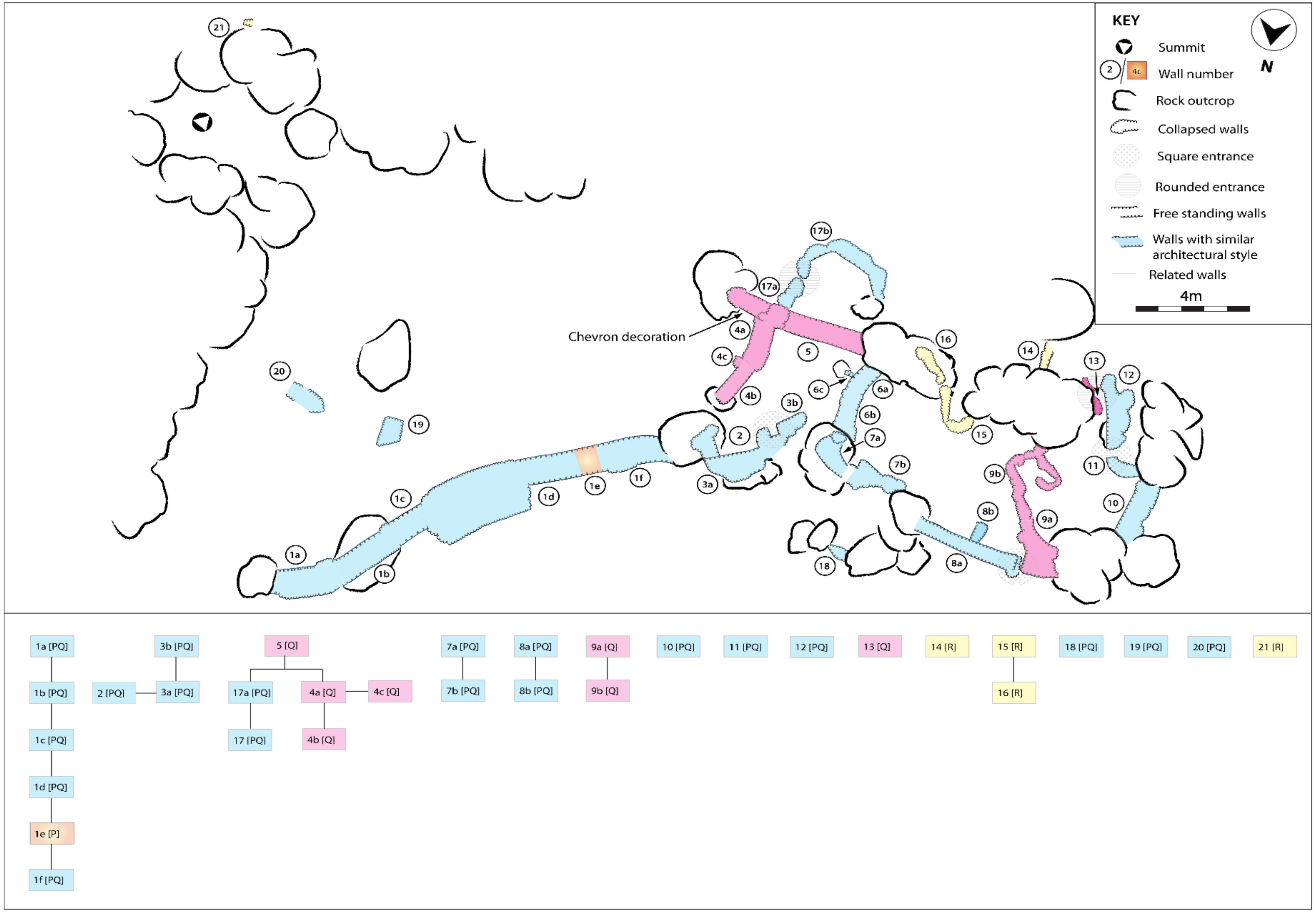


Figure 7.6: The stylistic succession of Chumnungwa drystone architecture as demonstrated in Harris Matrix 3.

It is evident from the spatial data derived from Matrices 1, 2, and 3 that Chumnungwa drystone walling shows a disjointed layout. This reflects the construction of the walling to have been conducted in sequential phases. In cases where natural rock boulders were available, the builders manipulated them to abut and reinforce the walling. The contemporaneity and synchrony of the walling are best expressed in those walls that encircle the hill and those that divide the walling into various enclosures and passages. All the known architectural walling styles (P, PQ, Q, R) are represented at Chumnungwa. One interesting aspect is that in as much as P-styled walling is conventionally regarded as the earliest architectural tradition to be built on Zimbabwe tradition sites (Whitty 1959, 1961; Garlake 1970; Chipunza 1994; Pikirayi 2013; Chirikure et al. 2016b), this is not the case at Chumnungwa, the same walling is contemporary with PQ style. This is puzzling given a situation where these occur on different sections of a continuous (single) walling (see Figure 7.6). I will discuss this unique and complex occurrence in the forthcoming section.

7.5. DISCUSSION: CHUMNUNGWA STONE WALLED ARCHITECTURE

The stone architecture on the summit and precipices of Chumnungwa Hill is made up of a series of monumental and mortar-less dry-stone walls in varied phases of collapse which are spread over a surface area that measures approximately 4000 m^2. These free-standing walls make up various enclosures that are connected by natural rock boulders and entrances which are either rounded or squared. The quality of the architectural style varies from one wall to another, but the best expression of the beauty of the walling is on one of the neatly coursed walls which is decorated with a chevron pattern. Whilst walls decorated with chevron designs have been reported at other traditional Zimbabwe sites such as Chisvingo and Great Zimbabwe (Great enclosure), the decorated wall at Chumnungwa is more enclosed inside the main walling. Perhaps one of the architectural features that distinguish Chumnungwa drystone walling as unique and one of the most sophisticated is the presence of a (collapsed) squared entrance which was lintelled with intricately carved dolerite slabs. This high level of architectural technique has only been reported from other Zimbabwe tradition sites such as Great Zimbabwe where entrances were lintelled using both stone and wood (Hall & Neal 1904; Whitty 1959; Garlake 1970; Huffman 1996; Sinamai 1997). However, what makes Chumnungwa unique is the presence of a conical buttress on Wall 7a which was probably constructed on this elevated point to command a wider view of the surrounding landscape.

The presence of numerous potsherds and fragments of other locally produced objects[35] scattered on the surface area of the walled area and the main midden on the summit of Chumnungwa Hill suggested that the people who made and used these objects shared the same identity with those who constructed the walling. So far, we know from the ceramic and glass bead sequences and established radiocarbon dates that Chumnungwa was inhabited by an Iron Age community whose ancestry is associated with the Shona-speaking people. Whilst the available archaeological data and local histories limit us in revealing further details about the stonemasons who built Chumnungwa walling, their material signatures were largely enshrined in a Shona identity which can be further classified as Karanga. Therefore, as widely acknowledged in global archaeology, regarding the antiquity of Zimbabwe tradition sites (Caton-Thompson 1931; Huffman 2007; Manyanga et al. 2010; Monroe 2013; Kusimba et al. 2017), there is no doubt that Chumnungwa walling was a local development pioneered by the Shona ancestry. This refutes the earlier propositions by Hall & Neal (1904), which pinpointed the Phoenicians as the architects of Chumnungwa walling.

In terms of construction, the erection of Chumnungwa drystone walling was enabled by the abundant availability of granite and dolerites batholiths in the Mberengwa area. Millions of stone blocks were used to construct the walling and most of these were likely to have been sourced from the granite rock outcrops which are abundantly represented onsite (see Figure 7.2) and those that protrude on the nearby kopjes. Otherwise, sourcing of these blocks in distant areas elsewhere would have been laborious and time consuming for the stonemasons to transport them back to Chumnungwa. Furthermore, as demonstrated in Figures 7.2 and 7.4, the stone blocks used to construct the walling at Chumnungwa have layered veins which shows that they were quarried using both the natural and artificial exfoliation methods (Caton-Thompson 1931; Whitty 1959; Garlake 1973b). Traditionally the artificial exfoliation technique was common among the Shona; stonemasons are said to have set fire on granite rock outcrops, and upon gaining enormous heat, these outcrops were cooled down using water to fracture the rock outcrops (see Whitty 1961). Naturally, the same process was enabled by mechanical weathering in which sheets of granite were detached from their parent outcrop from continued heating and cooling from the sun and frost, respectively (sensu Whitty 1961). Repetition of these processes helped in dislodging the top layer of the outcrop from parent rock.

[35] I.e. metals, spindle whorls discs, shell beads, lithics, and clay figurines (see Chapters 5 and 9).

Thereafter, sheets of the outcrop were broken into sizeable dressed or undressed blocks by specialist masons (sensu Garlake 1973b; Whitty 1961). Thus, the granite and dolerite blocks on Chumnungwa walling are likely to have been made using these methods, but most of the blocks are likely to have been a product of the artificial exfoliation since the method is faster and more effective. Beyond Chumnungwa, this method is believed to have been used by the masons who constructed walling at Great Zimbabwe, and other Zimbabwe culture sites such as Matendera, and Chiwona, (see Caton-Thompson 1931; Whitty 1961; Chipunza 1994; Garlake 1973b).

The walling at Chumnungwa was built using both undressed and dressed blocks, however, the latter was used more frequently. Generally, dressed blocks with similar faces were mostly used to construct the outer faces of most walls. Probably, this was a way of enhancing the uniformity and quality of the walling (see Figure 7.7). However, in some cases (i.e. Walls I a-d) partially dressed blocks were used, these, unfortunately, left some wide gaps and wedges were applied to cover these. Otherwise, the majority of the undressed blocks were used to fill up the core-spaces in-between the outer faces as demonstrated in Figure 7.7.

Figure 7.7: A cross-section showing the inner (undressed blocks) and outer (dressed blocks) of Wall 1d.

In terms of metric attributes, there is a possibility that the tallest and thickest walls (Walls 1a-f) particularly those situated on top of a granite platform that encircles the northern end of the summit of the Chumnungwa, must have been constructed with the aid of scaffolding equipment. For instance, the current study measured 3.53 m as the height of the tallest wall (Wall 1f). However, 117 years ago, before the walls were vandalised, Hall and Neal (1902:228) recorded the original height of the same wall was said to have reached 5.18 m. This undoubtedly means walling 1a to 1e had a height which surpasses the average height of a human being. Given that fact, this means the more the height and the width of the walling, the more the stonemasons needed scaffolding platforms to stand on to build the walls.

Another aspect revealed by this study is that the drystone walling at Chumnungwa was not built from a preconceived blueprint. As clearly shown in Figures 7.2, 7.4, and 7.7, there were no raised foundations that were intentionally constructed to host the walling, rather most of the walls were built on top of flat granite outcrops whilst a few were built on the soil. Thus, what gives stability to the walling, particularly from natural disasters such as earth tremors and too much runoff, which would disintegrate the walling, was that the builders carefully selected most of the blocks and fitted them cautiously leaving movement and room for surface runoff to flow via artificial drainages (Figure 7.8) in instances where heavy rainfall was experienced.

Figure 7.8: Wall 11 showing one of the drainage tunnels that was designed as part of the walling to facilitate the draining of surface runoff.

Furthermore, a rethinking of the available architectural data from the Harris matrices shows us that stone-walled structures at Chumnungwa were a product of numerous activities and stages of construction, restoration, and even alteration in some instances. There is a possibility that the masons based at Chumnungwa could reconstruct the walls upon collapse or simply dismantled them to create or restrict access. In the process, they could reconstruct a new wall using old blocks. Now, I return to the intriguing aspect of Wall 1e which I left hanging in the previous section. Whilst the stylistic succession dataset from the Harris Matrix (Figure 7.6) recognises Wall 1e (P) as the oldest of all the walls constructed at Chumnungwa, it is hard to imagine that the stone architects at Chumnungwa would build Wall 1e then expand eastwards and southwards building Walls 1a, 1b, 1c, 1d and 1f which had better coursing than Ie. Thus, the very idea of portraying Wall 1e as sandwiched by walls built in better style (PQ) based on the evolution of Whitty's (1961) stone building techniques, and as implied by the Harris Matrix, (Figure 7.6) is misleading. This is especially evident when one considers the nature of the joints that connect Wall 1e to 1d and 1f respectively and in addition, the similarities of the stone block used to build the walls. Therefore, the primary reason why Wall 1e has a different walling style, unlike its contemporaries, is probably more to do with structural failure than the stylistic technique used in its construction. Thus, it is likely that Wall 1e is a product of an attempt to reconstruct the original wall which collapsed, perhaps due to a technical fault or other reason. In the process, the masons failed to restore the wall to its original state, which is why the wall looks different when compared with its contemporaries. On the other hand, we might be describing walls which were built at the same time but with different masons who had different skills or a collapse was in progress at the time, hence the presence of P-styled walling could have been experimental.

Furthermore, as noted by Whitty (1959:69), the different architectural styles of Zimbabwe stone buildings (P, PQ, Q, or R) were in some way influenced by the geological character of igneous rocks from which the masons sourced their blocks. In cases where masons were dealing with granite with curved laminar structure, blocks with unequal sides tended to be produced and walls built using these tended in most cases to be P-styled. On the other hand, in cases where the granite had a straight laminar structure, regular and cube-shaped blocks where produced which would make it easy to produce Q-style walling. For instance, a comparison of Wall 1 (a-f) and Wall 5 shows that granite used to construct Wall 1 was of poor quality when compared to that used to make Wall 5. As a result, Wall 1 had more rhomboid-shaped blocks than Wall 5 which had more regular and cube-shaped blocks. Perhaps this helps to explain why parts of Wall 1 (i.e. 1e) are less stable when compared to Wall 5. Therefore, the presence of drystone walls built in P, PQ, Q, and R architectural styles does not necessarily imply walling styles of different periods of occupation at Chumnungwa, as has been interpreted at other Zimbabwe tradition sites such as Great Zimbabwe (see Summers et al. 1961; Whitty 1961; Huffman & Vogel 1991; Chipunza 1994; Ndoro 2001; Chirikure & Pikirayi 2008) but rather monumental architecture constructed in different styles by a single cultural group. Chumnungwa is not an exception as far as this matter is concerned. A similar setting was noted by Garlake (1972) at Nhunguza in northern Zimbabwe where P and Q walling were contemporarily built together by a single cultural group. Twelve years later (Rudd 1984) recorded a similar occurrence at Tsindi.

In terms of the construction sequence, the outer walls (Walls 1a-1f, 3a, 3b, 7a, 7b, 8a, 10, 11, 12, 13, 14, 15, 16, 17b, 18) that circle the northern, eastern and southern summit of Chumnungwa hill appear to have been built first (see Figure 7.5). Most of these walls were constructed on top of granite rock outcrops that form the slopes of Chumnungwa hill. Such positioning, and the fact that the majority of walling was very tall and thick, implies the possibility that they constructed first as a security strategy to control access to the hill summit. For instance, the space occupied by Walls 1(e-f) was originally a natural gap that made the hill summit easily accessible for intruders or even dangerous wildlife. Therefore, to avoid this, the residents of Chumnungwa who occupied the hill summit had to build the walling as a strategy of securing themselves from any danger. Having secured their homestead the residents of Chumnungwa went on and constructed the second groups of walls (Walls 2, 4a, 4b, 5, 6a, 6b, 6c, 8b, 9a, 9b, 17a, 19, 20, 21) that were mostly concentrated on the centre of the hill. These were used to divide the open space that was encompassed by the earlier walls into various residential enclosures[36]. Nevertheless, this does not mean to say that one must oversimplify the construction of all these walls to have been predetermined; there is a possibility that the needs that inspired the erection of the walling varied and were consistently reconfigured to match their everyday experiences. More importantly, the available radiocarbon dates at Chumnungwa show us that the hilltop was occupied for approximately three centuries; linking this

[36] As originally noted by Hall and Neal (1902:228) these enclosures amounted to five and they mostly comprised *dhaka* floors which they described as cemented floors.

chronostratigraphic data with the walling typology and the relative data set from the ceramics (Chapter 5) suggests that construction of both the outer and inner walls was gradual.

7.6. SUMMARY

The drystone architecture situated on the hilltop of Chumnungwa comprises a series of free-standing walls that make up various enclosures that connect with natural rock boulders. These monumental walls were constructed with both squared and rounded entrances and their architectural style varies from P, PQ, Q to R types. The grandiose of Chumnungwa walling is expressed by a chevron pattern designed on one of the neatly coursed walls as well as the use of dolerite stone slabs to lintel a squared entrance. Based on gathered local histories and the analysis of the material remains recovered on the surface area of the walled area and the main midden on the summit of Chumnungwa Hill, it is evident that the people who constructed the walling were members of an Iron Age community whose ancestors were Shona-speaking people. In terms of the construction sequence, it was clear that the drystone walling at Chumnungwa was not built from a preconceived blueprint but rather a series of numerous activities and stages of construction, restoration, and alteration. There is a possibility that the outer walls were constructed first as a security strategy to control access to the hill summit followed by the inner walls to divide the open space that was encircled by the earlier walls.

CHAPTER EIGHT

CHUMNUNGWA ARCHAEOFAUNA

"Only a zoologist will see animals in faunal remains; archaeologists should see them as meat, skins, sinew, and above all, a human menu" (Daly 1969:152).

8. 1. INTRODUCTION

Archaeofauna is one of the garbage remains retrieved from Iron Age sites that is so valuable to archaeologists and anthropologists. Since the advent of the 18th century, several studies have been conducted globally and regionally to build an understanding on human and animal interactions within given ecosystems (Garlake 1978; Voight 1983; Plug & Voigt 1983; Plug 1989; 2000; Thorp 1995; Reid 1996; Manyanga 2001; Lev-Tov, et al. 2010; Porter 2013). Thus, like any other material from the archaeological record, fauna is believed to be a repository of human behaviour which has the potential to illuminate on several cultural aspects and practices of ancient societies such as subsistence strategies, past environments, and societal complexity (Daly 1969; Klein & Cruz-Uribe 1984; Voigt 1983; Reitz & Wing, 1999; O'Connor 2000; Lyman 2008; Badenhorst et al. 2011; Russell 2011; Shenjere et al. 2013; Sykes 2014; Antonites et al. 2016a). Considering this, the goal of this chapter was to examine faunal remains that were recovered from Chumnungwa. The objective was to explore the entire spectrum of the roles of animals in the daily lives of the residents of Chumnungwa as well as the long-term relationship between the residents of Chumnungwa and their environments to reconstruct their foodways and herd management strategies based on animal resource exploitation. The basic question that informed this analysis revolved around the question of what animals they were, what strategies were used to procure them, for what reasons, and in what environmental conditions? Beyond diet and paleoenvironments, I was also interested in finding out the significance of these animals to the Chumnungwa people (sensu Russell 2011). It must be noted that I addressed these questions from both an archaeological and an anthropological viewpoint.

8.2. ARCHAEOZOOLOGY IN SOUTHERN AFRICAN IRON AGE: AN OVERVIEW

Archaeozoology[37] is a sub-discipline of archaeology which focuses on the study of human and animal interactions within given ecosystems to address archaeological questions; in particular, it involves the analysis and interpretation of excavated faunal remains retrieved from archaeological sites using interdisciplinary principles and protocols of zoology, biology, ecology, archaeology and anthropology (Plug & Voigt 1983; Reitz & Wing, 1999; Shenjere et al. 2013; Antonites et al. 2016a; Gifford-Gonzalez 2018). In the southern African Iron Age, the discipline of archaeozoology has contributed immensely to the reconstruction of a variety of aspects about human and animal interactions (Plug 2000; Shenjere et al. 2013; Antonites et al. 2016a).

As similarly experienced in Europe and the Americas, the earliest archaeozoological studies undertaken in the 20th century in southern Africa were more of an appendage to the mainstream archaeological studies, which were by then largely enshrined in the culture-historical approaches to material culture (Plug & Voigt 1983; Manyanga 2001; Shenjere et al. 2013). Thus, because the priority of most excavators was on 'valuable' materials[38] retrieved from Iron age sites, most faunal remains were relegated as useless and thrown away into rubbish dumps (Shenjere et al. 2013). A good example is that of Chumnungwa, and many other Zimbabwe type sites, that were excavated by treasure hunters and antiquarians such as Richard Nick Hall and W. G. Neal. Because their focus was on retrieving gold, mapping stone architecture, and extracting other forms of exotica as the basis for their exotic thesis on the origins of Zimbabwe-type sites, they never recorded or mentioned any of the faunal remains they encountered in their excavations (see Hall & Neal 1904). The relegation of archaeofauna continued even until the mid-20th century. For instance, prominent British archaeologists working at Great Zimbabwe and Khami such as Gertrude Caton-Thompson, Roger Summers, and Keith Robinson rarely mentioned archeofauna in most of their excavation reports (Caton-Thompson 1931; Summers et al. 1961; Robinson 1959; Shenjere et al. 2013:120). In other rare cases Roger Summers only collected a few samples of the fauna from his main excavations at the Nyanga agricultural complex and Great Zimbabwe, which he sent to H. B S. Cook, a zoology specialist

---

[37] Also known as zooarchaeology (see Plug & Voigt 1983; Reitz & Wing, 1999; Russell 2011; Gifford-Gonzalez 2018).

[38] I.e. gold and copper objects, glass beads, and Chinese celadon.

and Charles Kimberlin Brain, a paleontologist, who respectively identified and independently published the represented animal species (see Cook 1958, and Brain 1974). Otherwise, the norm in most cases was to publish the species lists as simple appendices to the site reports (see Robins et al. 1966).

However, as the 20th century came to an end, a new generation of archaeologists became formally trained in archaeozoology (i.e. Plug 1988, 1989, 1997a, 2000, 2014; Voigt 1983, Thorp 1984ab, 1995; Pwiti & Mawoko 1997; Manyanga 2001, 2006; Smith 2005; Badenhorst 2008, 2011; Badenhorst et al. 2011; Shenjere 2011). Such a development positively impacted the theory and practice of archaeozoology in southern Africa, and hence it grew rapidly to the extent of catching up with global trends. The more archaeologists and anthropologists began to appreciate the significance of animals in the everyday lives of the Iron Age societies of southern Zambezia, the more they explored a broad range of issues, particularly using advanced-microscopy, mass spectrometry (ZooMS) and stable isotope techniques (Plug & Voigt 1983; Shenjere et al. 2013; Antonites et al. 2016a). Today archaeozoology in southern Africa is vibrant and axiomatically it is almost on equal footing with other sub-disciplines of archaeology such as archaeometallurgy (see Shenjere et al. 2013; Antonites et al. 2016a).

Over the last 50 decades, numerous archaeozoological studies undertaken have contributed immensely to reconstruction of the meat economies of Iron Age societies of southern Zambezia (i.e. Brain, 1974; Voigt 1983; Plug 1989, 1997a; Pwiti & Mawoko 1997; Manyanga et al. 2000; Tapfuma 2010; Badenhorst et al. 2011; Van Waarden 2012; Shenjere-Nyabezi 2017; Nyamushosho et al. 2018). One prominent study was undertaken at Mapungubwe by Elizabeth Voigt (1983). Results from her extensive faunal study demonstrated the meat economy of the Leopards Kopje communities that resided at Mapungubwe to have been mostly contributed by the domesticates they herded than the game they hunted, snared, fished, or gathered. Part of the domesticates they herded included cattle, and small stock such as sheep, goats, and chicken whilst the wild animals included elephant, hippopotamus, duiker, zebra, impala, and fish. However, the latter had relatively low frequency when compared with archaeofaunal statistics from nearby Iron Age settlements such as Thulamela where marine resources such as hippopotamus and fish bones evidenced that they were heavily consumed (Plug 1997b, 2000). Thus, as concluded by Voigt, the residents of Mapungubwe regarded their livestock as a primary source of protein and most of these domesticates particularly cattle were slaughtered when mature to sustain their meat economy (Voigt 1983:133). Across the Limpopo River, a similar trajectory on food procurement was reported at other Zimbabwe culture sites such as

Kasekete (Pwiti & Mawoko 1997), Ndongo (Shenjere -Nyabezi 2017), Danamombe (Tapfuma 2010), Manyikeni (Garlake 1978), and Malumba (Manyanga 2006) where mixed meat economies that largely thrived on animal husbandry were reported. Apart from everyday consumption, archaeologists working at Mutokolwe, a LIA Venda site in northern South Africa have also shown that meat from cattle and other caprines[39] was occasionally consumed during feasting activities (Magoma et al. 2018).

Archaeofaunal studies have also contributed to inquiries on the nature and antiquity of inequality in southern African Iron Age (i.e. Brain, 1974b; Thorp 1995; Huffman 1996; Manyanga 2001; Fatherley 2009; Chiripanhura 2018; Mukwende et al. 2018). For instance, earlier studies of faunal remains previously excavated at Great Zimbabwe residential areas by Brain, (1974) and Carolyn Thorp (1984a, 1995) revealed a high frequency of juvenile cattle in elite spaces and mature cattle in commoner spaces. By then archaeologists and anthropologists concluded that this was direct evidence of inequality and social stratification at Great Zimbabwe (Brain, 1974b; Thorp 1984a. 1995). Thus, because elites were assumed to have had so much power over the political economy of Great Zimbabwe, they were presumed to have had the luxury of eating tender beef (meat) from young cattle, as demonstrated by the juvenile cattle bones recovered in their residences. On the other hand, the commoners were assumed to have been poor, hence recovery of mature cattle bones in their spaces was directly interpreted as an indication that signalled their status as commoners (Thorp 1995, Huffman 1996). The same reasoning was adopted by Huffman (1996) in his book, *Snakes and crocodiles: power and symbolism in ancient Zimbabwe*, who developed a model of cattle butchering at Zimbabwe tradition sites using Venda ethnography. According to Huffman (1996), soft meat portions such as the thigh were a delicacy for those with high status whilst bony portions such as the lower leg or foot bones were allocated to the commoners. However, Reid (1996) and others (i.e. Shenjere et al. 2013) disputed this model arguing that it was based on a few cattle bones sampled from the Hill complex and the foothill area. To them, the bones appeared more of remnants of a ritual activity that was carried out on the Hill complex, and most importantly, the argument put forward lacked any ethnohistorical analogies among the Shona communities from which Great Zimbabwe emerged. Lately, Reid (1996) and (Shenjere's et al. 2013) argument was buttressed by a recent faunal analysis of legacy collections of Great Zimbabwe

---

[39] Goats and sheep collectively.

which were excavated from both commoner and elite spaces in the last century. This study undertaken by Chiripanhura (2018) revealed that both juvenile and old cattle bones were prevalent throughout the elite and commoner spaces such as the Carpark midden, Western Enclosure, and Chenga ruin. This implied that both young and adult cattle were consumed by both commoners and elites at Great Zimbabwe. A similar trend was also uncovered at other sites such as Khami (Mukwende et al. 2018) and Mananzve (Nyamushosho et al. 2018).

Several scholars of Iron Age southern Africa have greatly relied on taxa represented by faunal remains to reconstruct past environments (Plug 1988, 1989, 2000; Manyanga 2001, 2006; Smith 2005, Denbow et al. 2008). Archaeozoologists believe that by knowing the nature of geographical distribution as well as the ecosystem preferred and adapted to by the identified species, one can generate insights on the environmental conditions in which the animal thrived in the deeper past. In as much as this appears like telescoping the present into the past, it is backed by rigorously tested paleoclimatic data records from isotopes, which show that the present climate was more similar to that of the last two millennia (Tyson & Lindesay 1992; Holmgren et al. 1999; Tyson & Preston-Whyte 2000 Smith 2005; Woodborne et al. 2015). Some of the knowledge generated relates to the average rainfall, temperature and even the vegetation of the area under case study. However, there are cases where archaeofauna reveals the presence of certain animals outside their known area of geographical distribution. According to Manyanga (2001), such scenario is normal especially when dealing with fauna from Iron Age sites; it usually reflects long-distance meat procurement strategies such as communal hunting expeditions where hunters outsourced certain animal species outside their locality for food consumption and other needs (see also Manyanga & Pangeti 2017). Furthermore, this is not undermining the fact that in cases when the environment changed there was a possibility that some animals migrated to a more tolerable ecological niche. One successful archaeozoological case study, where past environmental conditions that possibly shaped the livelihood of the Butua society in the second millennium CE, were reconstructed using mammalian bones was undertaken by Catrien Van Waarden (2012) at Vumba, a Khami tradition site in eastern Botswana. According to Van Waarden, the presence of wild archaefauna such as eland, zebra, duiker, impala, gemsbok in the Vumba area truly reflected a semi-arid landscape reminiscent of mopane woodlands that presently characterise most parts of eastern Botswana today. More recently, an isotopic study undertaken by Dyvart et al. (2018) at Khami, the capital of Butua shows that domesticates and wildlife species such as cattle, cape buffalo, and tsessebe thrived in an environment where they grazed on C4 grasses. This truly reflected the nature of the environment of present-day Khami which clearly shows a predominance of buffalo grasses in the area.

Studying archeofauna has also enabled archaeologists to explore human adaptiveness to the drylands of southern Zambezia during the Iron Age (i.e. Plug, 1997a; Manyanga 2001, 2006; Smith et al. 2007; Denbow et al. 2008; Thorp 2009; Nyamushosho et al. 2018). Generally, southern Zambezia's semi-arid landscape was regarded as drylands that were heavily infested with tsetse fly, particularly in the densely populated Mopane woodlands drained by Zambezi, Limpopo, Shashi, Shashani, and Umzingwane Rivers (Summers, 1960; Vincent & Thomas 1960; Robinson 1965a; Ford 1971; Huffman 2015). Given such a background, tsetse flies posed mortality challenges for cattle owned by numerous Iron Age communities that resided in these areas, given the fact that they were fulltime agropastoralists who engaged in livestock husbandry for subsistence purposes in sub-Saharan Africa (Phillipson 2005). Thus, having realised the threat of tsetse fly as a hindrance to productive cattle rearing, as evidenced by the rarity of cattle bones (Pwiti, 1996b; Manyanga 2001), the archaeological record from faunal studies undertaken in the last 40 years shows that some communities reconfigured their subsistence strategies and successfully managed to adapt to the impending calamities. One unique community was the EIA of Kadzi which settled in the Zambezi valley in northern Zimbabwe. As a way of averting food scarcity resulting from the high mortality rate of their cattle caused by the tsetse, they turned into specialist buffalo hunters to boost their meat economy (Plug, 1997a:91). Archaeologically this adaptation strategy was attested by fauna recovered from the site of Kadzi by Pwiti (1996b) which revealed a greater reliance on wildlife than domesticated species, particularly bovid remains of buffalo (Plug, 1997a:103). A similar response to climatic and environmental constraints of living in tsetse infested drylands was also revealed at Mwenezi Farm, a LIA Zimbabwe tradition site in south-eastern Zimbabwe where Manyanga (2001) recorded a heavy consumption of zebra and other wild resources, such as impala and wildebeest. This creativity to supplement and diversify agropastoral food resources with wild resources was also recorded at other Iron Age settlements such as Hlamba Mlonga (Thorp 2009), Ndongo (Shenjere-Nyabezi 2017) and Mananzve (Nyamushosho et al. 2018) in southern Zimbabwe as well as the Toutswe and the Khami settlements in eastern Botswana (Denbow et al. 2008; Van Waarden 2012).

Faunal remains have also enabled archaeologists to explore the symbolism of animals to Iron Age communities beyond their usual meat value (Thorp 1984a; Tiley & Burger 2002). For instance, from an economic standpoint *Cypraeidae* species such as cowrie shells recovered from Iron Age sites such as Khami (Robinson 1959), Mapungubwe (Voigt 1983), Kwagandaganda (Whitelaw 1994), Kadzi (Pwiti 1996b); Chibuene (Badenhorst et al. 2011), Shankare (Moffett 2017) and Mananzve (Nyamushosho et al. 2018), have been interpreted as a form of currency that was brought inland from the Mozambican and Cape coast by either Swahili, Portuguese or Indian traders as a currency of exchange in regional and international trade deals (Pwiti 1996b; Tiley & Burger 2002; Moffett & Chirikure 2016). Similarly, cattle and other livestock species (i.e. sheep and goats) reconstructed from archeofauna recovered from second millennium CE sites such as K2, Toutswe, Mapungubwe, Malumba, Danammombe, Khami, Thulamela, Great Zimbabwe has been interpreted as a measure of wealth (see Garlake 1978; Hall 1987; Huffman 1986, 2007; Badenhorst 2010, 2011; Van Waarden 2012). Thus, the more cattle an individual owned, the wealthier they were, hence the more wives they could marry. Other archaeologists (Summers et al. 1961; Voigt 1983; Thorp 1984b; Bvocho 2005, Manyanga 2006; Van Waarden 2012) have explored faunal remains from a social and crafting perspective, where worked ivory bones such as those recovered from Mapungubwe, Khami (including those excavated by Robinson, 1959), Great Zimbabwe, and Malumba have been symbolically interpreted as divination tools used by *n'anga* to communicate with the ancestors and healing their patients. In the same light worked archaeofauna is also interpreted as items of adornment and decoration (Bvocho 2005) as well as musical instruments.

8.3. ANALYTICAL APPROACH

The analysis of faunal remains recovered from Chumnungwa was undertaken in the Mammalogy Laboratory of the Natural History Museum of Zimbabwe in Bulawayo. A stepped methodology commonly used in archaeozoological studies was applied to examine the nature of the fauna (see Brain 1974; Voigt 1983; Klein & Cruz-Uribe 1984; Plug 1997a; Thorp 1995; Reitz & Wing, 1999; Manyanga 2001, 2006; Driver 1999, 2005; Badenhorst et al. 2011). The first stage of the analysis began by sorting the identifiable from the non-identifiable bones, paying close attention to their stratigraphical and depositional contexts. Damage on the bones, such as cut marks and other modifications, were also analysed to generate insights on the nature of relationships that connected the species to the residents of Chumnungwa. Ultimately, the non-identifiable bones were sorted and quantified into broad taxon categories using protocols from Brain (1974) (see Table 8.1).

Table 8. 1. The non-identifiable bone categories

Taxon	Description
Enamel fragments	All teeth fragments
Skull fragments	All fragments identified to have come from the skull
Rib fragments	All ribs and rib fragments
Bone flakes	Bone fragments from long bone shafts
Vertebral fragments	All vertebral column fragments
Miscellaneous skeletal parts	Skeletal parts consisting of all bones fragmented beyond Recognition

The next stage of the analysis focused on the morphology of the identifiable bones; these were examined to genus or species level using a comparative collection held at the Natural History Museum. A species list of wild and domestic animals common in this part of the Mberengwa area (see Appendix 5) also augmented the exercise. The morphological features of the faunal remains were examined using guidelines from (Klein & Cruz-Uribe 1984; Brain 1974; Reitz & Wing 2008; Plug 2014). In cases where some bovine bones were too fragmented to be identified to taxon or genus level, they were arbitrarily classified into four bovid categories common to southern Africa (see Table 8.2). Ina Plug's (2014), Bov V class which she specifically added to Brain's (1974) bovid categories to accommodate giant buffalos and antelopes, was relegated in this study since the species were already extinct in Mberengwa (Plug 2014). As commonly experienced in many archaeozoological studies (i.e. Voigt 1983; Plug 1997a; Manyanga 2001; Badenhorst et al. 2011; Van Waarden 2012), similarities of sheep and goat specimens presented challenges in separating them, hence they were grouped as *Ovis/Capra*.

Table 8. 2. Bovid classes common in southern Africa (Adapted from Brain 1974; Voight 1983; Manyanga 2001, 2006).

Bovid Class	Weight	Species
Bov I	<23 kg	Klipspringer (*Oreotragus oreotragus*), steenbok (*Raphicerus campestris*) & common duiker (*Sylvicapra grimmia*)
Bov II	24-84 kg	Sheep *(Ovis aries)*, impala *(Aepyceros melampus)*, bushbuck *(Tragelaphus scriptus)* & goat *(Capra hircus)*
Bov III	85-296 kg	Waterbuck (Kobus ellipsiprymnus), blue wildebeest *(Connochaetes taurinus)*, cattle *(Bos Taurus)*, greater kudu *(Tragelaphus strepsiceros)*, sable *(Hippotragus niger)*, tsessebe *(Damaliscus lunatus)*

Bov IV	>296 kg	Eland *(Tragelaphus oryx)*, buffalo *(Syncerus caffer)*

Ultimately, the identified species were quantified by calculating the Number of Identifiable Specimens (NISP) and the Minimum Number of Individuals (MNI). These methods are commonly used by archaeozoologists (see Voigt 1983; Grayson 1984; Klein & Cruz-Uribe 1984; Lyman 1994; Reitz & Wing 1999; Manyanga 2001; Badenhorst et al. 2011).

In this study, the NISP was calculated as the total number of identifiable bones and bone fragments that characterised the Chumnungwa assemblage (Klein & Cruz-Uribe 1984). However, NISP totals in some instances were biased, particularly in those cases where some of the archaeofauna had more identifiable bones for specific species (sensu O'Connor 2000). Therefore, to complement the weakness of the NISP, and avert the problems of fragmentation and manifold counting of identified species, the MNI totals were calculated as recommended by Reitz and Wing (1999). MNI was quantified as the minimum number of species that were estimated from each excavated specimen (Klein & Cruz-Uribe 1984; Reitz & Wing 1999; Manyanga 2001). However, as previously experienced by other researchers who used this method (i.e. O'Connor 2000), occasional species within a faunal assemblage tended to be over-estimated whilst frequently found species may be underestimated. Nevertheless, in as much as the NISP and MNI methods had limitations, they were especially useful in quantifying the archaeofauna of Chumnungwa. More importantly, they are widely used as standard methods of quantifying species in global archaeozoology (Klein & Cruz-Uribe 1984; Reitz & Wing 1999; O'Connor 2000; Plug 2014). Tooth eruption and wear patterns were also examined as basis for aging the domesticated species using the commonly used aging scheme pioneered by Voigt (1983) and Plug (1988) (see Table 8.3). However, because the age of some specimens could not be positively identified to the exact age categories, the adopted aging schemes were integrated into two broad categories namely juvenile and adult classes (Table 8.3).

Table 8. 3. Age classes commonly used in southern African archaeozoology (Adapted from Voight 1983 and Plug 1988).

Status	Class	Age (months)	Description of the tooth eruption sequence
Ovis/Capra (Sheep/Goat)			
Juvenile	I	0-3	Deciduous teeth erupted in wear
	II	3-10	M1 and I1 erupted
	III	10-16	M2 erupted
Adult	IV	16-30	M3 and I2 erupted, deciduous premolars lost and replaced by permanent molars
	V	30-60	Permanent dentition present in wear
	VI	Over 60	Heavy wear on all teeth, central islands disappearing
Bos taurus (Cattle)			
	I	0-6	Deciduous teeth erupting
Juvenile	II	6-15	M1 erupted
	III	15-18	M2 erupted
	IV	18-24	M3 and I1 erupting, loss of deciduous premolars
	V	24-30	P2, P3 and I2 erupting
Adult	VI	30-42	P4 and I3 erupting
	VII	Over 42	I4/Canine erupting
	VIII		Full adult dentition, heavy wear on M1 and M2
	IX		Heavy wear on all teeth, central islands disappearing

8.4. ANALYSIS AND RESULTS

A total of 8903 bone specimens were recovered from the test pits that were sunk on both the hilltop and foothill areas of Chumnungwa. As commonly experienced at most excavated Iron Age sites (i.e. Voigt 1983; Plug 1988; Pwiti 1996b; Manyanga 2001; Mukwende et al. 2018), the largest concentration of bone specimens recovered at Chumnungwa were largely fragmented beyond identification (n=8615). However, because most test pits were sunk on the summit of Chumnungwa, the majority of the bones were retrieved from the hilltop area. With the result that only 3.2% of the faunal remains were further analysed to species/genus level. A comprehensive analysis of the faunal remains at a stratigraphical level is presented in Appendix 5. The forthcoming sections only present an integrated dataset of the fauna at test pit level under the headings of hilltop and foothill areas.

8.4.1. ARCHAEOFAUNA FROM THE HILLTOP AREA

The bone fragments recovered from the hilltop area of Chumnungwa totalled 6886. The bulk of bone specimens 6656 (96.6%) that were recovered from most of the stratigraphical layers of the midden test pits were too fragmented, and hence they were classified into non-identifiable bone categories (Table 8.4). The majority of the bones were recovered from Test pit 7 and 8 whilst Test Pit 5 contributed the fewest. The non-identifiable categories were dominated by bone flakes and skull fragments.

Table 8.4. The non-identifiable bone categories of archaeofauna from the hilltop area

	Non-identifiable bone fragments								
Skeletal attribute	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	Tota l
Enamel Fragments	8	10		7	2	10	16	55	108
Skull Fragments	9	59	2	4	3	9	1090	610	1786
Rib Fragments	8	31	3		2	7	215	207	473
Bone Flakes	27	153	26	17	7	58	1749	1045	3082
Vertebral Fragments	9	37		11	1	17	580	400	1055
Miscellaneous Skeletal Parts	4	39	14		4	4	74	13	152
Total	65	329	45	39	19	105	3724	2330	6656

The remaining sample comprised 230 (3.3%) long-bone specimens which were partially fragmented, and these were analysed to species, genus level as demonstrated in Table 8.5. Overall, 19 domestic and wild species were identified, these comprised molluscs, mammals, and birds. *Bos taurus* (cattle) dominated, followed by Bov. III wild species, *Hippotragus niger* (sable), *Ovis/Capra* (sheep/goat), *Achatina sp*. (land snail), *Stigmochelys pardallis* (leopard tortoise), *Syncerus caffer* (buffalo) other species. As revealed by both the NISP and MNI counts in Table 8.5, it was clear that a mixed animal economy, which hierarchically comprised domesticates and wild species, was exploited by members of the Chumnungwa community that resided on the hilltop area.

Table 8.5. NISP and MNI species representation of archaeofauna from the hilltop area

Identifiable Species																		
Taxon (Common name)	TP1		TP2		TP3		TP4		TP5		TP6		TP7		TP8		Total	
	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI
Ovis/Capra (Sheep/Goat)													8	4	5	3	13	7
Bos taurus (Cattle)	5	3	2	1			1	1	2	2	2	1	18	6	9	4	39	18
Achatina sp. (Land snail)							2	1	3	1	3	1	14	2	3	1	25	6
Stigmochelys pardallis (Leopard tortoise)					3	1					3	1	7	2	12	2	25	6
Aves (Bird)													1	1	1	1	2	2
Procavia capensis (Rock hyrax)					1	1									3	2	4	3
Heterohyrax (Yellow-spotted rock hyrax)															2	1	2	1
Aethomys chrysophilus (Red veld rat)															16	2	16	2
Bov. I wild													1	1			1	1
Bov. II wild			1	1					1	1			1	1	4	2	7	5
Bov. III wild	2	1											15	7	18	6	35	14
Bov. IV wild													1	1	1	1	2	2
Connochaetes (Wildebeest)	1	1					1	1					1	1			3	3
Syncerus caffer (Buffalo)	1	1	2	1			2	1			3	1	3	1	1	1	12	6
*Hippotragus niger (*Sable)	1	1									1	1	20	8	4	1	26	11
Aespyceros meumpus (Impala)					1	1	1	1									2	2
Taurotragus oryx (Eland)							1	1					1	1	1	1	3	3
Kobus ellipsiprymnus (Waterbuck)													1	1	1	1	2	2
Tragelaphus strepsiceros/Kudu													4	2	7	3	11	5
Total	10	7	5	3	5	3	8	6	6	4	12	5	96	39	88	32	230	99

Ultimately 25 tooth samples (Table 8.5) of the identified *Bos taurus* and *Ovis/Capra* were further examined to establish the age range of the domestic species they exploited. As demonstrated in Table 8.6, it was clear that the bulk of domesticates exploited on the hilltop area were mature. Nevertheless, because of heavy fragmentation not much data was recovered regarding *Ovis/Capra* species.

Table 8.6. The age range of domesticated species recovered from Chumnungwa hilltop area

Age	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	Total
Ovis/Capra (Sheep/Goat)									
Juvenile								1	1
Adult							3	1	4
Bos taurus (Cattle)									
Juvenile	1	1			1		2	1	6
Adult	2	2		1	1	2	4	2	14
Total	3	3		1	2	2	9	5	25

8.4.2. ARCHAEOFAUNA FROM THE FOOTHILL AREA

A total of 2017 bone fragments recovered from five test pits that were sunk on the foothill area of Chumnungwa were meticulously examined. Most of the bones were recovered from Test Pit 13, Test Pit 10 contributed the least. Out of the total, 1959 (97.1%) bones were non-identifiable (Table 8.7) whilst the remainder (n=58/2.8%) were identified to species level. The non-identifiable fragments were largely characterised by bone flakes and vertebral fragments (see Table 8.7).

Table 8.7. The non-identifiable bone categories of archaeofauna from the foothill area

	Non-identifiable bone fragments					
Skeletal attribute	TP9	TP10	TP11	TP12	TP13	Total
Enamel Fragments	26	1	2	2	37	68
Skull Fragments	5	3	15	26	87	136
Rib Fragments	1	5	37	46	26	115
Bone Flakes	350	28	172	289	326	1165
Vertebral Fragments	10	9	90	154	211	474
Miscellaneous Skeletal Parts	1					1
Total	393	46	316	517	687	1959

As demonstrated in Table 8.8, 14, both domestic and wild species, which ranged from large ungulates to small animals, were identified from the diagnostic bones. *Bos taurus* (cattle) dominated, followed by Bov. III wild species, *Syncerus caffer* (Buffalo), Bov. II wild species, Tragelaphus strepsiceros (Kudu), and other species (see Table 8.8). Based on both the NISP/MNI statistics demonstrated in Table 8.8, it was clear that the members of the Chumnungwa community that resided on the foothill area had a mixed animal economy which respectively comprised of domestic and wild species.

Table 8.8. NISP and MNI species representation of archaeofauna from the foothill area

Taxon (Common name)	Identifiable Species											
	TP9		TP10		TP11		TP12		TP13		Total	
	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI
Bos taurus (Cattle)	6	3	2	1	9	3	3	2	7	3	27	12
Stigmochelys pardallis (Leopard tortoise)									1	1	1	1
Procavia capensis (Rock hyrax)									1	1	1	1
Bov. I wild					1	1					1	1
Bov. II wild					1	1	1	1	1	1	3	3
Bov. III wild	3	2	1	1	3	1	1	1	3	1	11	6
Bov. IV wild												
Connochaetes (Wildebeest)					1	1					1	1
Syncerus caffer (Buffalo)	2	1			1	1			3	2	6	4
*Hippotragus niger (*Sable)					2	1					2	1
Aespyceros meumpus (Impala)									1	1	1	1
*Tragelaphus strepsiceros (*Kudu)	1	1			1	1					2	2
Orycteropus afer (Aardvark)					1	1					1	1
Raphicerus campestris (Steenbok)							1	1			1	1
Total	12	7	3	2	20	11	6	5	17	10	58	35

Only 17 tooth samples (Table 8.9) of *Bos taurus* were examined to establish the age range of the domestic species that were exploited by the members of Chumnungwa which resided in the foothill area. Thus, as demonstrated in Table 8.9, it was evident that the majority of the *Bos taurus* species that were exploited were mature (76.4%). No data on the age of the *Ovis/Capra* species could be ascertained. As explained earlier this mostly resulted from the limitations of the available faunal sample.

Table 8.9. The age range of domesticated species recovered from Chumnungwa foothill area

Age	TP9	TP10	TP11	TP12	TP13	Total
Ovis/Capra (Sheep/Goat)						
Juvenile						
Adult						
Bos taurus (Cattle)						
Juvenile	1		1		2	4
Adult	4		4	2	3	13
Total	5		5	2	5	17

8.5. A COMPARISON OF ARCHAEOFAUNA FROM THE HILLTOP AND FOOTHILL AREAS

Morphology of the identifiable and non-identifiable archaeofauna from the hilltop and foothill areas of Chumnungwa was comparatively studied to trace how it related and differed at an intra-site level. This was critical, as it provided data that was used to determine if both the residents of the hilltop and foothill areas exploited the same species or not. Furthermore, the data provided insight into the distribution of the age range of domesticated species they exploited. At a secondary level, the data was also instrumental in finding out whether consumption of these animals implied any status or social inequality within the residents of the hilltop and foothill areas of Chumnungwa. Ultimately the comparative study enabled the characterisation of Chumnungwa archaeofauna as an assemblage. However, because of the limitations of the excavated data as previously explained in Chapter 4, the comparison was more qualitatively oriented than quantitative.

Non-identifiable bone fragments

A comparison of the frequency of non-identifiable bone fragments clearly shows that skeletal parts of the broad taxon categories were fairly represented throughout the hilltop and foothill areas of Chumnungwa (see Figure 8.1). The presence of skull and enamel fragments on the hilltop area is a very interesting phenomenon because stone walled Zimbabwe culture sites in Iron Age archaeology of southern Africa are traditionally associated with elites who are highly believed to have been entitled to the best parts (soft and meaty) of slaughtered animals (Huffman 1996).

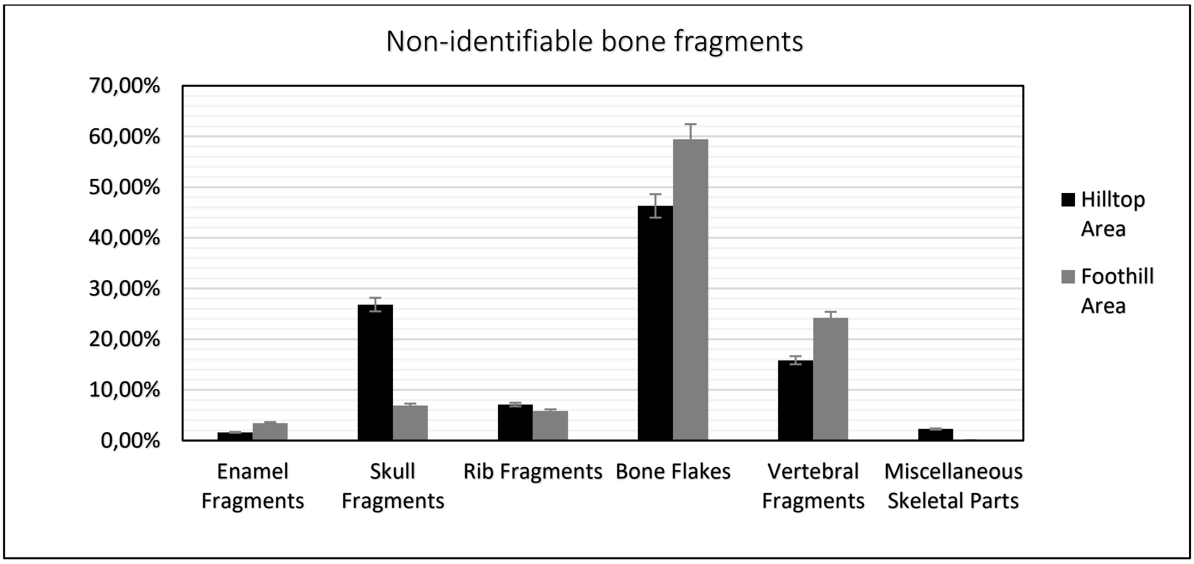


Figure 8.1. Frequency and representation of non-identifiable bone categories fragments from Chumnungwa hilltop and foothill areas.

Species represented and age range of the domesticated species

Both the wild and domestic species, which ranged from large ungulates to small animals, were represented in both the hilltop and foothill areas of Chumnungwa. As demonstrated by the NISP and MNI counts in Figures 8.2 and 8.3, both hilltop and foothill areas were dominated by *Bos taurus* (cattle) species, respectively followed by Bov. III wild species, *Syncerus caffer* (Buffalo), and others. However, on the contrary, *Ovis/Capra* (Sheep/Goat), *Achatina sp*. (Land snail), *Aves* (Bird), *Heterohyrax* (Yellow-spotted rock hyrax), *Aethomys chrysophilus* (Red veld rat), *Kobus ellipsiprymnus* (Waterbuck), *Tragelaphus strepsiceros* (Kudu), Bov. IV wild, *Taurotragus oryx* (Eland) were not represented on the foothill area of Chumnungwa. Similarly, *Orycteropus afer* (Aardvark) and *Raphicerus campestris* (Steenbok) species were not represented by archaeofauna from the hilltop area. Perhaps the differences could be explained by limitations of the available sample particularly the non-identifiable bones which were heavily fragmented or simply a result of the proportion of the middens excavated between the hilltop and foothill areas. NISP and MNI totals of the archaeofauna also show that both the residents of the hilltop and foothill areas of Chumnungwa thrived on a mixed animal economy that similarly and respectively comprised hunted, domesticated, gathered, and snared species

(Figures 8.4 and 8.5). In terms of the age range of domesticated species, the residents of both the hilltop and foothill areas of Chumnungwa exploited both juvenile and adult species, however, with bias more on mature caprine and cattle (Figure 8.6). In as much as the quantities differed due to sampling limitations and other variables, the comparison of acheofauna recovered from Chumnungwa hilltop and foothill areas revealed more similarities than differences.

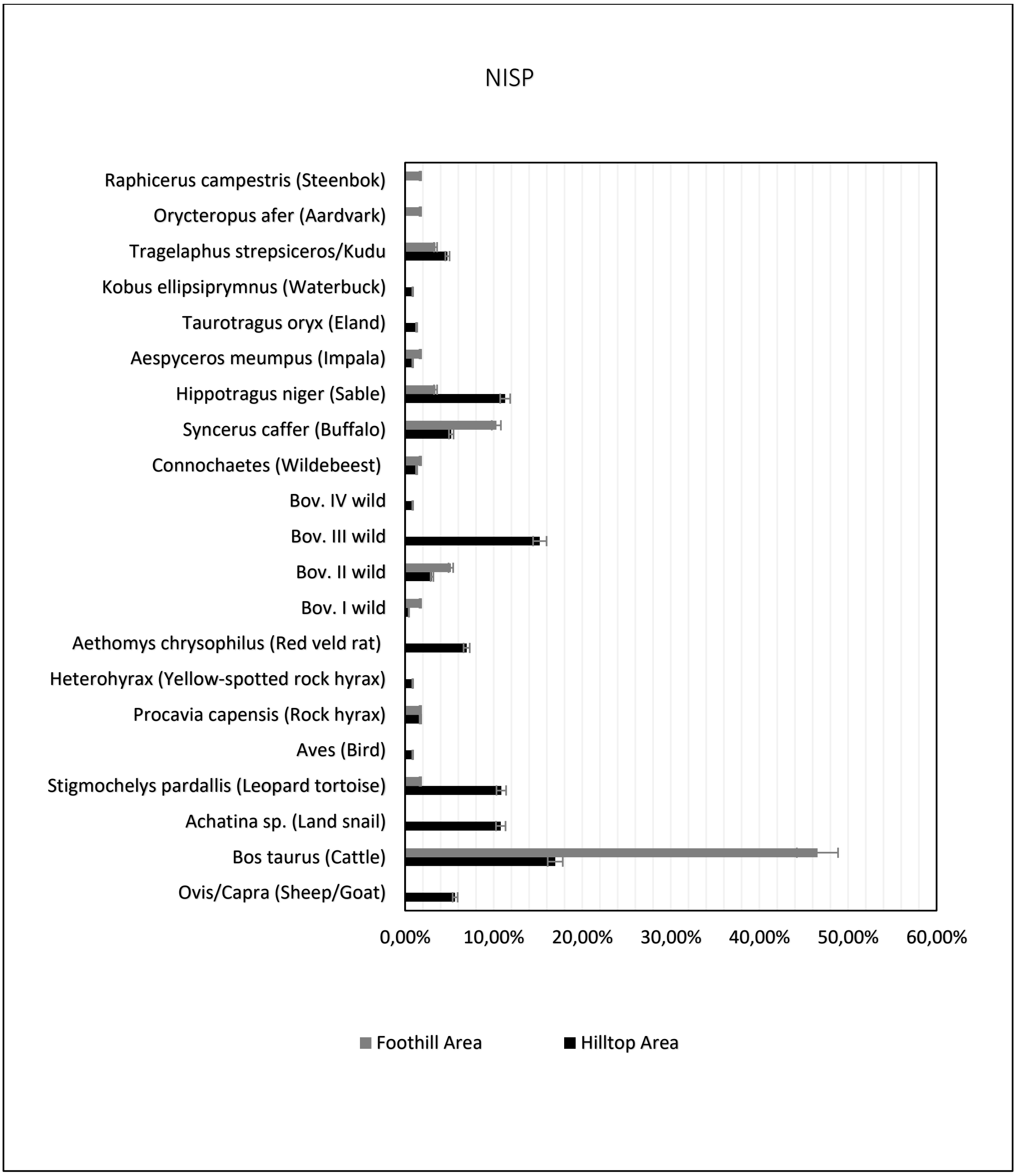


Figure 8.2. NISP totals of species represented on the hilltop and foothill areas of Chumnungwa.

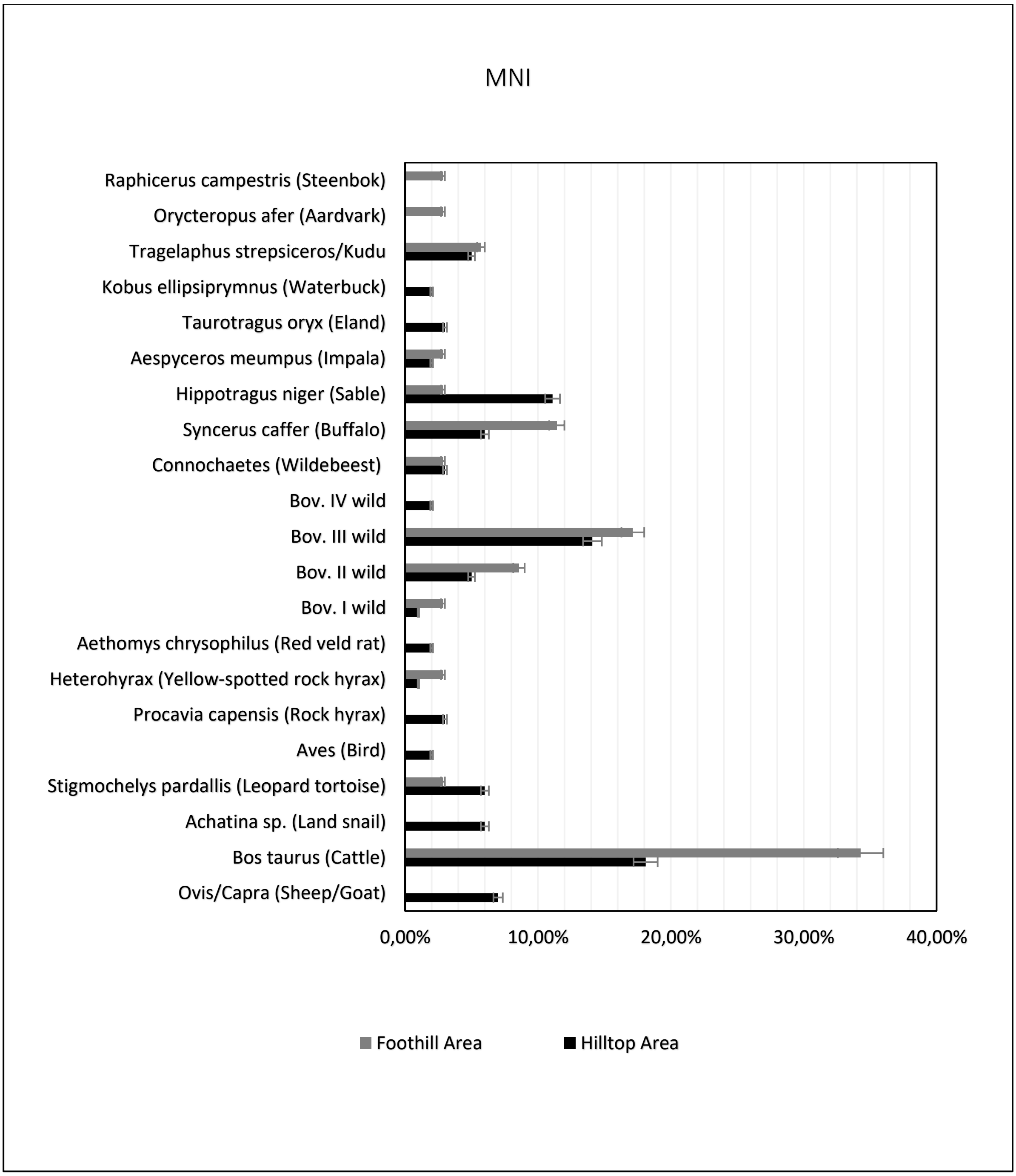


Figure 8.3. MNI totals of species represented on the hilltop and foothill areas of Chumnungwa.

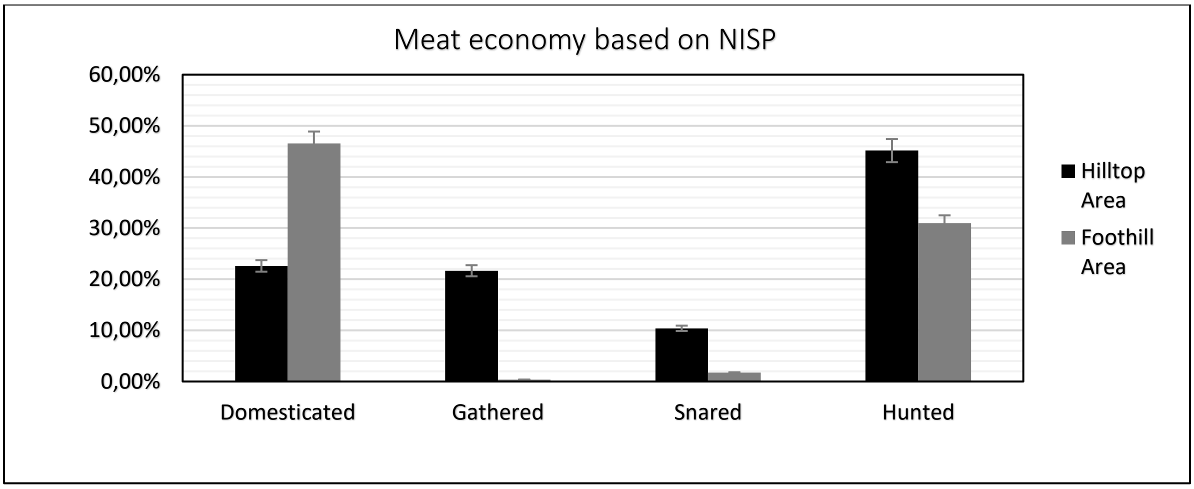


Figure 8.4. NISP totals of the meat economy of the hilltop and foothill areas of Chumnungwa.

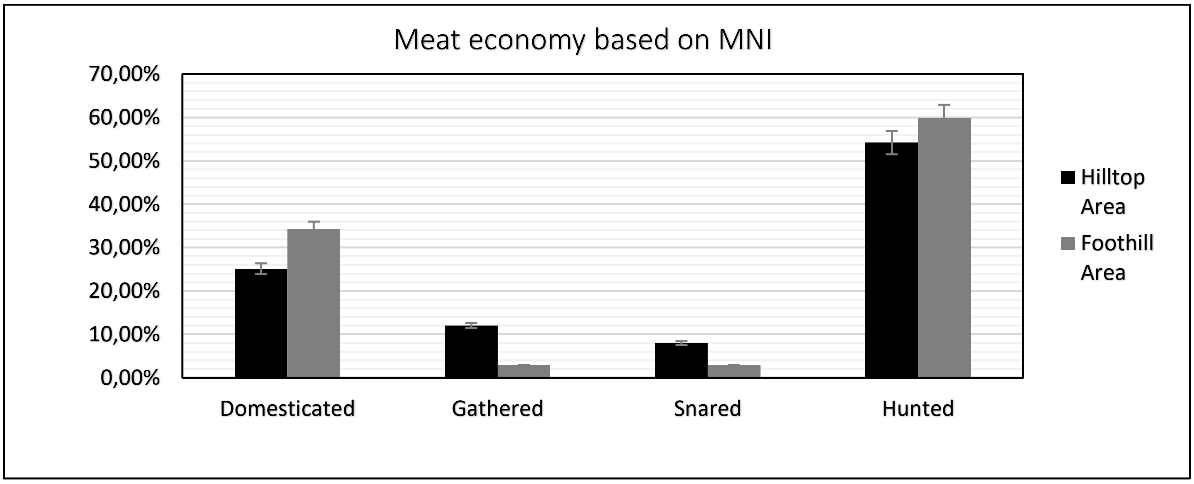


Figure 8.5. MNI totals of the meat economy of the hilltop and foothill areas of Chumnungwa.

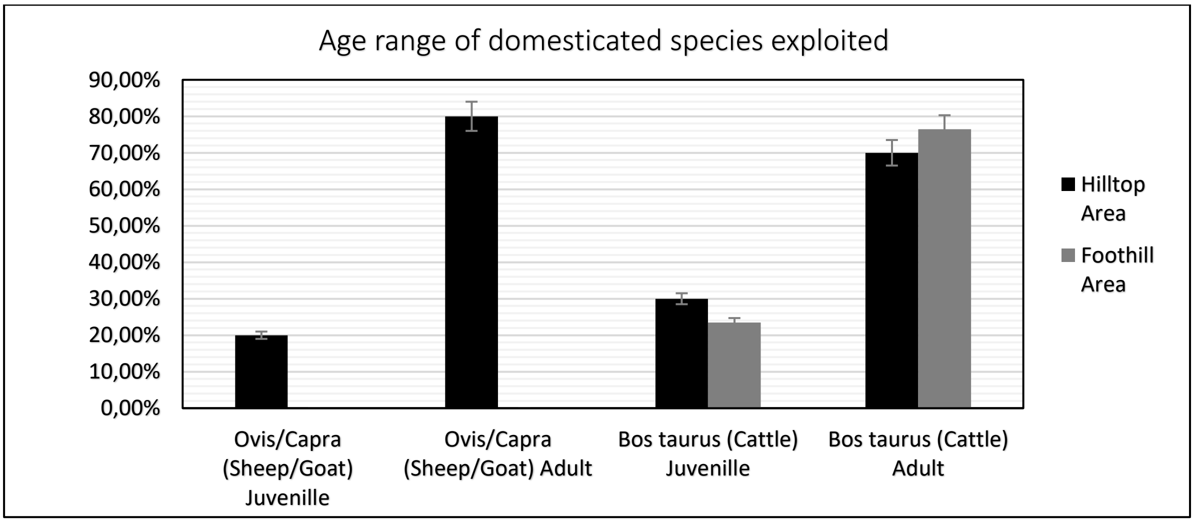


Figure 8.6. The age range of the domesticated species exploited on the hilltop and foothill areas of Chumnungwa.

8.6. DISCUSSION: CHUMNUNGWA ARCHAEOFAUNAL ASSEMBLAGE

Archeofaunal datasets derived from the hilltop and foothill of Chumnungwa shows that the Iron Age people who occupied these respective places, exploited the same range of animal resources in their everyday life. This is buttressed by the established radiocarbon dates, and ceramic typology which showed that Chumnungwa hilltop and foothill areas were occupied by a related community (see Chapters 4 and 5). Based on the NISP and MNI counts of the 17 species identified in the current study (Table 8.10) it is clear that domesticates, particularly cattle, were more heavily exploited than wild animals. This scenario is not new, similarly mixed animal economies with a bias towards domesticates have been recorded at other Zimbabwe culture sites such as Chamabvepfa (Huffman 1979), Khami (Thorp 1984b; Mukwende et al. 2018), Kasekete (Pwiti & Mawoko 1997), Danamombe (Tapfuma 2010), Ndongo (Shenjere - Nyabezi 2017), Manyikeni (Barker 1978), Chipadze (Robins et al. 1966; Brain 1974), Great Zimbabwe (Brain 1974, Thorp 1995; Chiripanhura 2018), and Malumba (Manyanga 2006).

A closer look at Table 8.11 below shows that most of the wild species recorded as local to the Mberengwa landscape (i.e. *Tragelaphus angasii* (nyala), *Damaliscus lunatus*, (tsessebe), *Equus quagga*, (zebra), *Ceratotherium simum* (white Rhinoceros), *Erethizon dorsatum*, (porcupine), and *Potamochoeus porcus* (bushpig) were not represented at Chumnungwa yet they are common at other neighbouring Iron Age settlements such as Malumba, Mwenezi, Ndongo, and Mutschilachokwe, (see Manyanga 2001; Shenhere-Nyabezi 2017). Same applies to some domestic species such as *Canis lupus familiaris*, (dog) and *Gallus gallus domesticus* (chicken) which are largely known from Shona anthropology and archaeology as being common in most Shona homesteads (Bent 1892; Holleman 1952; Bullock 1927; Burke 1969; Beach 1977; Gelfand 1966; Ellert 1984; Manyanga 2006; Shoko 2007 Mavunga 2014). Does that mean the Chumnungwa people did not domesticate any chickens or dogs in their homesteads or hunt most of these wild animals which are known to have roamed the Mberengwa landscape in the past? Obviously no, this is because we are dealing with a fragment of Chumnungwa past. Therefore, it is very difficult to get a complete picture of the meat economy of the Chumnungwa people. Nevertheless, the emerging picture from the current data shows that the residents of Chumnungwa thrived on a mixed animal economy which was characterised by the exploitation of both wildlife and domestic species.

Given the range of animals species represented at Chumnungwa, and the fact that their specific habitats are commonly known in zoology (i.e De Graaf 1981; Smithers 1986; Skinner &

Smithers 1990; Skinner & Chimimba 2005 Alexander & Marais 2007), an attempt was made to reconstruct the general environment in which they lived during their lifetime. A desktop study of the common biosystematic data of fauna and flora in southern Africa (i.e Plug & Badenhorst 2001; Skinner & Chimimba 2005; Plug 2014; Castello 2016), showed that 82.3% of the mammals represented at Chumnungwa (i.e wildebeest, buffalo, sable, waterbuck, and others in Table 8.10) thrived in open dry savanna grasslands and Miombo woodland areas. Others such as kudu *(Tragelaphus strepsiceros)*, bred in dense bushy, and light forest areas. However, because of the seasonality of rainfall which regulated grass and tree cover, most of these ungulates likely developed ways of adapting to the changing environment and climatic conditions. One of these would have been switching between grazing and browsing as many modern species do (Skinner & Chimimba 2005). Omnivores such as the red veld rat (Aethomys chrysophilus), rock hyrax *(Procavia capensis)* and yellow-spotted rock hyrax *(Heterohyrax)* inhabited the same environment but for shelter reasons, the hyraxes are likely to have preferred kopjes, which are prevalent in the Chumnungwa area (Skinner & Chimimba 2005).

The presence of a large onsite kraal, with a huge layering of vitrified dung (Chapter 4) and the high number of cattle bones at Chumnungwa, suggests a warm and wet environment. Nevertheless, it is widely renowned that cattle can adapt to prolonged dry seasons as they can switch between grazing and browsing (Sibanda & Ndlovu 1992; Scoones 1996; Manyanga 2006). Besides, high cattle numbers may be a reflection of absence or minimal mortality rate from parasites such as *Glossina spp*. (tsetse flies) and other outbreaks such as foot-and-mouth disease, or simply the effectiveness of traditional methods of managing tsetse such as penning (see Torr et al. 2011). Thus, the environmental picture depicted by Chumnungwa archaeofauna is more similar to the present and this is buttressed by the fact that most of the identified species still live in the Chumnungwa area and their habitats straddled between dry and wet conditions (Table 8.11).

Table 8.10.Feeding habits and habitat preferences of animal species represented by Chumnungwa archaeofauna (Adopted from Manyanga 2001; Skinner & Chimimba 2005; Castello 2016).

Taxon	Common Name	Type	NISP	MNI	Feeding Habit	Preferred Habitat
Domesticated						
Ovis/Capra	Sheep/Goat	Mammal	13	7	Herbivore	Savanna grasslands
Bos taurus	Cattle	Mammal	66	30	Herbivore	Savanna grasslands
Gathered						
Achatina sp.	Land snail	Mollusca	25	6	Herbivore	Warm and moist environment
Stigmochelys pardallis	Leopard tortoise	Reptile	26	7	Herbivore	Savanna grasslands, kopjes, valleys
Snared						
Procavia capensis	Rock hyrax	Mammal	5	4	Omnivore	Dry savanna grasslands with kopjes for shelter
Heterohyrax	Yellow-spotted rock hyrax	Mammal	2	1	Omnivore	Dry savanna grasslands with kopjes for shelter
Aethomys chrysophilus	*Red veld rat*	Mammal	16	2	Herbivore /Omnivore	Open dry savanna grasslands and woodland areas
Hunted						
Connochaetes	Wildebeest	Mammal	4	4	Herbivore	Open dry savanna grasslands and woodland areas
Syncerus caffer	Buffalo	Mammal	18	10	Herbivore	Open dry savanna grasslands and woodland areas
Hippotragus niger	Sable	Mammal	28	12	Herbivore	Open dry savanna grasslands and woodland areas, near water sources
Aespyceros meumpus	Impala	Mammal	3	3	Herbivore	Open savanna woodland and grassland areas
Taurotragus oryx	Eland	Mammal	3	3	Herbivore	Semi-arid areas with shrub-like bushes/Savanna grasslands
Kobus ellipsiprymnus	Waterbuck	Mammal	2	2	Herbivore	Open savanna woodland and grassland areas
Tragelaphus strepsiceros	Kudu	Mammal	12	7	Browser	Dense bush, light forest and hilly areas
Orycteropus afer	Aardvark	Mammal	1	1	Omnivore	Open savanna woodland and grassland areas
Raphicerus campestris	Steenbok	Mammal	1	1	Browser	Open savanna grasslands and all other environments except rainforests and arid landscapes

Table 8.11. Past and present animals species respresented by Chumnungwa archaeofauna

Taxon	Common Name	Local Name	Past	Present
Orycteropus afer	Aardvark	Hweru/Sambani	✓	✓
Canis mesomelas	Black backed jackal	Gava		✓
Syncerus caffer	Buffalo	Nyati	✓	✓
Tragelaphus scriptus	Bushbuck	Dzoma		✓
Potamochoeus porcus	Bushpig	Humba		✓
Bos taurus	Cattle	Mombe/N'ombe	✓	✓
Sylvicapra grimmia	Common Duiker	Mhembwe		✓
Crocodylus acutus	Crocodile	Ngwena		✓
Capra	Goat	Mbudzi		✓
Tragelaphus oryx	Eland	Mhofu/Nhuka	✓	✓
Giraffa camelopardalis	Giraffe	Twiza		✓
Lepus capensis	Hare	Shuro/Tsuro		✓
Hippopotamus amphibius	Hippopotamus	Mvuu		✓
Mellivora capensis	Honey badger	Tsere		✓
Homo sapiens	Human	Munhu	✓	✓
Ovis	Sheep	Gwayi	✓	✓
Aepyceros melampus	Impala	Mhara	✓	✓
Oreotragus oreotragus	Klipspringer	Nguruguru		✓
Tragelaphus strepsiceros	Kudu	Nhoro	✓	✓
Achatina sp.	Land snail	Hohzwe	✓	✓
Panthera pardus	Leopard	Mbada		✓
Cercopithecus aethiops	Monkey	Tsoko		✓
Struthio camelus	Ostrich	Mhou		✓
Erethizon dorsatum	Porcupine	Ngara		✓
Procavia capensis	Rock hyrax	Mbira	✓	✓
Redunca redunca	Reedbuck	Bimha		✓
Aethomys chrysophilus	Red veld rat	Mbeva/Matapi	✓	✓
Hippotragus niger	Sable	Ngwarati/Mharapara		✓
Tamiascurus hudsonicus	Squirrel	Mutswiri?		✓
Raphicerus campestris	Steenbuck	Mhene	✓	✓

Stigmochelys pardallis	Tortoise	Kamba	✓	✓
Phacochoerus aethiopicus	Warthog	Njiri	✓	✓
Kobus ellipsiprymnus	Waterbuck	Dhumukwa	✓	✓
Ceratotherium simum	White Rhinoceros	Chipembere		✓
Connochaetes taurius	Wildebeest	Ngongoni/Mvumba	✓	✓
Heterohyrax	Yellow-spotted rock hyrax	Mbira	✓	✓
Equus quagga	Zebra	Mbizi		✓
Panthera leo	Lion	Shumba		✓
Damaliscus lunatus	Tsessebe	Nondo		✓
Tragelaphus angasii	Nyala	Nyara		✓
Crocuta crocuta	Spotted hyena	Bere		✓
Canis lupus familiaris	Dog	Imbwa		✓
Gallus gallus domesticus	Chicken	Huku		✓

Given that we now know the general environment in which the animals represented at Chumnungwa lived, one of the burning questions that is yet to be answered is, *how were these animals procured?* A critical study of Table 8.12 shows that the majority (46.16%) of the animals consumed at Chumnungwa were acquired through hunting. The presence of diverse wild mammal species such as wildebeest (*Connochaetes*), sable (*Hippotragus niger*), waterbuck (*Kobus ellipsiprymnus*), aardvark (*Orycteropus afer*), and steenbok (*Raphicerus campestris*) suggests some members of the Chumnungwa community had been expert hunters who employed specialised hunting skills to capture these animals primarily for food and other secondary purposes. Hunting is likely to have been a seasonal activity which could be done at individual level but, on most occasions, it was a communal effort where men amalgamated forming hunting expedition parties that led them to disappear into the bush for weeks or months to hunt and only come back to the respective homesteads with the kill (Elton 1873; Beach 1977; Hamutyinei 1989). Large ungulates such as buffalo (*Syncerus caffer*), Eland (*Taurotragus oryx*), kudu (*Tragelaphus strepsiceros*), and impala (*Aespyceros meumpus*) were likely to have been hunted using spears, knobkerries, bows, and arrows. Murtalligical evidence was recovered onsite that supports hunting (see Chapter 9).

The predominance of skeletal parts from the big game such as sable (*Hippotragus niger*), buffalo (*Syncerus caffer*) and kudu (*Tragelaphus strepsiceros*), suggests two things. Firstly, there is a possibility that large game was preferred by the Chumnungwa hunters since it provided large meat returns in light of the hunting efforts they invested (sensu Manyanga & Pangeti 2017). Secondly, the size of these mammals suggests that they were not hunted far away from Chumnungwa, otherwise the technicalities of transporting the carcass of these animals would be difficult unless they deboned the carcass (sensu Manyanga & Pangeti 2017). As for the medium-sized game i.e. aardvark (*Orycteropus afer*), and steenbok (*Raphicerus campestris*), the hunters seem to have had the luxury of hunting them from distant areas as they could easily transport them back to Chumnungwa. However, in some cases, we know from Shona ethno-folklore that distance influenced hunters to debone their kill during the hunting trip, therefore, they selected the best portions while the remainder of the carcass was left in the bush (see Kuimba 1968; Zvarevashe, 1976; Mutasa 1978; Hamutyinei, 1989; Chakaipa 1991; Hanson, 2005). Perhaps these dynamics explain why complete skeletons of wild animals represented at Chumnungwa were not recovered from the middens that were excavated inside the hilltop and foothill areas. Nevertheless, more research is needed to ascertain these propositions since we are dealing with a fragment of the foodways of the Chumnungwa people.

Table 8.12. Shona animal procurement strategies and uses (Adopted from De Waal 1896; Bullock 1927; Holleman 1952; Gelfand 1966; Bourdillon 1976; Beach 1977; Aschwanden 1982, 1987; Skinner & Chimimba 2005; Shoko 2005; Mavhunga 2014, 2017; Castello 2016; Manyanga & Pangeti 2017).

Taxon	Common Name	Local Name	Primary Use	Secondary Use
Domesticated (This animal procurement strategy is locally known as *kupfuya*)				
Ovis	Sheep	*Gwayi*	Food source (meat)	-Wool used for making blankets *(magudza)* -A store of wealth used for barter trade, paying fines *(muripo*, and also inherited as *nhaka* -Sheep is also used as a totem
Capra	Goat	*Mbudzi*	Food source (meat & milk)	-Skin used for making aprons *(nhembe)*, bellows, and mats. During funeral rites, dead bodies of children are wrapped and buried inside goat skin -Offered to the maternal ancestry during ritual for protecting and enhancing fertility (*masungiro*). In some rituals (i.e. *kutsipika)* a goat is used to pacify avenging spirits *(ngozi)* by repelling it into the bush *(kurasirira).* -A store of wealth used for barter trade, paying *roora* (bride wealth), and fines *(muripo)* -Horn used as containers for storing medicinal charms *(makona/nyanga)* or snuff *(bute)*
Bos taurus	Cattle	*Mombe /N'ombe*	Food source (meat & milk	-Offered to the ancestors *(vadzimu)* during ceremonies & rituals (i.e. bira, nhimbe, *rufu, kurova guva* ceremony) -Skin used for making *(nhembe)*, drums *(ngoma)*, and mats. During funeral rites, dead bodies of adults are wrapped and buried inside the skin of slaughtered beast -Horn used for as containers for *makona* and *bute* -A store of wealth used for barter trade, paying *roora (danga)* and *muripo* -Totem for the Moyo (chirandu)/Vayera/Bvumavaranda clans -Dung *(ndove)* used for making house floors and walls(kudzura) and fertilising agricultural fields. In times of food scarcity can be dried and roasted as food -In the context of oxen *(madhonza)* used as drawing power for pulling or carrying heavy loads such tree logs for firewood -Sometimes loaned as a way of establishing social ties or head management *(kuronzera)*
Gathered (This animal procurement strategy is locally known as *kushuzha*, *kusunza* or *kushava*)				
Achatina sp.	Land snail	*Hozhwe*	Food (meat)	-Raw material for making shell beads *(zvuma)* -Traditional veterinary medicine for treating cattle cataracts and treating tropical ulcers in humans
Stigmochelys pardallis	Leopard tortoise	*Kamba*	Food (meat)	- Carapace is part of the attire of traditional healers and diviners *(n'anga)* -Medicinal food prescribed by *n'anga* for chest pains

Table 8.12. (continuation)

Taxon	Common Name	Local Name	Primary Use	Secondary Use
Snared (This animal procurement strategy is locally known as *kuteya misungo* or *mariva*)				
Procavia capensis	Rock hyrax	*Mbira*	Food (meat)	
Heterohyrax	Yellow-spotted rock hyrax	*Mbira*	Food (meat)	
Aethomys chrysophilus	Red veld rat	*Mbeva /Matapi*	Food (meat)	-Totem for VaRemba people
*Hunted (*This animal procurement strategy is locally known as *kuvhima*)				
Connochaetes	Wildebeest	*Ngongoni /Nyowani /Mvumba*	Food (meat)	-Skin used for making *(nhembe),* and mats
Syncerus caffer	Buffalo	*Nyati*	Food (meat)	-Skin used for making *(nhembe),* and mats -Totem for VaShonga clans
Hippotragus niger	Sable	Ngwarati /Mharapara	Food (meat)	-Skin used for making hides
Aespyceros meumpus	Impala	*Mhara*	Food (meat)	-Skin used for making *(nhembe),* and mats -Totem for Vaera Mhara
Taurotragus oryx	Eland	*Mhofu /Nhuka*	Food (meat)	-Skin used for making *(nhembe),* and mats -Totem for Vahera/Chihera /Museyamwa people
Kobus ellipsiprymnus	Waterbuck	*Dhumukwa*	Food (meat)	-Skin used for making *(nhembe),* and mats -Totem for Shava people
Tragelaphus strepsiceros	Kudu	*Nhoro*	Food (meat)	- Skin used for making *(nhembe),* and mats -Horn used for making *hwamanda* -Totem
Orycteropus afer	Aardvark	*Hweru /Sambani /Gwerekwete*	Food (meat)	-Snout and nails are used by *n'anga* for making medicinal charms -Totem for vaera Gwerekete

Raphicerus campestris	Steenbok	*Mhene*	Food (meat)	-Skin used for making *(nhembe)*, and mats

Apart from being hunted, the majority (27,37%) of the animals recovered at Chumnungwa were domesticated (Table 8.12). Archaeological evidence for animal domestication onsite is demonstrated by the presence of *Bos taurus* and *Ovis/Capra* remains within the Chumnungwa faunal assemblage and the presence of two kraals on-site, both with huge layerings of vitrified dung (see Chapter 4) which is direct evidence of domestication of large numbers of cattle and ovicaprines onsite. Because of the size of their livestock, the residents of Chumnungwa are likely to have collectively kept their cattle inside the large kraal situated on the western end of foothill whilst the ovicaprines were kept inside the smaller kraal situated on the western end of the hilltop. These pens are typical of livestock enclosures that were recorded at other Zimbabwe tradition sites such as Mapela (Chirikure et al. 2014); Tshobwane; Mutshilachokwe; Village 16 Manyanga (2006); Mananzve (Nyamushosho et al. 2018); Khami (Robinson 1959; Mukwende et al. 2018) where livestock was domesticated. Figure 4.5 (Chapter 4) shows a traditional kraal which is commonly used to pen goats and sheep in the areas surrounding Chumnungwa today. Probability is very high that the livestock kraals recorded at Chumnungwa were designed in the same way, and their differences were likely a matter of size.

Moreover, the presence of cranial and postcranial bone fragments of both young and adult species of *Bos taurus* and *Ovis/Capra* in both the hilltop and foothill areas of Chumnungwa reflects a slaughtering pattern of domestic animals that was democratic. In as much as it is generally believed that the elites who resided at the Zimbabwe tradition sites enclosures were entitled to the best parts (soft and meaty) of domestic animals slaughtered particularly juvenile cattle (Thorp 1995; Huffman 1996). The picture portrayed at Chumnungwa looks different, we see a pattern of slaughtering both young and adult cattle and caprines, but with more bias on adults. Likely adult species of *Bos taurus* and *Ovis/Capra* were preferred as a herd management strategy to secure the new breeds. This is a common practice among the Shona people (Sibanda & Ndlovu 1992; Scoones 1996; Manyanga 2006).

The exploitation of both juvenile and adult cattle, however, with a more bias on the mature ones shows that despite whether one lived on the hilltop or foothill, all the residents of Chumnungwa had the liberty to enjoy tender beef (meat) from young cattle as well as that from mature cattle. In other words, food (with reference to beef) was possibly a democratic resource that did not indicate or signal social status. Elsewhere, this was demonstrated by Chiripanhura's (2018) study at Great Zimbabwe which revealed that both juvenile and old cattle bones were prevalent throughout the elite and commoner spaces such as the Carpark midden, Western Enclosure, and Chenga ruin. This implied that both young and adult cattle were consumed by both commoners and elites at Great Zimbabwe. A similar trend was also uncovered at Khami (Mukwende et al 2018) and Mananzve (Nyamushosho et al 2018).

The presence of *Achatina sp*. (land snail) and *Stigmochelys pardalis* (leopard tortoise) species onsite provides us with another line of evidence which shows that 17,64% of the animals exploited at Chumnungwa were acquired through gathering (see Table 8.1). While most of the archaeozoological studies (i.e. Plug 1990; 1997a) largely recover land snails at Iron Age settlements that would have self-introduced, the visible modifications on the Chumnungwa shells clearly shows that they were intentionally brought to the site, perhaps as food or source of raw materials for making shell beads. For instance, as I noticed among the Shona communities that reside within the vicinity of Chumnungwa during my fieldwork, land snails *(hozhwa)*, particularly the giant ones, might have been a delicacy for the Chumnungwa Iron Age community (sensu Badenhorst et al. 2011; Shenjere-Nyabezi 2017) that were usually gathered in the middle of doing of other business such as tilling the land, herding or even hunting (Beach 1977; Shoko 2007). Similarly, to the current practices among the Shona-speaking communities in Mberengwa, the residents of Chumnungwa might have used powder from the crushed shells of land snails to treat animal diseases such as cattle cataract

The presence of small-sized animals such as *Aves* (bird), *Procavia capensis* (rock hyrax), *Heterohyrax* (yellow-spotted rock hyrax) and *Aethomys chrysophilus* (red veld rat/mice) species shows that 8.67% of the animals represented at Chumnungwa were procured through snaring. Whilst skeletal parts of species such as *Aves* could be secondarily used to make musical and communication devices such as bone whistles (see Chapter 9), the majority of the bone and flesh of birds and rodents (particularly mice) were roasted and consumed in the bush whilst herding, hence few carcasses ever reached the homesteads. Perhaps this helps to explain why very few birds and rodent bones were recovered from Chumnungwa.

Furthermore, it is commonly acknowledged, that red veld rats[40] (mice) are a delicacy to the Shona people (i.e. Franklin 1935; Jackson 1954; Gelfand 1971; Wilson 1990; Mazarire 2016). Among the notable accounts relating this symbiotic relationship between mice and the Shona people is one given by David Christiaan De Waal, former mayor of Cape Town (1889-1890). Based on his personal experiences with the Shona people during their 1890 explorations of the

---

[40] Locally known as *mbeva* or *matapi*.

interior of the Zambezia landscape with his close friend, Cecil Rhodes, he had this to say about red veld rats.

"The natives, however, are fond of them; they catch them and eat them. It happens now and then that a Kafir would smilingly appear at a camp with a number of rats tied to a stick and offer them for sale…" (De Waal 1896: 261).

In as much as the massive racial prejudice and belittling of indigenous Africans at the time influenced De Waal to mistakenly assume that the Shona consumed house rats *(Rattus rattus)*, his observation truly reflected a portion of the precolonial foodways of the Shona-speaking people which archaeologically is also captured by the Chumnungwa archaeofauna.

8.7. SUMMARY

Archaeofauna from Chumnungwa portrays an Iron Age society whose animal economy thrived on the exploitation of both wild and domestic species. The animals consumed ranged from molluscs and reptiles to mammals. The latter were predominant, particularly cattle, which shows that Chumnungwa had a strong cattle-keeping economy. The presence of ungulates that generally thrived in open dry savanna grasslands and woodland areas depicted the Chumnungwa past environment as being more similar to that of the present. This was buttressed by the fact that most of the identified animals still roam the area today. So many techniques were employed by the Chumnungwa community to procure these animals onsite, however, the majority of these appear to have been acquired through hunting. In as much as the quantities, the animal species from both the hilltop and foothill areas of Chumnungwa differed due to the weaknesses of sampling strategies applied in this study and other taphonomy variables relating to the fragmentation; the comparison of acheofauna clearly showed that residents of Chumnungwa, regardless of status, were free to consume any domesticated animal resource whether adult or juvenile. However, because of the need to secure the new breeds of *Bos taurus* and *Ovis/Capra* species for the future they preferred to slaughter the adults. Furthermore, the picture portrayed by archaeofauna from Chumnungwa shows a community whose meat diet was supplemented by wild game, particularly in times of drought. However, beyond protein consumption, the uses of these animals in the everyday life of the Chumnungwa community were manifold as be further discussed in Chapter 10.

CHAPTER NINE

CRAFTING AT CHUMNUNGWA: METALS, LITHICS, SPINDLE WHORLS, SHELL BEADS, FIGURINES, WORKED BONE, & SOAPSTONE

"crafting can be studied at many different scales of analysis, from household archaeology to regional studies" (Costin 2005:1076).

9.1. INTRODUCTION

In archaeology, crafting is one of the universal human behaviours that was prominent in the everyday life of societies of the ancient past (Costin 1991, 2001, 2005; Wailes 1996; Sinopoli 2003; Shimada 2007). In a basic sense, crafting is a human action that is 'design-directed' to produce material objects used for various purposes (sensu Costin 1998:4). During the excavations of middens, archaeologists retrieve numerous objects that are made from a range of raw materials including metals, clay, shell, animal bone, and stone. Archaeologists believe that studying these objects reveals the various crafting activities that were conducted by ancient societies. This might be for adornment purposes, social identity, or status. Thus, archaeologists regard crafted objects as "reluctant witnesses" which possess data that can be useful in revealing the everyday life of a society at any given site (Caple 2006; Tilley et al. 2006). At a broader scale, studying crafting exposes the role of material culture in the everyday life of ancient societies (Caple 2006; Huffman 2007; Hicks & Beaudry 2010; Wynne-Jones 2013; Chirikure 2015). In light of the above, this chapter was aimed at examining the numerous finds that were recovered at Chumnungwa using standard archaeological approaches of artefact studies. This was done to comprehensively ascertain the range of indigenous crafts that were produced and consumed across the hilltop and foothill areas of the site. More importantly, the chapter also traced the functional roles of the crafts in the daily lives of the residence of Chumnungwa. Recourse was made to Shona anthropology and history to achieve this. This line of inquiry was significant because Chumnungwa is situated in a geographic area that is resource-rich, as highlighted in Chapter 2. Thus, it was vital to know from the available archaeological evidence of crafting (recovered onsite) how the residents of Chumnungwa took advantage of the local resources to enhance their everyday life.

9.2. CRAFTING STUDIES IN SOUTHERN AFRICAN IRON AGE: AN OVERVIEW

In southern African Iron Age, studies on indigenous crafting enjoy more than a century of archaeological research by both amateurs and professionals. The legacy of the earliest studies is mostly clouded by selective biases on specific crafts that were made from gold, soapstone, ivory, glass, porcelain, and other fine objects which were rated as 'prestige goods'[41]. These crafts were regarded by antiquarians who plundered most Iron Age sites during the 19th century as products of foreign civilisations originating from Phoenicians and Serbians, whom they believed to have constructed and resided at the various Zimbabwe type sites in southern Zambezia (see Chapter 3). However, with time and as the archaeological practice became professionalised, the coming in of astute researchers such as Caton-Thompson (1931), Summers et al. (1961) and Garlake (1973) ushered in a new era of standard material culture studies which showed that most of the crafts such as spindle-whorl discs, pottery, soapstone figurines, and metals were produced locally by the ancestry of the Shona-speaking people for local and regional consumption. Over the years, crafting has become topical in most studies (i.e. Voigt 1983; Matenga 1993; Huffman 1996, 2007; Pwiti 1996b; Antonites 2012, 2019; Van Waarden 2012; Pikirayi & LindahI 2013; Chirikure 2015, 2019; Bandama et al. 2016; Klehm et al. 2017; Mukwende et al. 2018). However, the region is yet to undertake a comprehensive review that integrates Iron Age crafting activities, spanning the first and second millennials since crafting is usually found in the appendices of most Iron Age studies. Nevertheless, as has been the norm in most of these studies, various crafts that were recovered at Chumnungwa shall be examined below separately, however, this will be done with the realisation that they were produced, circulated, and consumed alongside each other.

9.3. METALS

9.3.1. BACKGROUND

Several studies undertaken in southern Zambezia pinpoint metals as one of the dominant indigenous crafts that were produced and consumed by numerous Iron Age communities

---

[41] Generally, archaeologists and anthropologists regard these as high-class goods that are produced for the elites by specialist craftsman using special raw materials. Their consumption is believed to have been limited to these specific classes of consumers (Friedman & Rowlands 1977; Stein 1996; Earle 2001; Huffman 2007).

(Summers 1969; Miller & Van Der Merwe 1994; Miller 2002; Swan 2007; Chirikure 2015). Iron and copper objects are believed to have been crafted first during the early first millennium CE followed by those made of gold, bronze, and other alloyed metals towards the late first millennium and early second millennium CE (Chirikure 2015). The available archaeological evidence from Iron Age settlements such as Chedzugwe (Garlake 1970), Nenga (Van De merwe 1978); Hlamba Mlonga (Thorp 2009), Zvongombe, Kasekete, (Pwiti 1996b), and Matendera (Caton-Thompson 1931) shows that most metal artistries were crafted using iron. In most cases, iron was used for making weapons such as spearheads, arrowheads, axes as well as utilitarian implements such as hoe heads, knives blades, and chisels. However, in some exceptional cases, as has been demonstrated at Great Zimbabwe (Bandama et al. 2016:5) and the Nyanga archaeological complex (Summers 1958:131-132), iron was used also to craft keys of musical instruments such as *mbira* (thumb piano). Copper mostly served as a raw material for crafting jewellery particularly, bangles, bracelets, anklets, necklaces, beads, earrings, and finger rings which, in most cases, were consumed by women for adornment purposes. Archaeometallurgists believe this metal was more valued than gold to the extent that some regard it as the "red gold of Africa" (Herbert 1984), In some cases it is postulated that some metalworkers crafted ingots of copper as repositories of wealth which served as currencies for regional and international trade (Summers 1969; Miller 2002; Chirikure 2015; Bandama et al. 2018). Like copper, gold was similarly used for crafting jewellery and in some instances because of its malleability and ductility, it could be further made into foil, and nails which were fashioned into figurines, bowls, and other ornamental forms (Chirikure 2015). The recovery of large quantities of golden artefacts in royal burial contexts at places such as Mapungubwe (Fouché 1937), Thulamela (Steyn et al. 1998), Danamombe (Caton-Thompson 1931), and Ingombe Ilede (Fagan et al. 1969; McIntosh & Fagan 2017) has influenced many archaeologists to believe that gold was used predominantly for crafting elitist material culture especially for those civilisations who traded with the Swahili or the Portuguese merchants (Huffman 2007; Swan 2008). Whilst this thinking applies to some Iron Age contexts, new research at places such as Great Zimbabwe is beginning to show that crafting, distribution, and consumption of objects once regarded as 'elitist' transcended into spaces that were associated with the common people (see Chirikure et al. 2018). Alloyed metals such as bronze are believed to have complimented copper and iron crafting but, in some cases, bronze was used for making some ceremonial regalia such as spearheads, such as those recovered at Great Zimbabwe (Garlake 1973b). For some archaeologists (i.e. Miller 2002:1125) this clearly shows that bronze crafts were a preserve for the elites, which they manipulated as symbols of status and power

(Herbert 1996). Nevertheless, further research is needed to ascertain this thinking, particularly when confronted with the new findings that show that most Iron Age sites such as Great Zimbabwe, Thulamela and Jahunda revealed more bronze than copper (Miller 2002; Bandama et al. 2018).

Recent archaeometallurgical studies have also enabled archaeologists to generate an understanding of the societal notions of fecundity that underlined by processes of metal crafting (both smelting and smithing) in southern Africa (see Ndoro 1991; Collett, 1993; Herbert 1996; Chirikure 2015; Chirikure et al. 2015). Furthermore, the recovery of metal smelting debris such as furnaces, tuyeres, and flow slag at places such as Great Zimbabwe (Bent 1896; Caton-Thompson 1931; Collett et al. 1991; Herbert 1996; Bandama et al. 2016; Mtetwa 2017), Jahunda (Bandama et al. 2018), Zvongombe, and Kasekete (Pwiti 1996b) even demonstrated that processing of metal ores was conducted onsite within the residential quotas. More importantly, unlike as previously understood (see Huffman 2007), it now appears that crafting of metals at most Iron Age capitals such as Great Zimbabwe was largely household-based (Bandama et al. 2016).

In summary, studies on the crafting of metals reveal mining and metallurgy as pillars of the economies of most Iron Age communities (Chirikure 2015). The bulk of the metal ores mined by these communities was used to make utilitarian and jewellery items that were consumed locally, whilst a portion of gold, copper, iron, and tin was exported to China, India, and Europe via the Indian Ocean trade rim (Hall 1987; Pikirayi 2001; Mitchell 2002; Phillipson 2005; Huffman 2007). In return, they acquired glass beads and other exotic goods which they incorporated into their everyday material culture. Regionally, metals could be traded in exchange for cattle, wives, and other locally produced goods (see Beach 1980; Chirikure 2015).

9.3.2. ANALYTICAL METHOD

All metals and metalworking debris excavated from the hilltop and foothill areas of Chumnungwa were non-invasively examined and classified into ores, slags, technical ceramics, and metallic object categories using the standard methods for metal analysis used in archaeometallurgy (see Miller & Van Der Merwe 1994:33-36; Miller & Killick 2004; Chirikure & Rehren 2006; Martinón-Torres & Rehren 2009; Chirikure 2015; Bandama et al. 2016). No attempt was made to stabilize the corroded metals as this helped to preserve the chemical properties of the metallic objects. However, in cases where some of the metals were too corroded to be identified, a portable-X-ray fluorescence machine (pXRF) or an Optical

Microscope (OM) was used. A comprehensive inventory of the recorded attributes at a stratigraphical level is provided in Appendix 6.

9.3.3. ANALYSIS AND RESULTS

A total of 875 metallurgical objects weighing 5065, 56 g were recovered from Chumnungwa. However, due to the uneven distribution of the excavated middens between the areas, the majority of metal and metalworking debris was recovered from the hilltop area (total=666/weight=4320,99 g). Although most of the objects from both the hilltop and foothill areas were fragmented, they shared a similar typology. Ultimately, the whole assemblage was easily classified respectively into ores, slags, technical ceramics, and metallic object categories (see Tables 9.1, 9.2, 9,3, and Figures 9. 1 to 9.7).

Most of the metal objects and metalworking debris identified was represented in most of the excavated spaces within the hilltop and foothill areas, however, only one sample of haematite ore was recovered from the hilltop area (Figure 9.1). A total of 448 nodules of slag mostly comprised of oxide waste products that were formed during the smelting of the metals, were recovered. These pieces weighed 4243gms, hence they formed the largest density of metallurgical debris that was recovered onsite (Figures 9.2 and 9.5). Technical ceramics comprised of tuyere fragments (N=3/w= 108,2 g), and crucible fragments (N=6/w=95,92 g) and a bead mould (N=1/42,1 g). One of the crucibles had gold droplets adhering to the attached slag (Figures 9.3 and 9.6).

The majority of the metallic objects recovered from Chumnungwa was crafted using iron (52.6%/weight=186,31 g) followed by bronze (44%/weight=65,8 g) then copper (2,7,7%/weight= 2,5 g). As demonstrated in Figures 9.4 and 9.7, iron was used to craft a range of objects which included arrowheads, bangles, beads, blades, hoe heads, scrapers, spearheads, rings, and *mbira keys*. Bronze was used to craft bangles and wires. Most of the bronze bangles were crafted using fibre and bone cores. The most exceptional bronze object was one fragment of a bangle disc which was decorated with a herringbone pattern. Copper was similarly used to make bangles, rings, and wire. The most exceptional copper object recorded at Chumnungwa was a plaited copper bangle fragment.

Table 9.1. Summary of the typological and metric attributes of ores, slag and technical ceramics recovered from the hilltop area of Chumnungwa

Object Type	Surface		TP 1		TP 2		TP 3		TP 4		TP 5		TP 6		TP 7		TP 8		Total	
	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W
Ore																				
Ore	1	321																	1	321
Total	1	321																	1	321
Slag																				
Slag	51	1536.06	63	478	1	0.9			1	1.36	11	400			110	410.4	104	858.97	341	3685.7
Total	51	1536.06	63	478	1	0.9			1	1.36	11	400			110	410.4	104	858.97	341	3685.7
Technical ceramics																				
Crucible fragment	2	28.9											2	8.23					4	37.13
Gold smelting crucible fragment													1	11.6					1	11.6
Tuyere fragment									1	32.8									1	32.8
Bead mould fragment													1	1.23					1	1.23
Total	2	28.9							1	32.8			3	19.83					7	82.76

TP = Test Pit Q = Quantity W = Weight (grammes)

Table 9.2. Summary of the typological and metric attributes of metallic objects recovered from the hilltop area of Chumnungwa

Object Type	Surface		TP 1		TP 2		TP 3		TP 4		TP 5		TP 6		TP 7		TP 8		Total	
	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W
Bronze wire					1	0.05			2	0.31	1	0.12	1	0.37	5	0.67	9	1.27	19	2.79
Bronze ring	1	3.8	1	0.14															2	3.94
Bronze-wound bangle fragment	1	0.05							1	0.59	8	0.98			28	2.25	4	0.46	42	4.33
Bronze bangle fragment with herringbone decoration							1	5.41											1	5.41
Bronze wire bangle fragment with hollow bone core							1	6.4											1	6.4
Bronze-wound bangle fragment with fibre core					2	0.46	2	1.75	10	1.42	3	0.63			6	1.87	35	13.8	58	19.93
Copper bangle fragment											1	0.08							1	0.08
Cuprous wire			2	0.12															2	0.12
Cuprous-wound wire			1	0.2			1	0.32			1	0.21							3	0.73
Iron arrowhead fragment							1	8											1	8
Iron bangle fragment					1	0.08													1	0.08
Iron bangle fragment with hollow core					14	2.19					1	0.21	28	6.02	77	22.33	40	21.62	160	52.37
Iron bead fragment															1	0.24			1	0.24
Iron blade fragment											2	1.98			4	1.93	10	8.66	16	12.57
Iron hoe head fragment																	4	45.55	4	45.55
Iron *mbira* key fragment															2	6.68			2	6.68
Iron scrapper fragment																	1	17.9	1	17.9
Iron spear blade fragment																	1	2.31	1	2.31
Total	2	3.85	4	0.46	17	2.78	6	21.88	13	2.32	17	4.21	29	6.39	123	35.97	104	111.57	316	189.43

TP = Test Pit   Q = Quantity   W = Weight (grammes)

Table 9.3. Summary of the typological and metric attributes of metallurgical objects recovered from the foothill area of Chumnungwa

Object Type	Surface		TP 9		TP 10		TP 11		TP 12		TP 13		Total	
	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W
Slag														
Slags	87	455.6			12	100.9	8	0.8					107	557.3
Total	87	455.6			12	100.9	8	0.8					107	557.3
Technical ceramics														
Crucible	1	30.29									1	16.9	2	47.19
Tuyere fragment			2	75.4									2	75.4
Total	1	30.29	2	75.4							1	16.9	4	122.59
Metallic objects														
Bronze wire			2	0.65			17	1.1					19	1.75
Bronze-wound bangle fragment			1	0.35	2	0.56	10	1291	13	3.29	5	0.83	31	17.94
Bronze-wound bangle fragment with fibre core							17	2.47	2	0.45	2	0.39	21	3.31
Copper plaited bangle fragment	1	0.57											1	0.57
Copper ring	1	0.28											1	0.28
Cuprous wire					2	0.74	2	0.06					4	0.8
Iron arrowhead fragment									2	6.08			2	6.08
Iron bangle fragment							1	10.44					1	10.44
Iron bangle fragment with fibre core											1	0.13	1	0.13
Iron bangle fragment with hollow core			7	2.49	13	3.69	1	0.97	10	3.82	3	0.97	34	11.94
Iron mbira key fragment			1	5.81									1	5.81
Iron ring							1	0.021					1	0.021
Iron spear blade fragment			1	5.61									1	5.61
Total	2	0.85	12	14.91	17	4.99	49	1306.06	27	13.64	11	2.32	118	64.681

TP = Test Pit Q = Quantity W = Weight (grammes)

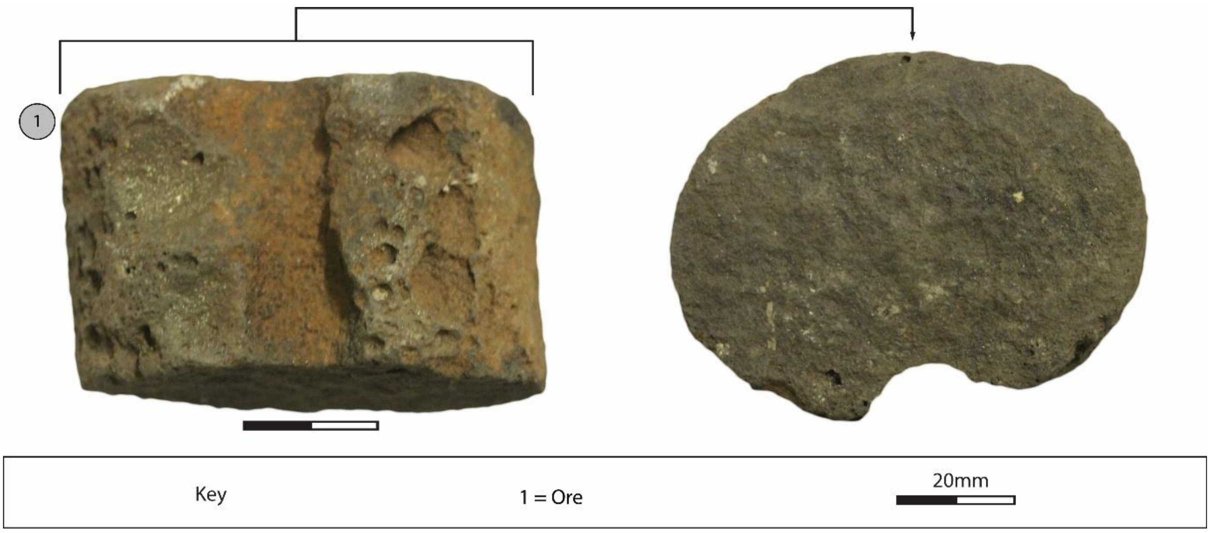


Figure 9.1. Ore recovered from the hilltop area of Chumnungwa

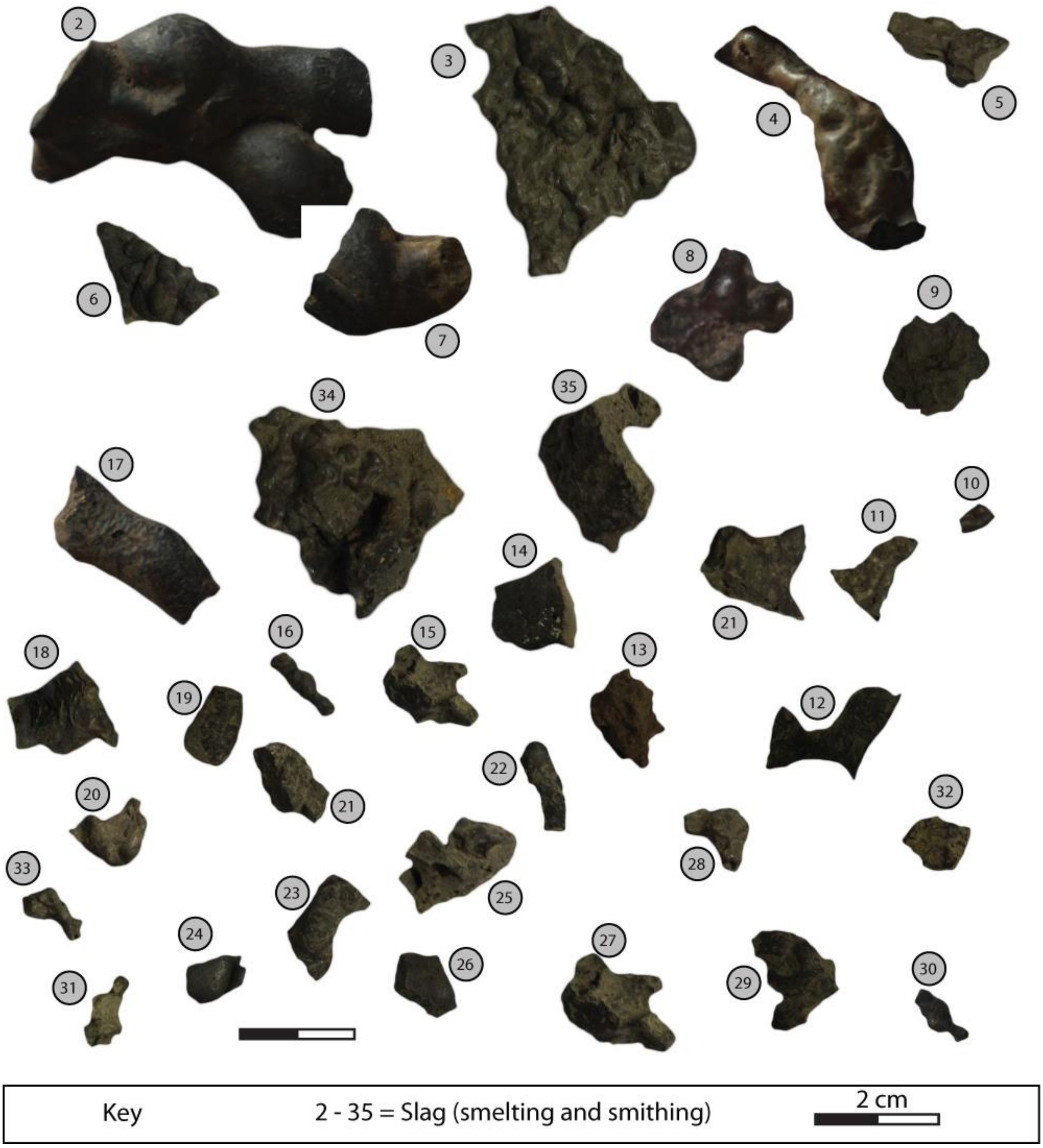


Figure 9.2. Sample of slag recovered from the hilltop area of Chumnungwa

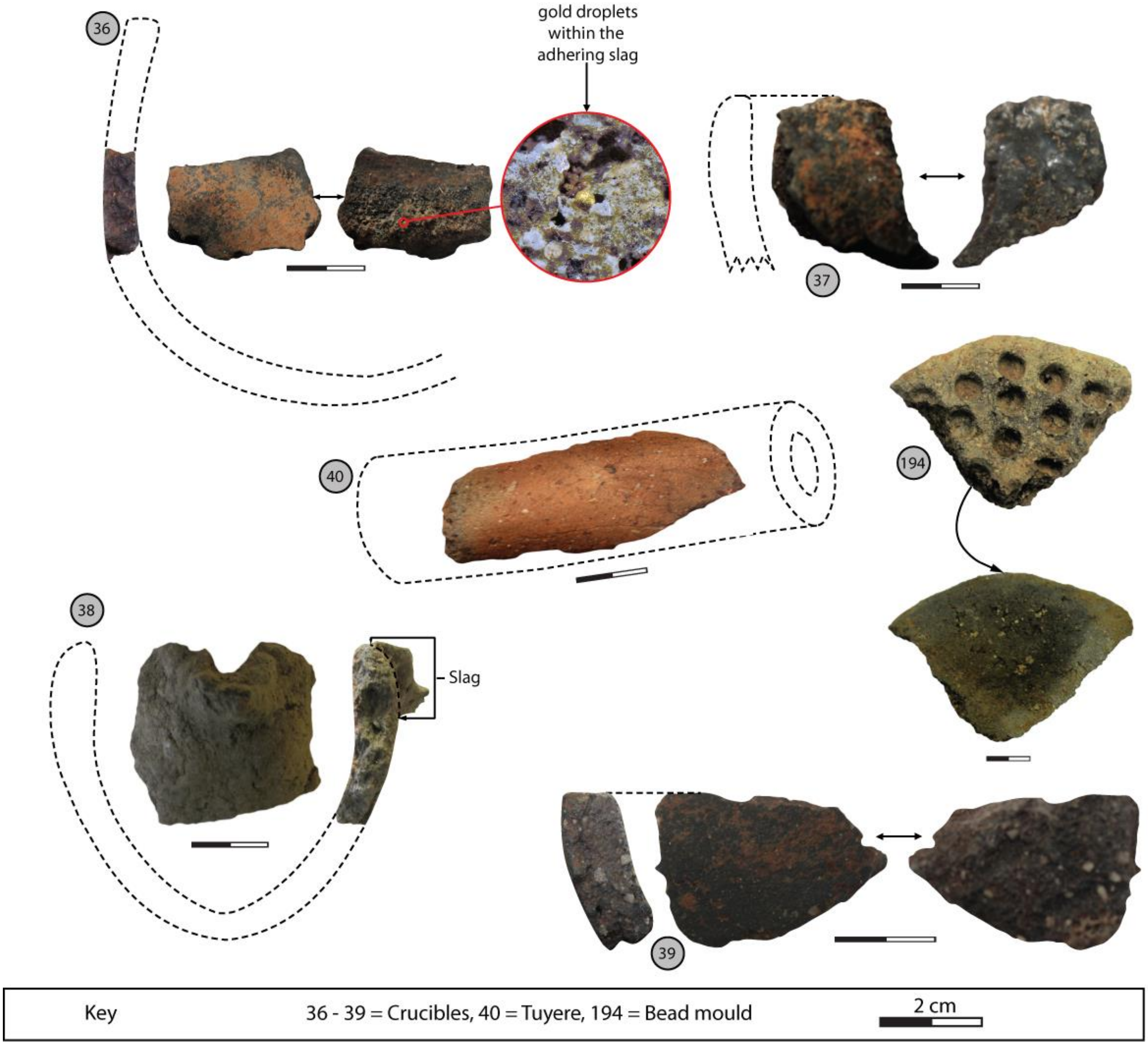


Figure 9.3. Sample of technical ceramics recovered from the hilltop area of Chumnungwa

Key

2 cm

41 - 44 = Iron hoe head fragments, 45 = Bronze wire bangle fragment with hollow bone core, 46 - 47 = Iron mbira key fragments, 48 = Bronze bangle fragment with herringbone decoration, 49 - 51 = Cuprous-wound wires, 52 - 53 = Cuprous wires, 54 - 60 = Bronze wires , 61 = Iron bangle fragment, 62 = Iron arrowhead fragment, 63 = Iron bead fragment, 64 = Iron spear blade fragment, 65 = Iron scrapper fragment, 66 - 72 = Iron blade fragments, 73 - 84 = Iron bangle fragments with hollow cores, 85 - 91 = Bronze-wound bangle fragments with fibre cores, 92 - 97 = Bronze-wound bangle fragments, 98 = Bronze ring

Figure 9.4. Sample of metallic objects recovered from the hilltop area of Chumnungwa

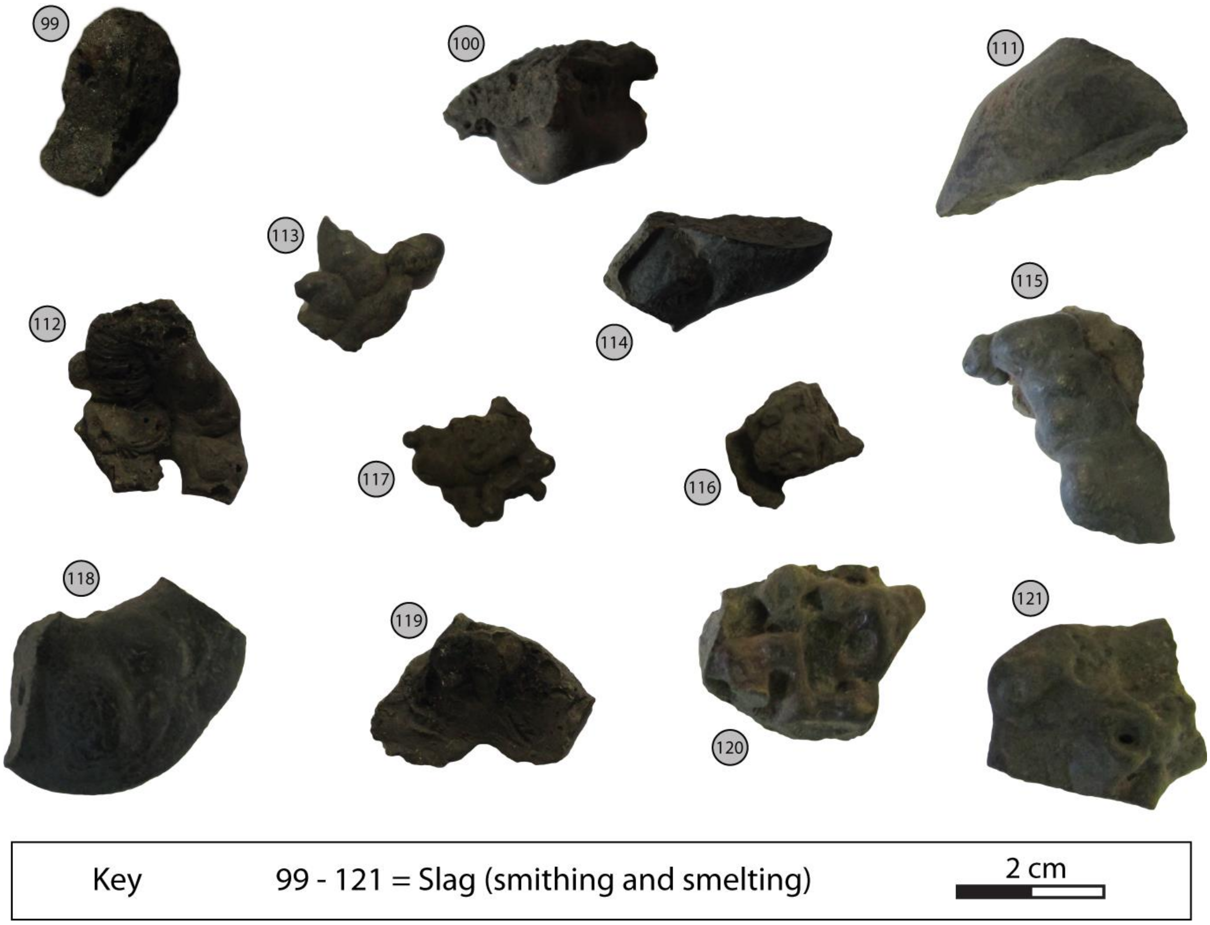


Figure 9.5. Sample of slag recovered from the foothill area of Chumnungwa

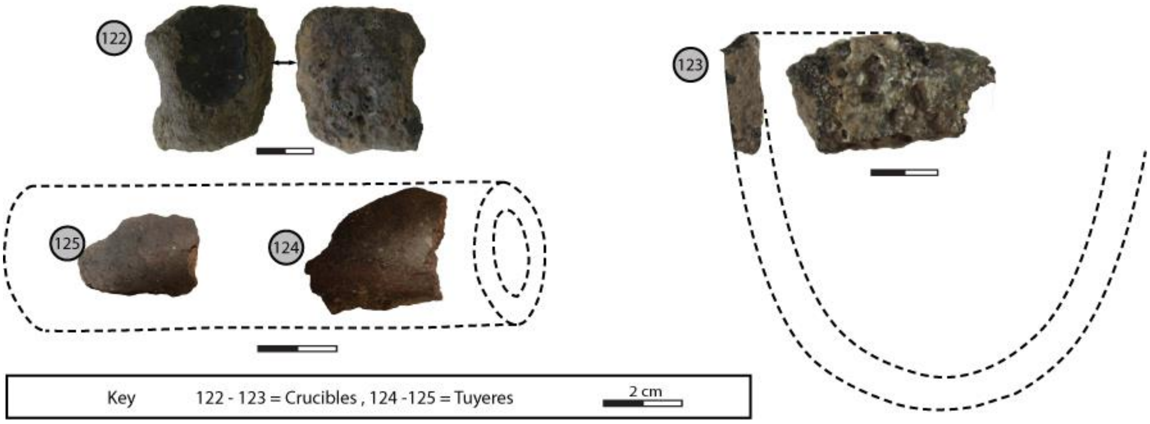


Figure 9.6. Sample of technical ceramics recovered from the foothill area of Chumnungwa

Key
2 cm
126 = Iron spear blade fragment, 127 - 128 = Iron arrowhead fragments, 129 - 143 = Iron bangle fragments with hollow cores, 144 - 145 = Iron bangle fragments with fibre cores, 146 = Iron mbira key fragment, 147 = Iron bangle fragment, 148 - 169 = Bronze-wound bangle fragments, 170 - 177 = Bronze-wound bangle fragments with fibre cores, 178 = Copper plaited bangle fragment, 179 = Copper ring, 180 = Iron ring, 181 = Cuprous wire, 182 - 193 = Bronze wires

Figure 9.7. Sample of metallic objects recovered from the foothill area of Chumnungwa

9.4. SPINDLE WHORLS

9.4.1. BACKGROUND

Spindle whorls are perforated flat circular discs that are crafted from various materials which include clay, soapstone, and cycled potsherds (Huffman 1971; Alt 1999; Nyamushosho et al. 2018; Antonites 2019). These technologies are widely believed to have been used as flywheels and weights which were attached to the end of spindles to enable the spinning of the fibre into a thread which was thereafter woven into textiles such as cloth (McAdams & Howman 1940; Davison & Harries 1980; Ellert 1984; Ruwitah 1999; Phillipson 2005). During spinning, the weight of a spindle whorl disc was regarded as the force that regulated the speed of the spindle (Ruwitah 1999). Thus, the smaller the disc was the faster the spinning process would be. Because of their perishable nature, it has been exceedingly difficult for archaeologists to recover fibres or cloth that was made out of the thread which was spun using the spindle discs at most Iron Age sites they have worked on. However, some tiny remnants of woven cloth have been recovered at sites such as Khami (Robinson 1959: 49) and Ingombe Ilede (Fagan et al. 1969). Thus, spindle whorls stand out as the most enduring tool of ancient spinning processes that has been preserved in the archaeological record.

Based on the available chronostratigraphic data, the craft of spinning in Iron Age southern Africa is believed to have first appeared in the second millennium CE at places such as Mapungubwe, Mananzve where some of the oldest spindle whorls were recovered (Gardner 1963; Nyamushosho et al. 2018; Antonites 2019). Based on these dates some scholars regard the technology of spinning using spindle whorls to have spread from India into the interior of southern Africa via the Indian ocean trade rim (Huffman 1971, 2000; Phillipson 2005; Antonites 2019). However, local research is beginning to show that both spinning and weaving were probably indigenous developments that mushroomed independently in southern Zambezia (Ruwitah 1999). This is corroborated by the presence of spindle whorls at numerous Iron Age settlements such as Leokwe (Calabrese 2007), Mutamba (Antonites 2019), Vumba, (Van Waarden 2012), Village 16 (Manyanga 2006), Nenga (Huffman 1978), Ndongo (Shenjere-Nyabezi 2017), Nhunguza, (Garlake 1973a) which shows that spinning was widely practiced across southern Zambezia, perhaps using the indigenous cotton (Ruwitah 1999). Furthermore, the available ethnohistorical data shows that the locals preferred indigenous clothing over imported ones. For instance, in the 16th-century report from Dos Santos, a Portuguese historian reported that royalty from the Mutapa polity preferred regalia made from local textiles (see Theal 1900). In summary, a review of crafting studies in Iron Age southern Africa shows that the archaeology of spindle whorls has received lesser attention when compared to other material culture. Therefore, the analysis of spindle whorls recovered from Chumnungwa presented below is expected to broaden our current understanding of this crafting activity at Zimbabwe type sites.

9.4.2. ANALYTICAL METHODS

The typological and metric attributes of spindle whorls recovered from Chumnungwa hilltop and foothill areas were analysed using standard methods commonly used in southern African Iron Age (see Huffman 1971, Van Waarden 2012; Antonites 2019). Ultimately, the data sets for each spindle whorl were recorded and a detailed attribute analysis is presented in the forthcoming section.

9.4.2. ANALYSIS AND RESULTS

A total of 11 spindle whorl discs were recovered from the middens that were excavated on the hilltop and foothill areas of Chumnungwa, however, out of the total only one disc was not fragmented. All the discs recorded were finished products that were crafted using clay and had all their surfaces polished (see Tables 9.4 -9.5 and Figure 9.8). The majority of discs were red-brown (54.5%) followed by grey-brown (18.1%), grey (18.1%), and lastly black (9.0%). The presence of spindle discs with grey-brown and black colours shows that some discs were probably fired under an oxidizing atmosphere. Despite them all being crafted using sand as temper, the fabric of the discs varied. The majority of the discs had course fabrics (45.4%) whilst the remainder had fine (27.2%) and medium textures (27.2%). As demonstrated in Table 9.4, it is clear that the majority of the discs had outer diameters that were large-sized whilst their inner-diameters and thicknesses were small-sized. In terms of weight, the majority of the discs weighed less than 100 g. One unique aspect of the spindle whorl discs recovered at Chumnungwa was the presence of a disc fragment that was decorated with cross-hatching incision motifs (see Figure 9.8).

Table 9.4. Summary of the typological and metric attributes of spindle whorls recovered from the hilltop area of Chumnungwa

Object ID	1	2	3	4	5	6
Provenance	Test Pit 1 Layer 2	Test Pit 3 Layer 1	Test Pit 6 Layer 5	Test Pit 7 Layer 1	Test Pit 7 Layer 1	Test Pit 8 Layer 1
Material	Clay	Clay	Clay	Clay	Clay	Clay
Colour	Red-brown	Grey-brown	Red-brown	Grey-brown	Grey	Red-brown
Surface Finish	Polished	Polished	Polished	Polished	Polished	Polished
Fabric	Medium	Coarse	Coarse	Medium	Coarse	Fine
Temper	Sand	Sand	Sand	Sand	Sand	Sand
Decoration Motif						
Outer Diameter	7.9 cm	10.8 cm	8.3 cm	7.2 cm	9.7 cm	11 cm
Inner Diameter	2.1 cm	2.4 cm	1.6 cm	1.8 cm	2.3 cm	2.5 cm
Thickness	0.7 cm	1.2 cm	0.7 cm	1.25 cm	1.4 cm	1.1 cm
Weight	0.40 g	0.70 g	0.65 g	0.34 g	0.28 g	0.85 g
Production Stage	Finished	Finished	Finished	Finished	Finished	Finished

Inner Diameter (<=49 mm/50 mm=>) Outer Diameter (<=99 mm/100 mm=>)
Thickness (<=24 mm/25 mm=>) Weight (<=99 g/100 g=>)

Table 9.5. Summary of the typological and metric attributes of spindle whorls recovered from the foothill area of Chumnungwa

Object ID	7	8	9	10	11
Provenance	Test Pit 10 Layer 2	Test Pit 11 Layer 1	Test Pit 12 Layer 4	Test Pit 13 Layer 2	Test Pit 13 Layer 1
Material	Clay	Clay	Clay	Clay	Clay
Colour	Red-brown	Red-brown	Red-brown	Black	Grey
Surface Finish	Polished	Polished	Polished	Polished	Polished
Fabric	Medium	Coarse	Coarse	Fine	Fine
Temper	Sand	Sand	Sand	Sand	Sand
Decoration Motif				Cross-hatching	
Outer Diameter	11.2 cm	14.6 cm	11.5 cm	12.1 cm	9.2 cm
Inner Diameter	2.6 cm	4.3 cm	2.4 cm	3.1 cm	2.1 cm
Thickness	1.4 cm	1.4 cm	9.8 cm	1.4 cm	1.2 cm
Weight	0.23 g	102.1 g	0.31 g	0.36 g	0. 27 g
Production Stage	Finished	Finished	Finished	Finished	Finished

Inner Diameter (<=4.9 cm/5 cm=>) Outer Diameter (<=9.9 cm/10 cm=>)
Thickness (<=2.4 cm/2.5 cm=>) Weight (<=99 g/100 g=>)

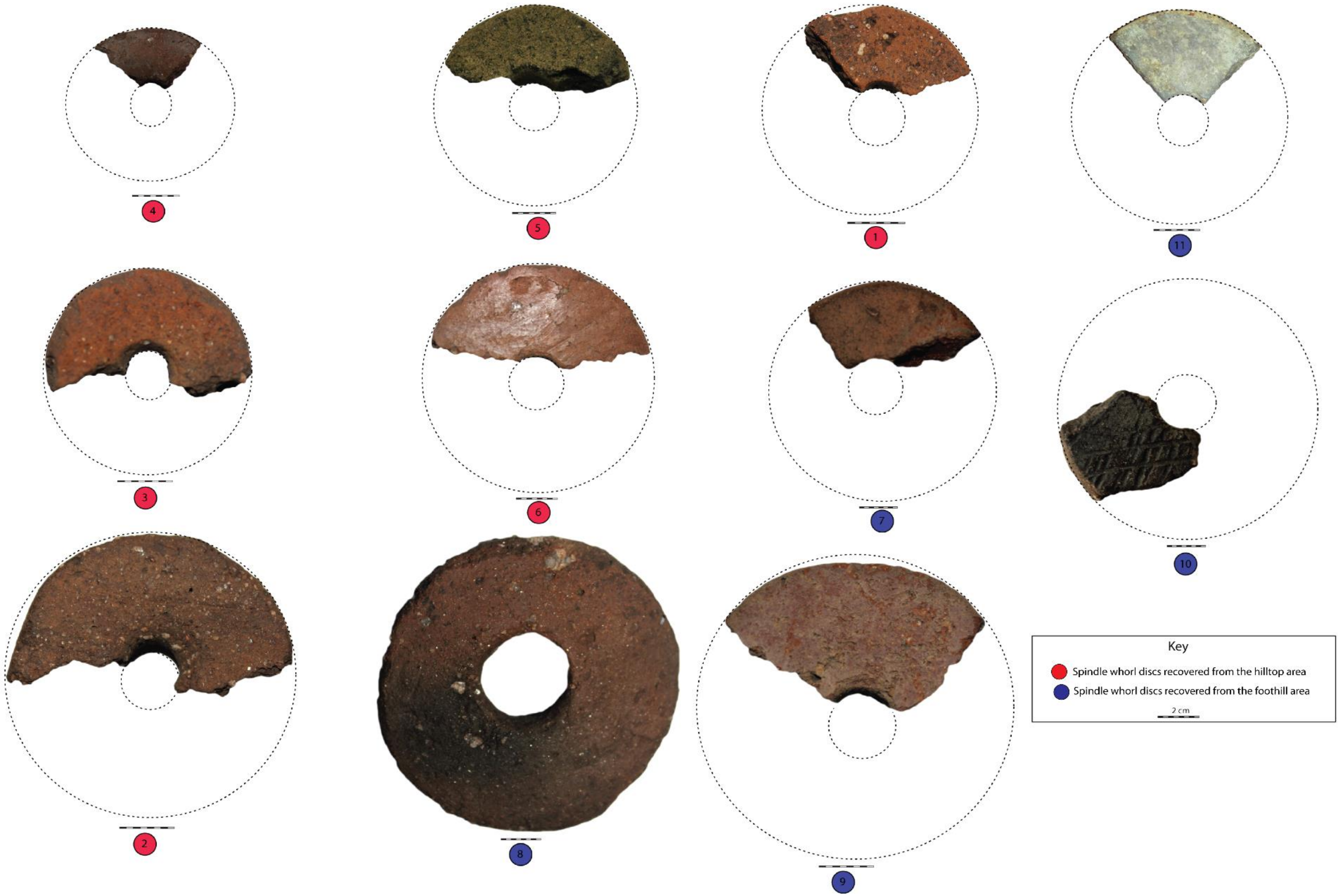


Figure 9.8. Spindle whorls discs recovered from Chumnungwa

9.5. FIGURINES

9.5.1. BACKGROUND

For over a century more than a thousand archaeological figurines, largely crafted using clay, soapstone, or stone, have been recovered from more than 200 Iron Age settlements and burial sites in southern Africa (Bent 1896; Summers 1957; Robinson 1988; Matenga 1993 Schalkwyk & Hanisch 2002; Schoeman 2017). Among these sites include Chiwona (Caton-Thompson 1931), Zvongombe (Pwiti 1996b), Chivowa Hill (Sinclair 1987), Ingombe Ilede (Fagan 1967), and Kagumbudzi (Matenga 1993). However, the largest figurine collection has so far been recovered from Schroda in the Shashi-Limpopo Basin (Schalkwyk & Hanisch 2002).

The majority of the figurine finds that have been recovered from these Iron Age sites resemble humans and animals, however, in some cases, archaeologists have recovered other objects whose physical appearance is beyond that of humans and animals (Matenga 1993 Schalkwyk & Hanisch 2002). At Mapungubwe figurines depicting domesticated livestock, such as cattle, goats, and sheep, were recorded by various researchers that excavated at the site (i.e. Fouché 1937; Gardner 1963). A detailed inventory is provided in Voight (1983). Cattle figurines were also recovered at Tsindi (Rudd 1984), Great Zimbabwe (Bent 1896; Robinson 1961), and Ruanga (Garlake 1973a). Similarly, wildlife species such as snakes, crocodiles, tortoises, baboons, and birds were also recorded at Mutare Alter (Randal McIver 1906; Matenga 1993). Phallic objects are another phenomenal object which was recovered at sites such as Great Zimbabwe (Hall 1905). The conical tower at Great Zimbabwe is believed to be a large phallus (Huffman 1984)

Archaeologists believe that apart from serving in specific contexts, figurines were artistic expressions that reflect the settings of everyday life in the Iron Age. For instance, cattle, sheep, and goat figurines from Mapungubwe were interpreted by Voight (1983:123) to have reflected the types of livestock which were domesticated by the Leopards Kopje societies that resided in the Shashi Limpopo basin. On the other hand, phallic figurines that depicted genitals were interpreted by Summers (1957) as religious artefacts, whilst Schofield (1948) and others (Huffman 1984, 1996) regarded them as sex toys that were used for educating the youth during initiation. For Voight (1983), Robinson (1988), Soper and Pwiti (1988:20) there was a possibility that some of these figurines, (particularly cattle) were just mere artworks crafted by young boys as they would be tending livestock which were eventually discarded. However, for

Matenga (1993) in as much as this framework was plausible, it became difficult to apply it to human figurines, particularly female bodies with genitals or the phallus all of which depicted a high level of artistry but in a sexually explicit way. Alternately, Matenga (1993) suggested the figurines to have largely served as symbols which were used during fertility rituals. Thus, it was within these respective frameworks that figurines recovered from Chumnungwa were examined with the hope of generating an understanding of the everyday life and perceptions of the people that crafted and consumed them.

9.5.2. ANALYTICAL METHODS

Figurines recovered from Chumnungwa were typologically examined using classification methods employed in the analysis of figurines in southern African Iron Age (see Summers 1957; Huffman 1974; Voight 1983:123-130; Matenga 1993). As demonstrated below, the emphasis of my analysis was placed on the physical attributes of the objects; the results are presented in the next section.

9.5.3. ANALYSIS AND RESULTS

Five figurines fragments all crafted using clay were recovered from both the hilltop and foothill areas of Chumnungwa (Table 9.6, Figure 9.9). The majority (60%) of the figurines were cattle horns and these were recovered from the hilltop area whilst the remainder, which comprised phalluses, were recovered from the foothill area. As demonstrated in Table 9.6, only the phallus figurines had their surfaces polished and fired.

Table 9.6. Summary of the typological and metric attributes of figurines recovered from Chumnungwa

Object ID	1	2	3	4	5
Provenance	Test Pit 6 Layer 3	Test Pit 7 Layer 1	Test Pit 8 Layer 1	Test Pit 10 Layer 2	Test Pit 11 Layer 1
Object Type	Cattle horn	Cattle horn	Cattle horn	Phallus	Phallus
Raw Material	Clay	Clay	Clay	Clay	Clay
Colour	Grey-brown	Grey-brown	Grey	Red-brown	Red-brown
Surface Finish	Not polished	Not polished	Not polished	Polished	Polished
Firing	No	No	No	Yes	Yes
Fabric	Course	Medium	Medium	Medium	Coarse
Width/ Diameter	0.76 cm	2.1 cm	2.5 cm	2.2 cm	1.6 cm

Length	1.8 cm	4.3 cm	4.8 cm	3.5 cm	2.5 cm
Weight	0.24 g	0.98 g	101 g	0.90 g	0.98 g

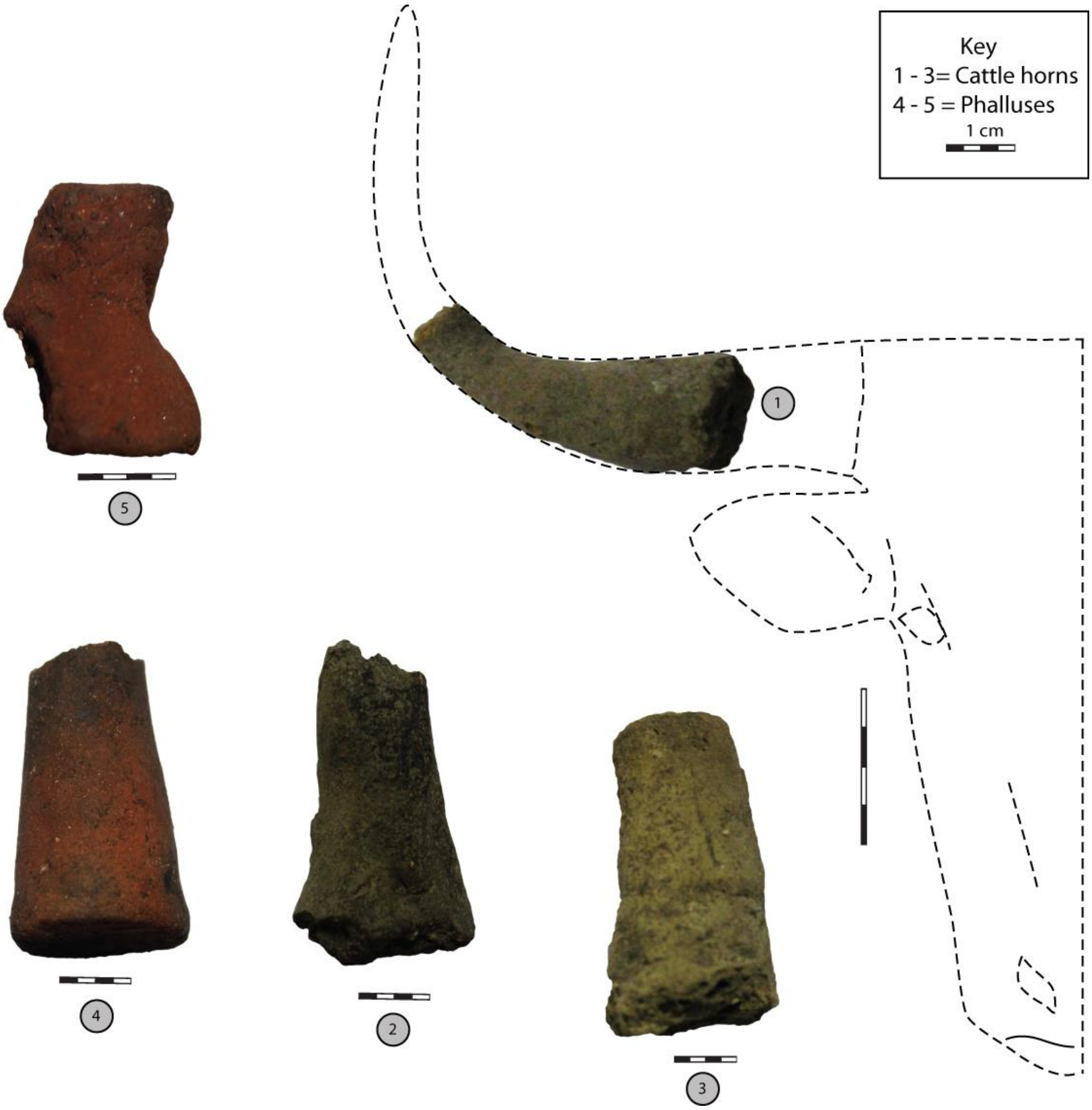


Figure 9.9. Figurines recovered from Chumnungwa

9.6. WORKED BONE

9.6.1. BACKGROUND

As discussed in the last chapter, several archaeofaunal studies undertaken in southern Africa show a variety of domestic and wild animals that were consumed by precolonial societies in the Iron Age. Thus, apart from serving as food, both the wild and domesticated animals had their bone waste carefully carved into various tools, weapons, ornaments, and instruments that were used in everyday life (Voigt 1983; Thorp l984b; Bvocho 2005; Bradfield 2015; Antonites et al. 2016; Bradfield & Antonites 2017). Among these included bone awls, beads, bangles, amulets, whistles, pins, needles, hoe heads, arrowheads and link-shafts that were recovered at settlements such as K2 (Bradfield & Antonites 2017), Khubu la Dintša (Klehm et al. 2017), Mapungubwe (Fouché 1937; Antonites et al. 2016), Khami (Randall-McIver 1906; Robinson 1959; Thorp l984b; Mukwende et al. 2018) and Malumba (Bvocho 2005; Manyanga 2006). Bone tools such as arrowheads were believed to have been used as weaponry for warfare or hunting, whilst smaller sized implements such as needles were used for leatherworking, basketry, and any other complimentary crafting activities. Ornaments such as beads, bangles, and amulets were mostly used for adornment purposes, however, there is a possibility that some pendants may have been used as charms against evil spirits (Bvocho 2005). Furthermore, as demonstrated by Thorp (1984b), unique items such as a dice might have been traditional healers' paraphernalia which was used for divination purposes. More recently, Bradfield and Antonites (2017) identified a bovid scapula from the K2 legacy collections which was probably used as a hoe-head for agricultural purposes. Thus, the exact function of a worked bone object is difficult to tell, however, through the use of ethnographic analogy and high-powered scientific techniques such as use-wear and residue analysis, archaeologists can tell the possible uses (see Bradfield 2015).

9.6.2. ANALYTICAL METHODS

The morphological analysis of worked bone objects recovered from Chumnungwa was conducted using guidelines from Voigt (1983). Basic metric dimensions and the physical attributes were recorded paying attention to their excavation context.

9.6.3. ANALYSIS AND RESULTS

As clearly demonstrated in Table 9.7 and Figure 9.10, only three skilfully handcrafted bone objects were recovered from the hilltop and foothill areas of Chumnungwa. Based on their morphological traits, these were respectively classified as pendant? (1) whistle (2) and dice (3). The first object was classified as a pendant fragment which was probably attached to a necklace. Based on its morphological traits, it is evident that the object was carved out of a long bone which was probably a scapula of a bovid. The whistle was carved out of a bird *(Aves)* bone since they are the only known species with hollow bones (air-filled spaces) to enable flying (Plug 2014). Although fragmented, the dice is uniquely decorated with cross-hatching motifs.

Table 9.7. Summary of the typological and metric dimensions of worked bone objects recovered from Chumnungwa

Object ID Provenance	1 Test Pit 7 Layer 1	2 Test Pit 8 Layer 1	3 Test Pit 11 Layer 1
Object Type	Pendant?	Whistle	Dice
Raw Material	Bone	Bone	Bone
Skeletal part	Scapula?	Tibia?	?
Animal	Bovid	Aves	?
Surface	Rough	Smooth	Smooth
Decorations			Cross-hatching motifs
Other features	Perforated with two holes	Perforated with one hole	
Width/ Diameter	0.34 cm	1.16 cm	0.75 cm
Length	4.8 cm	8.91 cm	2.15 cm
Weight	0.10 g	0.85 g	0.13 g

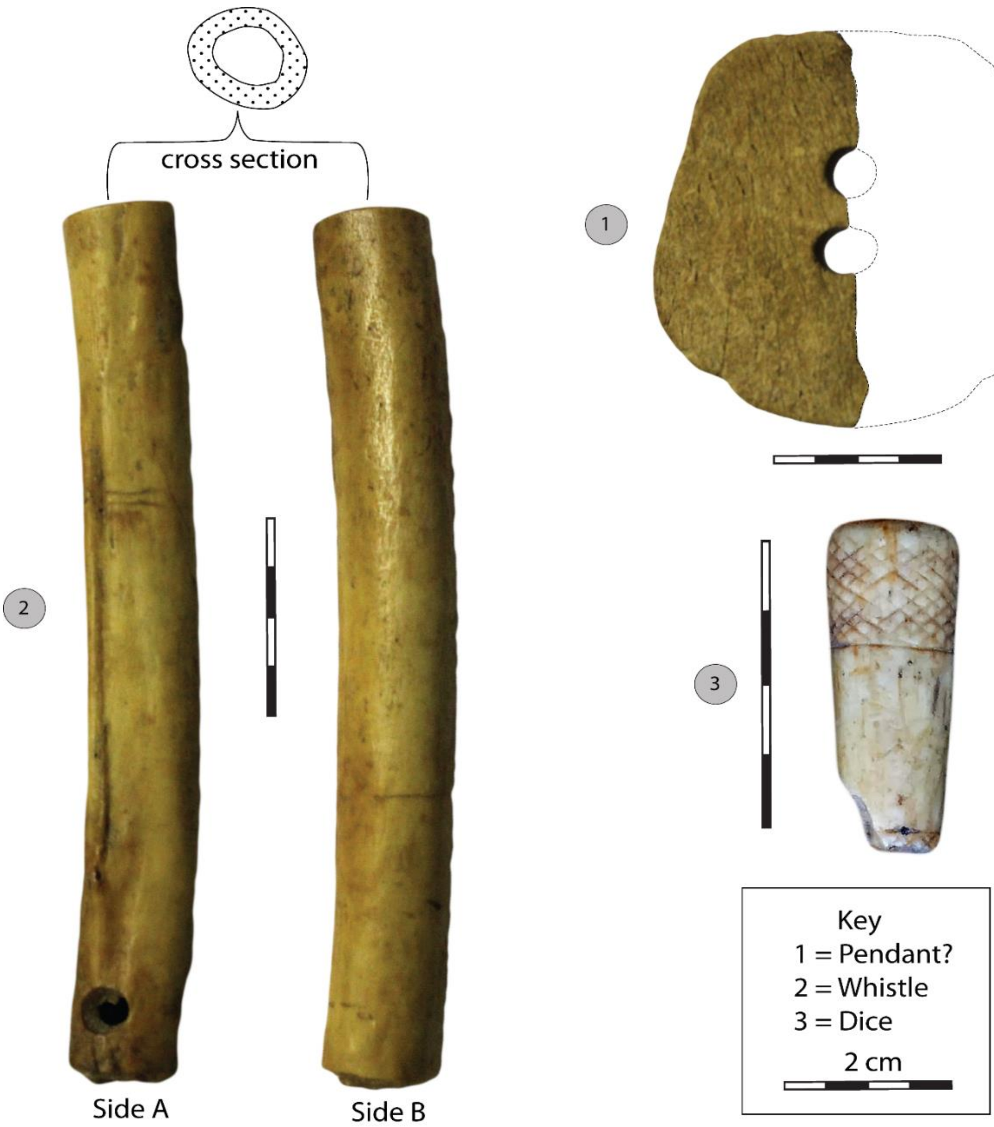


Figure 9.10. Worked bone objects recovered from Chumnungwa

9.7. SOAPSTONE

9.7.1. BACKGROUND, ANALYTICAL METHOD, ANALYSIS, AND RESULTS

In southern Africa, the crafting of both utilitarian and non-utilitarian objects was also conducted using soapstone (Matenga 1998, 2011). Apart from spindle whorls and figurines (i.e. phallus and figurative birds), several soapstone objects which range from monoliths, dishes, metal drawing plates, ingot moulds, gameboards, crucibles, bowls, beads, smoking pipes, and pendants, have been recovered at sites such as Mapungubwe (Saitowitz 1996), Great Zimbabwe (Bent 1896; Hall 1905; Burke 1969), Danamombe, Mundi (Hall & Neal 1904), Domboshaba, Selolwe, and Vumba (Van Waarden 2012). However, in as much as these objects varied, soapstone objects rarely appear at most archaeological sites (Matenga 1998). The current study at Chumnungwa recovered very little evidence of soapstone crafting in the form of a bicone shaped bead, semi-worked and unworked waste fragments (See Figure 9.11) whose colour varied between grey and green-grey. The bicone bead was the only finished soapstone product recovered onsite.

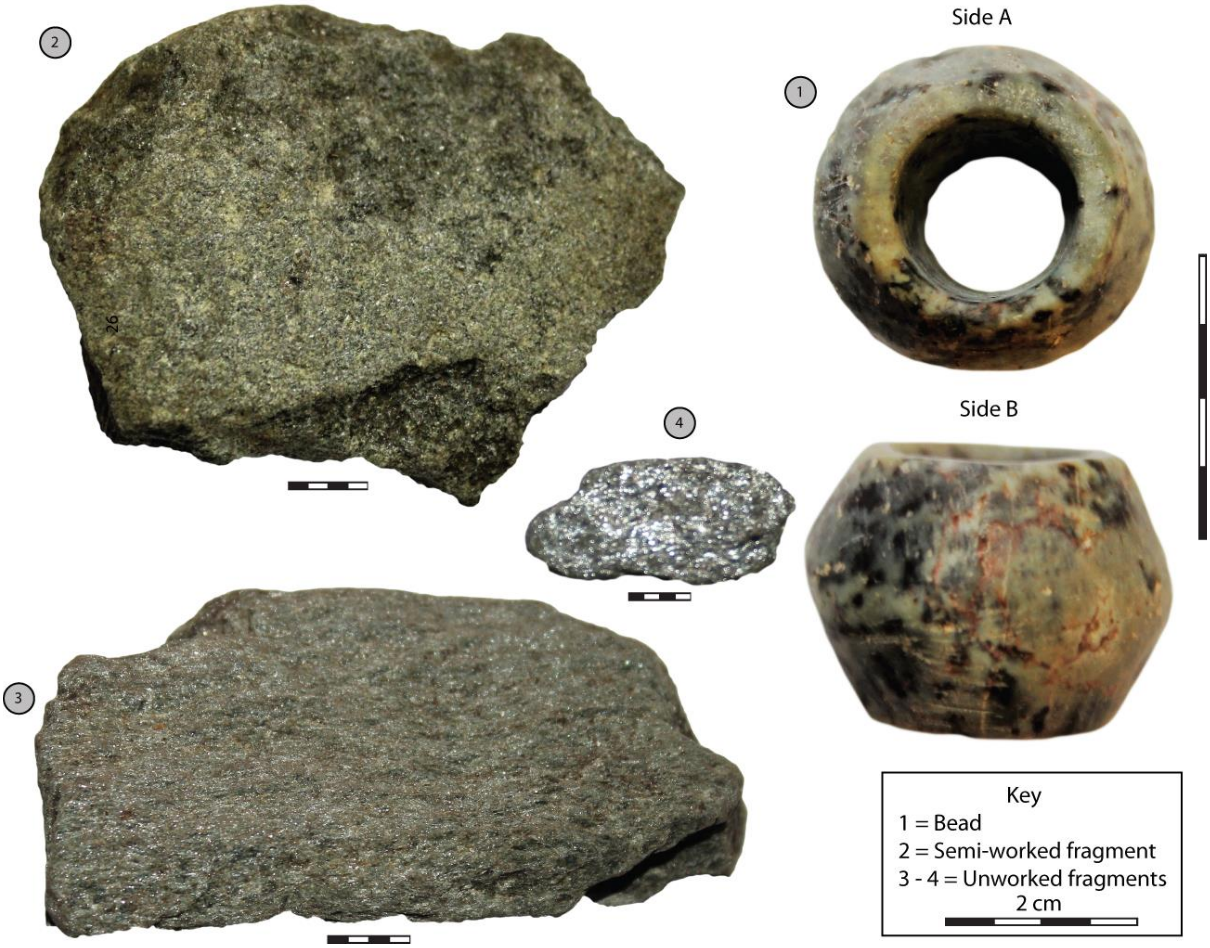


Figure 9.11. Soapstone objects recovered from Chumnungwa hilltop area (1=Test Pit 6 Layer 3), 3=Test Pit 2 Layer 2, 4=Test Pit 2 Layer 1), and foothill area (2=Test Pit 13 Layer 1).

9.8. LITHICS

9.8.1. BACKGROUND

Lithics are one of the crafts that have been recovered at numerous Iron Age sites in southern Africa such as Mtanye (Walker 1972), Mapungubwe (Fouché 1937), Little Muck Shelter (Hall and Smith 2000; Van Doornum 2005), Gosho Park (Burrett 2003), Shinje Hill (Marufu 2008), Induna Cave (Thorp 2010), Selowe (Van Waarden 2012), Mananzve (Nyamushosho et al. 2018), Mosu 1 (Reid & Segobye 2000), Great Zimbabwe, Chiwona and Matendera (Bent 1896; Caton-Thompson 1931). Traditionally lithics assemblages, which comprised points, scrapers, pebbles, flakes, backed bladelets, and other stone tools, have been associated with Stone Age hunter-gatherer societies, and in cases where they have been recovered at Iron Age sites, it has been suggested that they are material signatures of interaction (i.e. trade and exchange) between hunter-gatherers and farmer societies (Caton-Thompson 1931:184; Cooke 1969; Walker 1995; Walker & Thorp 1997; Denbow 1999; Hall & Smith 2000; Reid & Segobye 2000; Thorp 2010; Burrett 2003). However, a rethinking of the wide presence of lithics at most Iron Age sites over the recent years, as reflected by some scholars (i.e. Maggs 1980; Whitelaw 1993; Calabrese 2007; Van Waarden 2012; Manyanga et al. 2013) is now undermining the traditional partitioning of the precolonial crafts of southern Zambezia into Stone and Iron Age cultures. Thus, as illustrated by some scholars such as Van Waarden (2012:141) and Manyanga et al. (2013:76), there is no doubt that lithics were part and parcel of the material culture that was crafted by Iron Age agropastoralists for various uses in their everyday life.

9.8.2. ANALYTICAL METHODS

For this study, the lithic assemblage recovered from Chumnungwa was sorted, examined and morphologically classified into broader categories based on the standard typologies widely used in southern African lithic studies (see Cooke 1969; Deacon 1984; Walker 1995; Thorp 2010; Burrett 2003, Marufu 2008, Van Doornum 2005, Van Waarden 2012, Nyamushosho et al. 2018). Emphasis was placed on recording the typological attributes of the lithics that comprehensively captured the character of the lithics. These included the provenance of the tools, raw material used, and metric dimensions. A detailed analysis is presented in the forthcoming section.

9.8.3. ANALYSIS AND RESULTS

A total of 23 lithic objects were recovered from both the test pits that were excavated on the hilltop and foothill areas of Chumnungwa (see Table 9.8; Figures 9.12 and 9.13). However, the highest frequency of the lithics (56.5%) was recovered from the foothill area. Pebbles were predominant (N=9/39.1%) followed by hammerstones (N=7/30.4%), pestles (N=5/21.7%), and scrapers (N=2/8.6%). A comparison of the raw material used (Table 9.8) shows that most of the lithics were crafted using chert (N=11/47.8%) whilst dolerite (N=10/43.4%) and quartz (N=2/8.6%) were used to make the remainder.

Table 9.8. Summary of the typological and metric dimensions of lithic objects recovered from Chumnungwa

Object ID	Object Type	Provenance	Raw Material	Width /Diameter	Length	Weight	State
1.	Pebble	Test Pit 1 Layer 1	Chert	2.1 cm		0.20 g	Complete
2.	Hammerstone	Test Pit 3 Layer 1	Dolerite	6.3 cm	8.2 cm	400 g	Incomplete
3.	Pebble	Test Pit 4 Layer 1	Chert	3.8 cm		0.30 g	Complete
4.	Pebble	Test Pit 5 Layer 1	Chert	2.4 cm		0.25 g	Complete
5.	Pestle	Test Pit 5 Layer 1	Chert	2.5 cm	6.3 cm	0.78 g	Complete
6.	Hammerstone	Test Pit 7 Layer 1	Dolerite	6.2 cm	6.2 cm	198 g	Incomplete
7.	Pebble	Test Pit 7 Layer 1	Chert	2.4 cm		0.39 g	Complete
8.	Pebble	Test Pit 7 Layer 1	Chert	2.5 cm		0.41 g	Complete
9.	Pebble	Test Pit 8 Layer 1	Chert	1.8 cm		0.71 g	Complete
10.	Pebble	Test Pit 8 Layer 1	Chert	1.9 cm		0.26 g	Complete
11.	Scrapper	Test Pit 9 Layer 1	Quartz	2.7 cm	3.3 cm	0.40 g	Complete
12.	Pebble	Test Pit 9 Layer 1	Chert	1.1 cm		0.35 g	Complete
13.	Scrapper	Test Pit 9 Layer 2	Quartz	3.1 cm	3.5 cm	0.51 g	Complete
14.	Hammerstone	Test Pit 9 Layer 2	Dolerite	2.1 cm	11.4 cm	198 g	Complete
15.	Hammerstone	Test Pit 10 Layer 2	Dolerite	5.3 cm	7.9 cm	201 g	Complete
16.	Pestle	Test Pit 10 Layer 2	Dolerite	3.1 cm	6.1 cm	102 g	Complete
17.	Pestle	Test Pit 11 Layer 1	Dolerite	1.7 cm	7.9 cm	098 g	Complete
18.	Pestle	Test Pit 11 Layer 1	Dolerite	3.8 cm	11.6 cm	208 g	Complete
19.	Hammerstone	Test Pit 12 Layer 1	Dolerite	2.3 cm	3.4 cm	0.66 g	Complete
20.	Pestle	Test Pit 11 Layer 1	Chert	1.4 cm		0.34 g	Incomplete
21.	Hammerstone	Test Pit 12 Layer 2	Dolerite	1.8 cm	3.2 cm	0.34 g	Complete
22.	Pebble	Test Pit 13 Layer 1	Chert	1.1 cm		0.15 g	Complete
23.	Hammerstone	Test Pit 13 Layer 2	Dolerite	5.1 cm	3.4 cm	0.86 g	Incomplete

Figure 9.12. Lithic objects recovered from Chumnungwa hilltop area

Figure 9.13. Lithic objects recovered from Chumnungwa foothill area

9.9. SHELL BEADS

9.9.1. BACKGROUND

Shell beads are one of the common archaeological finds that have been recovered at numerous Iron Age sites of southern Zambezia such as Great Zimbabwe (Beck 1931), Mwenezi (Bvocho 2005), Khubu la Dintša (Klehm et al. 2017), Hlamba Mlonga Hill (Thorp 2009), and Chibuene (Sinclair 1987), Research that has been undertaken over the last century shows that shell beads were crafted using various raw materials which included ostrich eggshells, land snail shell commonly known as *Achatina sp* and freshwater mussels *(Uniondae sp)* (Tapela 2001; Miller et al. 2018). The process of crafting shell beads is believed to have been achieved using two methods namely the drilling method, in which a shell bead blank was perforated first before trimming and the trimming method in which grinding of the edges of a bead blank into a circular disc was done first before drilling (Tapela 2001; Orton, 2007). Previously, shell beads were entirely regarded as craft products of the forager communities which they manufactured for ornamentation and trade purposes, the rationale of this argument was based on the fact that the antiquity of shell bead making predated the peopling of Iron Age agropastoralists by several centuries (Walker 1995; Jacobson 1987; Wilmsen 2015). Therefore, in instances where shell beads were recovered at Iron Age sites, they were interpreted as forager material culture which was acquired by the farmers through trade (Caton-Thompson 1931; Jacobson 1987; Denbow 1983, 1990 Walker 1995; Wilmsen 2015). For many years, this negatively influenced archaeologist, hence, they understudied shell beads as one of the Iron Age crafting activities (Miller et al. 2018). For instance, most studies just reported the presence or absence of shell beads (i.e. Garlake 1976). Nevertheless, findings from later research undertaken at Iron Age sites such as Phate Hill Kaitshe (Tapela 2001) Rhenosterkloof 1 (Bandama 2013), Great Zimbabwe (Chiripanhura 2018), Shankare (Moffett 2017), Vumba, Selolwe (Van Waarden 2012), Mutamba (Antonites 2012), and Mananzve (Nyamushosho et al. 2018), clearly revealed evidence of onsite bead crafting in the form semi-finished bead blanks with angular edges and incomplete perforations.

9.9.2. ANALYTICAL METHODS

The typological characteristics and dimensions of the shell beads recovered from Chumnungwa were examined following guidelines from Ward and Maggs (1988), Tapela (2001), and Antonites (2012). As a measure to ensure consistency and standardisation with other related studies, the emphasis of the analysis was directed towards determining the type of bead, their size, surface finish, and production stage. A comprehensive inventory of the recorded attributes at the stratigraphical level is provided in Appendix 7.

9.9.3. ANALYSIS AND RESULTS

A total of 39 shell beads were recovered from Chumnungwa (Figure 9.14). The majority of the shell beads (N=21/53.8%) were recovered from test pits that were excavated on the hilltop area whilst the remainder (N=18/46.1%) were retrieved from the foothill area. The highest frequency of shell beads recovered from Chumnungwa was crafted from ostrich eggshells (N=27/69.2%) whilst the other beads were equally manufactured using Achatina (N=6/15.3%) and freshwater mussel shells (N=6/15.3%). In terms of size, the majority of the beads (N=21/53.8%) had dimensions that exceeded 7.4 mm. Overall, the majority of the shell beads were finished products (N2=8/71.7%) whilst the remainder were semi-finished.

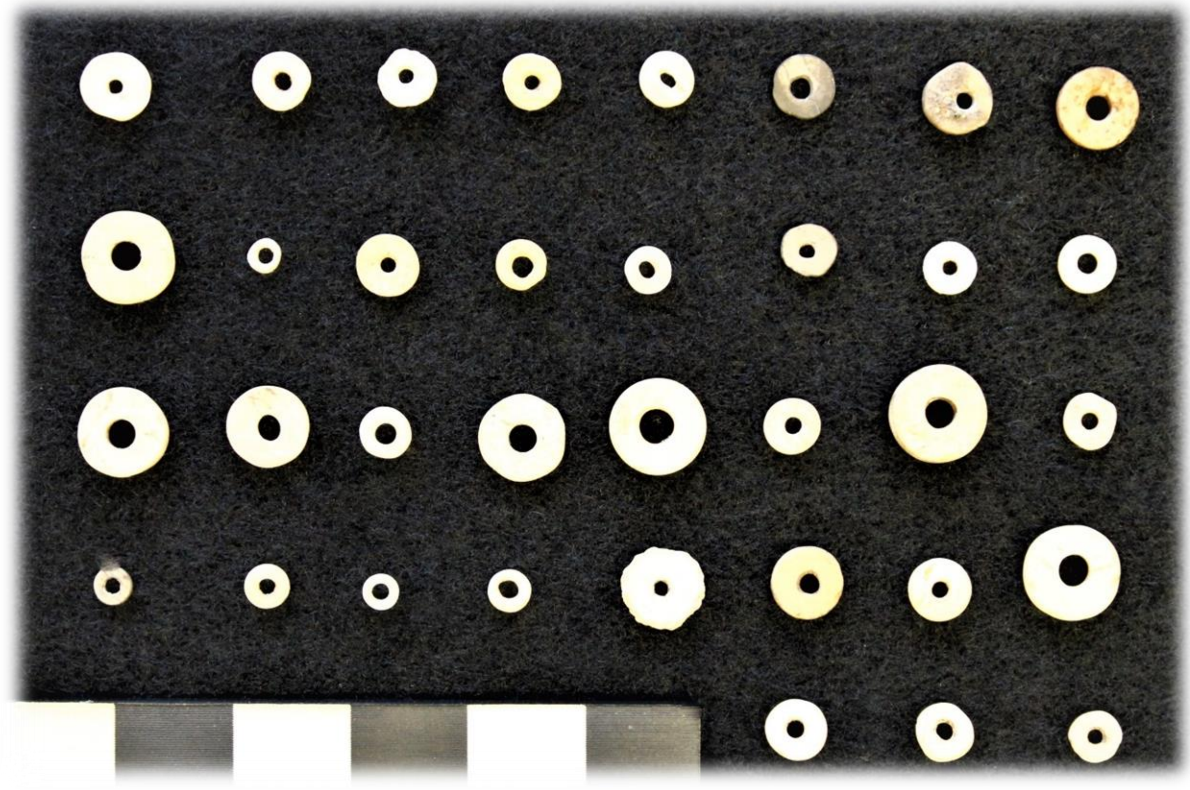


Figure 9.14. Shell beads recovered from Chumnungwa

9.10. DISCUSSION: CRAFTING AT CHUMNUNGWA

The presence of various craft objects across the hilltop and foothill areas of Chumnungwa attests to innovation in the crafting industry. Given that we now know the range of crafts that were recovered on-site, one of the objectives informing this study yet to be explored was generating insights on the nature of their production, distribution, and consumption. This was instrumental in unearthing the daily practices of the Chumnungwa community.

The study of metallurgical objects recovered at Chumnungwa showed that iron, copper, gold, and bronze objects were crafted on both the hilltop and foothill areas. The presence of haematite ore, flow slag, and tuyeres is an indication that smelting of iron[42] and copper[43] was conducted onsite using bloomery processes. There is a high possibility that the tuyeres recovered at Chumnungwa served as blowpipes that were used to feed air blown from bellows into the furnace made of goatskin (sensu Ndoro 1991). Nevertheless, we are yet to identify any smelting precincts to substantiate this, however, Hall and Neal (1905) report of recovery of large quantities of smelting debris on the hilltop area. This pinpoints the ordinary spaces on the hilltop and foothill areas where other crafts and other activities were conducted as the possible areas where furnaces used for smelting metals could have been erected. Similarly, the presence of clay-pot shaped crucibles attached with gold droplets and oxide waste products suggests that gold[44] ore was melted onsite to merge it into prills (Summers 1969; Ellert 1993; Chirikure 2015). Whilst the current evidence does not allow us to identify the gender of the individuals behind crafting of metals at Chumnungwa, the very fact that smelting debris was recovered within the residential area on both hilltop and foothill spaces where males and females interacted suggests that it was not strictly gendered or restricted by status. Iron, copper and gold ore used to craft the metals represented at Chumnungwa is likely to have been mined from local greenstone belts (Worst 1956, 1962; Martin 1978; Bickle & Nisbet 1993; Ranganai et al. 2008) however, absence of tin slag onsite suggests that tin was sourced elsewhere, perhaps trace element studies could resolve this mystery. Because of the legacy of vandalism, the weight of the slag recovered from middens that were excavated from both the hilltop and foothill areas was too little and mixed to reflect the scale of production of metals at

[42] Locally known as *simbi*.
[43] Locally known as *mhangura*.
[44] Locally known as *ndarama*, *usanga* or *utare*. There is possibility that it could also have been panned from local rivers such as Bubi, Ngezi and Lundi (see Von Sicard 1957).

Chumnungwa. However, as shall be demonstrated in the next chapter, there is no doubt that it was largescale (also see Hall & Neal 1904).

As common at most Iron Age sites, the presence of smithing slag, and a clay bead mould directly indicates that fabrication of iron, copper, and gold artefacts was conducted onsite. The available archaeological evidence shows that the majority of the metals recovered from the hilltop and foothill areas of Chumnungwa were utilitarian objects which were crafted using the iron. Through various methods of iron fabrication, a range of objects were produced which included spearheads, arrowheads, blades, hoe heads, scrapers, bangles, beads, rings, and *mbira keys*. These were used for various tasks that included hunting, warfare, cultivation of crops, and in some cases as trade goods and bridewealth (Holleman 1952; Beach 1977; Mavhunga 2014; Manyanga & Pangeti 2017).

Bronze an alloy of copper and tin was the next dominant metal that was fabricated at Chumnungwa. The inventory of bronze objects recovered onsite shows an assemblage made up of jewellery objects that ranged from bangles to wires and a ring. Four types of bangle fragments were recorded, and these ranged from wound wire bangles with fibre core, to wound wire bangles with hollow bone core, wound bangles, and one unique item which was decorated with a herringbone pattern. Typical bangles were recovered at Great Zimbabwe (Caton-Thompson 1931; Bandama et al. 2016), Mapungubwe (Miller 2002), and Khami (Mukwende et al. 2018). Though no evidence was recovered onsite, there is a possibility that wires used to make these bangles, including those made of copper, were fabricated using drawing plates (sensu Miller 2002; Chirikure 2015; Bandama et al. 2019). Some of the known sites where wire drawing plates were recovered onsite include Ingombe Ilede (Fagan et al. 1969) and Great Zimbabwe (Garlake 1973b). Among the Shona, the bangles represented at Chumnungwa are locally known as *shambo* or *ndarira* (Ellert 1984). Similar to glass bead necklaces, the bangles were more of women's material culture, hence, it would not be surprising for one woman to wear hundreds of bangles on her arms and ankles (Bvocho 2005). As commonly noted at most Iron Age sites such as Mapungubwe (Miller 2002, Chirikure 2015), Mapela and Jahunda (Bandama et al. 2019) and Great Zimbabwe (Bandama et al. 2016), the production and functions of copper jewellery recovered at Chumnungwa likely resembled that of bronze.

The recovery of a clay bead mould used for making spherical gold beads (Chirikure 2015:118) suggests that the fabrication of gold was conducted onsite. As demonstrated by the Chumnungwa gold burials (see Hall & Neal 1904; Garlake 1973b) even in death gold beads and bangles were used by women and children for adornment purposes in the same way bronze and copper jewellery was used in everyday life. Apart from ornamentation, gold might have been used as a commodity for trade purposes regionally and internationally, the same could be said of the iron and copper processed at Chumnungwa. Because Chumnungwa is located close to the greenstone belts (i.e. Mberengwa, Buhwa, and Mweza) which is rich in gold, there is a possibility that some of the gold might have been sourced from these deposits (also see Summers 1969).

The recovery of clay spindle whorl disc fragments on both the hilltop and foothill areas shows that the craft of spinning was practiced across the site by residents of Chumnungwa. Thus, the spindle whorl discs were used as flywheels and weights that were fastened on the end of spindles to facilitate the spinning of fibre into a thread locally known as *usaru* (McAdams & Howman 1940; Ellert 1984; Ruwitah 1999). There is a possibility that the smaller discs that were recovered at Chumnungwa were used for spinning thin fibres whilst the larger ones were reserved for the thick fibres (sensu Ruwitah 199)9. The perishable nature of *usaru*, obviously made it difficult to endure the depositional processes at Chumnungwa, hence, we do not have archaeological evidence to identify the types of fibre that were spun or trace its uses by the residents of Chumnungwa. However, we know from Shona ethnography that traditional spinning was undertaken using a variety of fibres such as baobab bark *(muuuyu)* (Bent 1895:310), rubber tree *(mutowa)*, mnondo *(munhondo)* and to a larger extent wild cotton *(donje)* (Ellert 1984; Ruwitah 1999). As l noted during my fieldwork, these trees are common in the area. Therefore, it is possible that the thread spun onsite could have been used for weaving textiles *(machira)*, blankets *(magudza)*, and bags locally known as *nhava* (Posselt 1935; Ellert 1984). Thin *usaru* could be used to weave everyday clothing *(nhumbi)*, including underwear *(mukokoto*[45]*)*, and baby wrap carriers *(misisi)* (Ruwitah 1999). The thread spun using spindle whorls discs recovered at Chumnungwa could also have been used for repairing worn clothes or making strings for ornaments such as beads neckless *(zvuma)* and headbands (*tsungare*) (Gelfand 1979). At a religious level, the thread could have been used for making cloth wrapped charms *(mazango)* which were worn by both adults and infants for protection of their good health against evil spirits (Gelfand et al. 1985; Aschwanden 1982, 1987; Shoko 2007). Finally, the *usaru* crafted at Chumnungwa could have been traded locally and regionally

[45] Also known as *mugwada*.

in exchange for goods such as salt, small livestock, glass beads, and metal products (Ruwitah 1999). There is a possibility that the fibre spinners who resided at Chumnungwa society could have been yarn and textile dealers.

The available evidence makes it difficult to determine whether the scrapers recovered from Chumnungwa were crafted onsite or not since no debris of knapping of quartz was recovered onsite. Traditionally, scrapers in southern African archaeology were normally used to justify forager-farmer interactions (Walker 1972; Hall & Smith 2000; Thorp 2010). In as much as this line of thinking is plausible, as previously discussed, there is every reason to consider these lithics as crafts that were produced onside given the fact that it is now becoming common knowledge that lithics were part of the Iron Age material culture (see Maggs 1980; Whitelaw 1993; Manyanga 2006; Schoeman 2006; Calabrese 2007; Van Waarden 2012; Manyanga et al. 2013; Nyamushosho et al. 2018). For instance, as eloquently argued by Waarden (2012:141) stone tools were used by Iron Age communities to accomplish tasks that could not be undertaken using iron tools. Shona archaeology and anthropology show that pebbles *(hurungudo)* of different sizes had multiple uses. Some potters used them for smoothening newly fashioned pots (Lindahl & Matenga 1995); traditional healers *(n'anga*) used them at times as divination tools; makers of music instruments filled them inside a dried fruit casing of the wild orange tree *(mutamba)* to make handheld rattles *(hosho)*, bird hunters (particularly young boys) used them as weapons for shooting birds *(shiri)* using handheld slingshots *(ndande)*, whilst the young and the old used them at times as gaming dice to play traditional games such as *fuva (tsoro)* or *nhodo* (Ellert 1984). Hammerstones and pestles were used for processing foods, medicines, and tobacco. This is corroborated by the fact that some hammerstones had white stains, suggesting grinding of fibre.

The recovery of shell beads at Chumnungwa shows that crafting of organic beads was conducted onsite. This undermines arguments that solely regard shell beads as forager material culture (i.e. Caton-Thompson 1931; Jacobson 1987; Denbow 1983, Walker 1995). A variety of shells were used to make the beads, these ranged from land-snail shell to freshwater mussel and to a greater extent ostrich egg. As demonstrated in the previous chapter, animal species bearing these shells are common in the area including the freshwater mussels which were likely sourced from the nearby rivers. The presence of trimmed bead discs with incomplete perforations and perforated bead discs with semi-trimmed ends is a clear indication that the Chumnungwa shell bead assemblage was crafted using both the trimming and drilling methods. These are regarded as the common methods used for shell bead manufacture in southern Africa

(Orton 2007). The shell beads recovered at Chumnungwa likely served to most individuals as items of adornment that were probably used alongside metal and glass beads (Bvocho 2005; Van Waarden 2012).

The clay figurines recovered at Chumnungwa allow us to recreate some social and economic aspects of the everyday life of the Chumnungwa community. On one hand, the fact that all the recovered cattle horn figurines were roughly moulded, sun-dried, and unfired is a clear sign that they were made by armature artisans, who were likely children. For instance, as common among the Shona societies (Gelfand et al. 1985; Mawere 2012), there is a possibility that young boys residing at Chumnungwa grew up tending cattle and other livestock owned by their families, in the process, they possibly had a closer relationship with these animals as they would spend most of their day looking after them. Therefore, during playtime, they possibly competed with each other in demonstrating their creativity through imitating what they saw every day, hence, they made clay models of cattle and maybe other animals and objects which might not have been recovered onsite. Perhaps one might wonder, how then were these clay models brought onsite given the background that they were made in the bush during herding. Growing up in a Shona society myself, part of my childhood was spent looking after goats and cattle. Like any other young boy, we also modelled clay figurines and sun-dried them. One thing I remember vividly is that we treasured our models, and we were so eager to carry them back home to show our parents and other family members. In most cases, we used these models as 'toys' that we played during childhood games such as *mahumbwe*[46] where we imagined them as real animal and human characters (also see Mawere 2012). Additionally, whilst there is merit in interpreting the cattle horn figurines as model artworks that were crafted by children (sensu Voight 1983; Robinson 1988; Soper & Pwiti 1988:20); the fact that these were cattle horns should not be overlooked since it directly informs us that the residents of Chumnungwa were keepers of indigenous long-horned cattle as previously postulated in Chapter 8 (Sensu Brain 1974; Summers 1965:81).

On the other hand, the presence of two phalluses with polished and fired surfaces suggests that these figurines were carefully designed by mature members of the Chumnungwa community who probably were specialists who adhered to the protocols of working clay (see Lindahl &

[46] Basically, this is a traditional Shona version of the playing house game which is aimed at fostering gender roles and norms for minors aged between 5 and 14. Hence, they imitate their parent's behaviour by pretending to have their own families and livestock (Posselt 1935; Mawere 2012).

Matenga 1995). Furthermore, the fact that they are sex objects makes it difficult to regard them as children's artworks. It is well known in anthropology that sexually explicit content was highly restricted to the underage within a Shona society (see Bullock 1927; Gelfand 1966; Bourdillon 1976; Aschwanden 1982, 1987; Shoko 2007). Therefore, the only plausible explanation is regarding them as sexual objects that were crafted by adults, however, whether these artists were males or females we do not know. Perhaps as once suggested by Matenga (1993) these figurines types are likely to have served as symbols that were used during fertility rituals. Nevertheless, Matenga (1993) did not state the types of the rituals but it is obvious that these did not include initiation ceremonies since they have never been part of the Shona culture since the precolonial era (see Posselt 1935; Blacking 1984; Beach et al. 1997, 1998; Pwiti et al. 2013).

The morphology of the bone objects recovered at Chumnungwa suggests that most of the fauna used to manufacture the objects were acquired from animals that were slaughtered for ‘meat’ purposes. As a result, some of the unconsumed bone ended up being skilfully carved into objects. Whilst no parallel bone objects were identified from the archaeological and ethnographic record that matched the typology of the pendant, the two perforated holes suggested that it was attached to a necklace that could have been used for adornment or ritual purposes. Similarly, the bone whistle was probably carved out of a bird bone to serve as a musical instrument. The dice recovered onsite possibility served in rituals (Ellert 1984; Thorp 1984b; Huffman 1996). The presence of flakes of worked and semi-worked soapstone and the bicone shaped soapstone bead on the hilltop and foothill areas of Chumnungwa shows that soapstone working was also conducted across the site.

9.11. SUMMARY

The crafts exhibited at Chumnungwa were diverse, dynamic, and innovative, this shows us that the residents of Chumnungwa were skilled in their various crafting activities. Despite residing in dryland with limited rainfall and too much heat, they managed to utilise the local resources for their benefit. They mined and processed iron, copper, and gold to make tools, musical instruments, weapons, and ornaments which they used in their everyday life, and when there was a surplus, it is likely that they exchanged it for other items such as tin and glass beads. Apart from metals, the archaeological evidence shows that they processed fibre, shell beads, leather, soapstone, bone, and clay. As commonly practiced in Shona societies (Bent 1892; Posselt 1935; Ellert 1984), basketry and wood carving might also have been practiced at

Chumnungwa, but unfortunately, products from these respective crafts were not visible among the archaeological finds since they easily decompose as a result of site formation processes. Mixing of various craft products and crafting equipment at Chumnungwa shows that the residents were what Bandama et al. (2016:16) defines as *"cross-craft specialists"* who worked on a range of materials. The presence of various crafts on both the hilltop and foothill areas shows that the artisans at Chumnungwa operated independently as homestead-based artisans who produced goods to meet their needs and those close members of their community through some objects could be traded regionally and internationally. Furthermore, as in most precolonial societies, seasonality probably directed crafting activities at Chumnungwa. Resulting in some crafts such as mining and metallurgy being mostly done on a part-time basis during the dry season to allow time to do other activities such as crop production, hunting and stonewalling construction. However, there is a possibility that some artisans may have operated on a full-time basis. More research is needed to ascertain this. Based on an analogy from Shona anthropology (Bent 1896; Posselt 1935; Burke 1969; Beach 1980; Ellert 1984; Gelfand et al. 1985; Beach et al. 1998; Shoko 2007) and the fact that most crafting activities were conducted within the residential spaces, there is the possibility that crafting at Chumnungwa was not strictly gendered (sensu Costin 1996). Women and men likely played complementary roles in metallurgy, pottery making, fibre spinning, shell bead making, bone carving, and other associated crafts. Similarly, as part of families, children might have participated in certain crafting activities such as figurine making, and metallurgy (Chirikure 2015).

CHAPTER TEN

DISCUSSION & CONCLUSION

"The worlds people create are not one thing, but many: a series of linked locales of action which have their own special properties, but which take on extra significances from their position within the cultural whole" (Gosden 1999:204).

10.1. INTRODUCTION

As demonstrated in the introductory chapter, the way in which previous Iron Age research was conducted in southern Africa inspired this study. For more than a century, most of the research efforts were concentrated on the 'bigger' sites such as Great Zimbabwe, Khami, Danamombe, Mapungubwe and a few other sites which were considered by pioneering archaeologists to have been 'centres' of territorial states whose political boundaries were respectively spread across the landscape of southern Zambezia (see Hall 1905; Garlake 1973b; Hall 1987; Huffman 1996, 2007; Pikirayi 2001; Phillipson 2005; Swan 2008; Van Waarden 2012). In contrast, 'smaller' Zimbabwe culture sites particularly those situated in Mberengwa and other gold-belt territories away from, and in-between 'centres' of these territorial state were hazily studied and marginalised as docile 'peripheries' that had no agency or political power (see Hall & Neal 1904; Livneh 1976; Huffman 1978, 2009; Kim & Kusimba 2008; Kusimba et al. 2017). I conducted archaeological research at Chumnungwa, one of the Zimbabwe culture sites in Mberengwa to address this research imbalance and to verify these speculations. Fieldwork at Chumnungwa also presented me with an opportunity to find out how Zimbabwe culture communities residing in this dryland landscape adapted and benefitted from the local resources, particularly those which had mineral deposits such as iron, copper, and gold at their disposal. In the light of these research objectives, I present a consolidated discussion of the findings that were derived from the material culture datasets that I extracted from Chumnungwa. Lastly, I conclude by discussing the implications of the research findings to the position of Mberengwa within the Zimbabwe culture and the limitations of the current study as well as the future research directions.

10.2. ETHNICITY, CHRONOLOGY, AND SETTLEMENT HISTORY

Ceramic and architectural datasets examined in this study clearly confirm Chumnungwa as an abode of an Iron Age society that was affiliated to the Zimbabwe tradition. This tallies with the long-standing supposition held by Garlake (1970, 1973) and many other Iron Age archaeologists, and historians who previously regarded Chumnungwa as a *dzimbahwe* (Livneh 1976; Beach 1980; Hall 1987; Kim & Kusimba 2008; Swan 2008; Huffman 2009; Chirikure 2019). When viewed using a regional lens, radiocarbon data derived from this study clearly shows that Chumnungwa thrived more or less the same time as Great Zimbabwe, Danamombe, Mapela, Khami, Thulamela, Manyikeni, Zvongombe, and many other social formations of the Zimbabwe culture that were spread across the landscape of southern Zambezia during the later Iron Age (see Table 10.1). Whilst the available data is not explicit about the scale of Chumnungwa's relations with these Iron Age formations, a cross-comparison of the material culture derived from these sites visibly shows that they were not isolated from each other. As demonstrated in Table 10.1, the stylistic attributes of ceramics that were recovered at Chumnungwa compare very closely with those from pottery that was recovered at neighbouring and distant sites such Pamuuyu, Nenga, (Huffman 1978), Tsindi (Rudd 1984), Nhunguza, Ruanga (Garlake 1973a), Musimbira (Monro & Spies 1975), Zvongombe (Pwiti 1996b), Ndongo (Shenjere-Nyabezi 2017) and Great Zimbabwe (Bent 1892; Caton-Thompson 1931; Chirikure et al. 2018). Equally, the presence of free-standing walling with various architectural features that included chevron patterns, rounded, and squared entrances, is not restricted to Chumnungwa. Garlake (1970), recorded numerous Zimbabwe culture sites in and out of Mberengwa with similar stone structures. These similarities apply to the settlement's choices as well (see Table 10.1), and the range of glass beads that were consumed at these respective sites.

One aspect that meaningfully explains why material culture recorded at Chumnungwa shares a lot in common with archaeological finds that were recovered from its contemporaries in the region is embedded in the fact they shared a similar worldview (Garlake 1970; Livneh 1976; Beach 1980; Hall 1987; Huffman 1996, 2009; Kim & Kusimba 2008). As demonstrated in Chapter 1, it is widely acknowledged among archaeologists and historians working in southern Africa that Zimbabwe culture sites *(madzimbahwe)* served as former residences of Iron Age agropastoralists whose identity is broadly described today as Shona (Zachrisson 1978; Beach 1980; Huffman 1996; Pikirayi 2001; Phillipson 2005; Chirikure et al. 2013a, 2018; Pwiti et al. 2013). Whilst it is undeniable that the term 'Shona' is a historical construct that was formulated during the colonial era to facilitate the classification of Kalanga, Karanga, Korekore, Zezuru, Ndau, and Manyika speakers who were widely spread across southern Zambezia (Doke 1931; Chimhundu 1992; Chirikure et al. 2017b); we know from the historical records dating back as far as the 16th century that these groups did co-exist, and shared a common culture and belief systems that shaped their daily practices. (Theal 1898; Von Sicard 1951, 1958; Burke 1969; Livneh 1976; Beach 1978, 1980; Bhila 1982; Mudenge 1988; Livneh 1976; Bhebe 1999; Brisch 2012).

Table 10.1. A correlation of radiocarbon dates, pottery, settlement location, drystone walling and glass beads series that were recorded at some Zimbabwe culture sites. (Adapted from Caton-Thompson 1931; Summers 1969; Garlake 1970ab, 1972, 1978; Rudd 1984:105; Pikirayi 1993; Huffman 1996, 2007:258-259; Pwiti 1996b:133; Manyanga 2006:176; Swan 2008; Van Waarden 2012:80-84; Chirikure et al. 2014, 2016b, 2017a; McIntosh & Fagan 2017:1073; Bandama et al. 2018; Chirikure 2015, 2018; Nyamushosho et al. 2018; Koleini et al. 2019:878).

Site	Radiocarbon dates	Tradition	Settlement location		Pottery			Dry stone walling				Glass bead series			
			Hill	Flat	GB	Hb&rr	Itm	Fs	Re	Se	Cp	K2	Mp	Zi	Kh
Chumnungwa	1298-1627	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Ntabazikamabo	1415-1615	Khami	X	X	X			X	X	X	X	X	X	X	X
Thulamela	1450-1650	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Manyikeni	1415-1460	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Selolwe	1478-1661	Khami	X	X	X				X	X	X	X	X	X	X
Domboshaba	1427-1661	Khami	X	X	X			X	X	X	X	X	X	X	X
Mapela	1000-1400	Leopards Kopje	X	X	X				X	X		X	X	X	X
Great Zimbabwe	1300-1660	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Mtanye	1273-1392	Leopards Kopje	X	X	X						X	X	X	X	X
Jahunda	1190-1410	Zimbabwe	X	X				X	X		X	X	X	X	X
Baranda	1320-1420	Mutapa	X	X	X			X	X	X	X	X	X	X	X
Village 16	1449-1624	Khami	X	X	X			X	X		X	X	X	X	X
Machemma	1430-1640	Khami	X	X	X			X	X	X	X	X	X	X	X
Mutshilachokwe	1047-1403	Leopards Kopje	X	X	X			X	X	X	X	X	X	X	X
Musimbira	1433-1469	Zimbabwe	X	X	X	X	X	X	X	X		X	X	X	X
Ruanga	1425-1629	Zimbabwe	X	X	X	X	X	X	X	X		X	X	X	X
Tsindi	910-1585	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Khami	1450-1820	Khami	X	X	X	X	X		X	X	X	X	X	X	X
Vumba	1425-1625	Khami	X	X	X	X	X		X	X	X	X	X	X	X
Mananzve	1185-1730	Leopards Kopje/ Khami	X	X	X	X	X		X	X		X	X	X	X

Nhunguza	1431-1482	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Little Mapela	1280-1460	Leopards Kopje	X	X	X	X	X	X	X	X	X	X	X	X	X
Danamombe	1433-1950	Khami	X	X	X	X	X	X	X	X	X	X	X	X	X
Zvongombe	1331-1465	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
Chipadze	1280-1630	Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X

KEY: Gb = Graphite burnished, Hb&rr = Heavily beaded and rolled rims, Itm = Incised triangle motifs, Fs = Free standing, Re = Rounded entrance, Se = Squared entrance, Cp = Chevron pattern, Mp = Mapungubwe, Zi = Zimbabwe, Kh = Khami

As such, there is a high probability that the similarities in ceramic and architectural style highlighted in Table 10.1 were products of shared practices and ideas that emanated from a collective Shona worldview that entangled Chumnungwa and its contemporaries. Recycling and spread of these shared practices and ideas was probably facilitated through kinship ties, trade, warfare, and intermarriages where iconography, style, and other aspects that shaped the material culture that featured in their everyday life were emulated (sensu Renfrew & Cherry 1986; Zachrisson 1978; Beach 1980, Chimhundu 1992; Antonities 2012; Chirikure et al. 2012). Thus, as they interacted, they possibly shared knowledge, and wisdom regarding good settlement choices, construction of dry-stone walled architecture *(masvingo)*, and even production of craft objects such as pottery. In the long run, the materiality of these entanglements was reflected by similarities of the places they chose to settle, the stonewalling they constructed within their homesteads, the ceramics they produced and used, and even the range of glass beads they traded and consumed (see Table 10.1). Nevertheless, in as much as there were a lot of similarities between material culture from Chumnungwa and its contemporaries, some differences did exist. For instance, whilst retaining walls were recorded at Chipukuswi, Danamombe, Ntabazikamambo, Gorongwe, Khami, Muchuchu, and other sites that were built on artificial platforms, the dry-stone architecture at Chumnungwa was limited to free-standing walling (see Table 10.1). Thus, in as much as Zimbabwe culture formations that resided in southern Zambezia shared similar practices and ideas during the later Iron Age, those at Chumnungwa adapted some of these to make hybrid products that suited their own needs which probably differed from communities occupying the other sites. Stein (1999) noted a similar development among the Bronze Age communities of southern Mesopotamia where communities residing at Zeidan developed their hybrid ceramic styles which they imitated from the ’Ubaid culture. At this point, I will focus on the settlement history of Chumnungwa. I will return to the theme of entanglement in the forthcoming sections.

The location of Chumnungwa clearly shows that the members of the Zimbabwe community which resided onsite were strategic in terms of their settlement choice. They made sure that they settled in close proximity with the open tracts of land in and around Chumnungwa which provided them with space for housing, crop cultivation, and grazing of their livestock. These were part of the top priorities to any Iron Age community that occupied southern Zambezia during that time since most livelihoods were hinged on agropastoralism (Pikirayi 2001). Settling at Chumnungwa also enabled the Zimbabwe community to access iron, copper, and gold from the Mweza, Mberengwa, Buhwa, and other local greenstone belts which they smelted and fabricated into tools, ornaments, weapons, and various objects they used in their everyday life. Furthermore, they were situated nearby numerous water supplies. Thus, local rivers, alluvial aquifers, and springs such as Makori, Bubi, and Jordan enabled the residents of Chumnungwa to have access to water for their families and livestock throughout most seasons of the year. Apart from being sources of aquatic resources, the rivers probably served as waterways that networked the residents of Chumnungwa with their contemporaries as well as the east coast traders that supplied glass beads to the interior. Choosing to settle at Chumnungwa was also a wisely calculated move. It enabled the residents of Chumnungwa to exploit the rich biodiversity spread across Mberengwa (Summers 1960; Scoones 1993; Mapaura & Timberlake 2004) which provided them with wildlife to boost their meat diet, firewood for cooking and timber for constructing houses, grain bins, and livestock pens. During the wet season, the Mberengwa landscape is also endowed with edible wild fruits and vegetables such as African cabbage, smooth pigweed, spindle pod, and burweed (see Bent 1892; Scoones 2001; Mapaura & Timberlake 2004). These obviously supplemented their foodways. Perhaps this level of astuteness in settlement location, explains why the Zimbabwe community which resided at Chumnungwa had a long settlement history that spanned for nearly 326 years, despite Mberengwa being dryland that was vulnerable to droughts.

Radiocarbon and ceramic data derived from the study shows that the occupation of Chumnungwa was sequential. It appears that a wholly developed cultural entity of the Zimbabwe tradition first occupied the hilltop around CE 1298 and sometime around CE 1413, their settlements spread to the foothill. Settling on the hill summit was strategic as it offered them a good view of the surrounding landscape which was key in securing themselves from dangerous wild animals and potential livestock raiders. There is a possibility that when the Zimbabwe Iron Age community first settled at Chumnungwa, it was a small group whose population easily fitted on the summit of the hill. However, perhaps due to population growth promoted by several factors that included agricultural prosperity which ushered in food security and the well-being of the society; and massive wealth created from mining gold, copper, and iron in the nearby greenstone belts; they gradually spread their settlements to the foothill and the adjacent plains drained by the Bubi, Jordan, Makori, Bembezi, Njoro, Insiza, and Mwenezi Rivers. This sequence of occupation demonstrated at Chumnungwa is not new in the Iron Age archaeology of southern Zambezia. It was reported by other researchers that worked at other contemporary Iron Age sites such as Great Zimbabwe where human settlement reported to have spread from the Hill complex to the Great enclosure and Valley enclosures on the flats (Summers et al. 1961; Garlake 1973b; Chirikure et al. 2018).

A typological study of the walling, which was backed by a stratigraphical computation using the Harris Matrix Composer v2.0b, revealed a relative chronology which showed that the construction sequence of the dry-stone walling was gradual. Nevertheless, this does not mean to say that one must oversimplify the construction of all the walls to have been programmed; there is a possibility that needs inspired the erection of the walling varied and were consistently reconfigured to match their daily practices and requirements. There is a possibility that the stonemasons based at Chumnungwa could reconstruct the walls upon collapse or simply dismantle them to create or restrict access. Thus, the stonewalling at Chumnungwa was a product of numerous activities and stages of construction, restoration, and even alteration in some instances.

The end of the Zimbabwe occupation at Chumnungwa is a difficult subject to engage with considering the available radiocarbon data which shows that both the hilltop and foothill residences were abruptly vacated more or less at the same time. Nevertheless, a reappraisal of archaeological data derived from previous 'excavations'[47] undertaken by Hall and Neal (1904) on the hilltop of Chumnungwa, 200 years after the site had been probably abandoned might provide us a clue. Hall and Neal (1904:100-103) reported their recovery of human skeletal remains of seven individuals. These were not officially buried as they were lying in shallow graves with their gold bangles and weapons in original positions they had been slain. As postulated by Hall and Neal (1904:102) these individuals might have been massacred during a conflict especially when one considers the fact that the archaeological context of their skeletons portrayed their 'death postures', however, there is no account to explain why they were massacred (see Hall & Neal 1904). A reading of the oral history of southern Zambezia during the Later Iron Age (CE 1250-1900) shows that the landscape of Mberengwa and the adjacent areas was frequently marred by civil wars sparked by internal disputes particularly among the Torwa and Rozvi groups (see Von Sicard 1951, 1953, 1957, 1958; Beach 1978, 1980; Livneh 1976; Zachrisson 1978; Bhila 1982; Mudenge 1988). For instance, Robinson (1959) exposed various burnt poles, thatch, and related materials during his excavations at Khami. It is well known in history that these were remnants of a civil war that broke out around 1650 and

[47] See Chapter 2 for a detailed summary.

resulted in the destruction of the town (Livneh 1976; Zachrisson 1978; Beach 1980; Pikirayi 2001; Van Waarden 2012). Therefore, drawing from such comparative historical and archaeological data (sensu Kim & Kusimba 2008), such typical conflicts contributed to the demise of later Iron Age societies in southern Zambezia such that the ‘conflict scene’ recorded at Chumnungwa (Hall & Neal 1904:102) might have resulted from warfare.

10.3. DAILY PRACTICES AT CHUMNUNGWA

10.3.1. INNOVATION

A study of the daily practices of the residents of Chumnungwa shows that they were skilled innovators who managed to operate a vibrant crafting industry despite living in a dryland with a hostile climate and environment. Like many other Iron Age societies spread across the landscape of southern Zambezia, they seasonally exploited local resources that were at their disposal to engage in diverse crafting activities that produced a range of utilitarian and ceremonial objects which featured in their everyday life. Metallurgical data recorded onsite showed that the Chumnungwa metalworkers crafted impressive jewellery using copper, and iron which they probably mined locally within a 0-30 km radius, including the adjacent Mberengwa, Buhwa, Filabusi, Gwanda, and Mweza greenstone belts. As expert metallurgists, they also alloyed copper with tin which they sourced elsewhere outside Mberengwa to make bronze jewellery. The range of jewellery fabricated at Chumnungwa included beads, rings, and bangles which were occasionally designed with fibre cores, hollow bone cores, and herringbone impressions. Typical bangles were also recovered at other Zimbabwe culture sites such as Mapungubwe (Miller 2002), Khami (Mukwende et al. 2018), and Great Zimbabwe (Bandama et al. 2016). In fact, they were widely crafted throughout southern Zambezia during the second millennium CE and as similarly practised among the Shona (Bvocho 2005; Chirikure 2015), they are likely to have been mostly used by Chumnungwa women for adornment purposes. Apart from jewellery, the Chumnungwa metal workers also had the capacity to make tools, and weapons using iron. Among these included spearheads, arrowheads, blades, hoe heads, and scrapers that were recovered onsite. We know from the archaeological record that typical spears and arrows recorded at Chumnungwa were commonly used to hunt wild game by Iron Age communities in southern Zambezia (Caton-Thompson 1931; Fouché 1937; Robinson 1959; Voight 1983; Pwiti 1996b; Van Waarden 2012; Bandama et al. 2016; Manyanga & Pangeti 2017). Similarly, as recorded in the region (i.e. Pikirayi 2001; Chirikure 2015) the iron hoes crafted at Chumnungwa were possibly used for crop cultivation and quarrying ore in the adjacent greenstone belts. More interestingly, the presence of *mbira* keys onsite, showed that the Chumnungwa metal workers had also the ability to fabricate keys of *mbira*, a musical instrument that is commonly used by the Shona people (Ellert 1984; Hanson 2005) using iron. As demonstrated in the previous chapter, typical *mbira* keys were rarely recovered at Iron Age sites in southern Africa, the only known sites being Great Zimbabwe (see Bandama et al. 2016; Chirikure 2019), and the Nyanga agricultural complex (Summers 1958:131-132). We know from Shona anthropology that music and dancing and beer formed the lifeblood of most of the indigenous ceremonies *(mabira)* particularly those that connected the living and the dead *(vadzimu)* such as *mukwerera* (rain asking ceremonies) (Posselt 1935; Gelfand 1966; Chirikure et al. 2017b). It is within these ceremonies that a *gwenyambira* (*mbira* player) would play the instrument striking the metal keys into a melodious tune using his or her thumbs and forefingers (Ellert 1984).

Though not a single finished gold objects was recovered onsite, the recovery of a clay bead mould used for making spherical gold beads and a crucible fragment attached with a gold droplet during this study, undeniably shows that the residents of Chumnungwa smelted and fabricated gold onsite. Even Hall and Neal (1905:232), acknowledged the quality of the gold processed at Chumnungwa to have been of better quality than that which was used for Britain coinage in the early 20th century. Similarly, to copper and bronze, the gold processed at Chumnungwa was mostly used for jewellery making. In fact, Hall and Neal (1904), recovered much of the gold objects consumed at Chumnungwa in burials. Among these included bangles, beads, and a rosette (see also Garlake 1973b). Due to the legacy of vandalism, it is very difficult to compute the scale of gold, copper, and iron production at Chumnungwa, however, quantities of smelting debris recorded by Hall and Neal (1905:227-228) suggests Chumnungwa as one of the biggest smelting precincts in south-central Zimbabwe within the territory that connected Mberengwa, Filabusi, and Gwanda districts.

Moreover, the range of utilitarian metals that I recovered at Chumnungwa, and evidence of their manufacture using a combination of hot and cold working techniques, suggests that these objects were produced by expert metal workers for onsite and offsite consumption. Cases of homestead-based metal industries are abundant in the archaeological record, and they have been previously reported at other Iron Age sites in and around Mberengwa such as Nenga 2030:CB58 (Van Der Merwe 1978), Hlamba Mlonga (Thorp 2009), and Great Zimbabwe (Hall 1905).

Like most Iron Age societies spread across southern Africa, the members of the Zimbabwe community which resided at Chumnungwa were also skilled in fibre-weaving. As part of the spinning machines, fragments of spindle whorl discs recovered at Chumnungwa were used as flywheels and weights that were fastened on the end of spindles to facilitate spinning of both thick and thin fibres (see Chapter 9). The typological traits of the discs recovered at Chumnungwa are similar to those that were recovered at other Iron Age sites such as Nenga (Huffman 1978), Ndongo (Shenjere-Nyabezi 2017), Nhunguza, (Garlake 1973a). Given the distribution of spindle whorls at the site, there is a possibility that spinning at Chumnungwa was mostly conducted at the household level, in a similar manner to contemporary sites such as Great Zimbabwe (see Chirikure 2019). Consequently, the thread spun using the discs could have been used for sewing clothing or making strings for ornaments such as beads neckless and headbands (Gelfand 1979) and could even have been traded locally and regionally in exchange for goods such as salt, small livestock, glass beads, and metal products (Ruwitah 1999).

The presence of stone tools suggests experimentation with local resources such as quartz to manufacture a range of lithic stone tools that included scrapers. Thus, as part of their everyday material culture, the Chumnungwa society possibly used these for a range of crafting activities that included leatherworking, shell-bead manufacture, and woodworking (sensu Whitelaw 1993; Van Waarden 2012). Regarding the smooth-surfaced stone tools with symmetrical shapes such as the pebbles, hammerstones, and pestles, it is evident that the Chumnungwa Iron Age community likely sourced them from the riverbeds of nearby rivers such as the Bubi. We know from basic hydrology that these are products of the abrasion and collision of rocks on the riverbed during a river flow (Small 1989). The use of smooth stones with symmetrical shapes is recorded as a common practice among agropastoralists of southern Zambezia. These are said to have been used for activities such as pottery making, hunting, gaming, making of music instruments, divination, and processing of foods, medicines, and tobacco (see Bent 1892:216; Caton-Thompson 1931; Ellert 1984: 68; 93-106; Lindahl & Matenga 1995; Huffman 1996; Van Waarden 2012).

The evidence of worked and semi-worked soapstone flakes and a bicone shaped bead onsite shows that the residents of Chumnungwa also engaged in soapstone working. As demonstrated in Chapter 2, soapstone is abundant in Mberengwa, and chances are extremely high that it could have been locally mined. Whilst much cannot be said about soapstone carving at Chumnungwa using current data examined in this study, previous research undertaken by Hall and Neal

(1904) showed that they also crafted a range of utilitarian objects that included items such as bowls. Similar soapstone objects were also crafted at Mapungubwe (Saitowitz 1996), Great Zimbabwe (Bent 1896; Hall 1905; Burke 1969), Danamombe, and Mundi (Hall & Neal 1904). This shows that soapstone working was not limited to the 'bigger' or the 'smaller' Zimbabwe culture sites.

The recovery of bone objects made from animal fauna implies that bone crafting was an activity that was practiced across Chumnungwa. The presence of the bone whistle[48] carved out of a bird bone is intriguing. To date, the whistle is the only object and only musical instrument at Chumnungwa that was recovered in a complete state. More recently, a similar instrument was recovered at Khubu la Dintša a Later Iron Age site in north-eastern Botswana (Klehm et al. 2017:611). Such musical instruments are commonly known as *pembe* or *pito*, these were played alongside *mbira*, drums *(ngoma)*, rattles *(hosho)* other instruments during ceremonies such as *mabira* and *mukwerera* where congregants danced to the music and rhythm (Ellert 1984). Thus, the whistle recovered at Chumnungwa likely served similar roles. The presence of a dice uniquely decorated with cross-hatching motifs reflects the ingenuity of the bone workers at Chumnungwa. A typical dice with the smoothly polished and cross-hatched surface was recovered at Mwenezi Farm (see Bvocho 2005:416; Manyanga 2006:86). Basing on Shona anthropology, there is a possibility that these objects were paraphernalia of traditional healers *(n'anga*) which were used as divining dice *(hakata)* for foretelling and diagnosing diseases (Posselt 1935; Gelfand et al. 1985; Ellert 1984; Thorp 1984b; Huffman 1996; Shoko 2007).

The presence of finished and unfinished shell-bead areas on the hilltop and foothill areas of Chumnungwa shows that crafting of organic beads was fairly practiced across the site using shells from local land snails, freshwater mussels and, to a greater extent, ostrich eggs. As demonstrated in Chapter 8, animal species bearing these shells are common in the area including the freshwater mussels, which were probably sourced from the nearby rivers. The shell beads recovered at Chumnungwa most likely served to most individuals as items of adornment that were probably used alongside metal and glass beads (Bvocho 2005; Van Waarden 2012). As discussed earlier, there is a possibility that they also formed part of the necklaces that were used adornment by members of the Chumnungwa community.

---

[48] Recovered in a stratum that was dated between CE 1300 and 1410 (see Chapter 4).

Like most social formations of the Zimbabwe culture, the residents of Chumnungwa also had the expertise and resources to engage in the construction of monumental drystone architecture. Thousands of stone blocks, spread across a surface area that measured approximately 4000 $m^{2,}$ have layered veins which show that they were quarried locally using both the natural and artificial exfoliation methods (Garlake 1970). There is no doubt that stonemasons at Chumnungwa took advantage of the mechanical weathering processes that separated granite and dolerite batholiths from their parent outcrop due to continued heating and cooling effects. However, the same process is likely to have been made faster and more effective using artificial exfoliation whereby stonemasons set fires on granite and dolerite rock outcrops, and upon gaining enormous heat, these outcrops were cooled down using water to fracture the rock outcrops (Whitty 1959, 1961). Repetition of these natural processes helped in separating the top layer of the outcrop from the parent rock, hence sheets of the outcrop were broken into millions of sizeable stone blocks that were dressed by specialist masons. Beyond Chumnungwa, these methods are believed to have used by the masons who constructed walling at Great Zimbabwe and other Zimbabwe culture settlements sites as Matendera (see Caton-Thompson 1931; Whitty 1961; Garlake 1970; Chipunza 1994; Chipangura et al. 2019).

10.3.2. ADAPTATION

A study of the daily practices of the Iron Age community that resided at Chumnungwa shows that they were successful risk-takers who managed to adapt pastoralism and obtain cattle wealth and food security in a dryland that was vulnerable to tsetse-fly. As demonstrated in Chapter 2, the wide presence of Mopane woodlands in Mberengwa promoted breeding of tsetse-fly during the dry season (Summers 1960; Garlake 1978; Sinclair 1987; Beach 1994). This infestation obviously posed mortality problems to local livestock. Therefore, to reduce the rate of infection from this parasite, the residents of Chumnungwa created a centralised herding system that restricted movement of their livestock through onsite penning of their cattle, sheep, and goats (sensu Torr et al. 2011; Mavhunga 2014). This herding strategy was archaeologically demonstrated at Chumnungwa by two livestock enclosures with huge layers of vitrified dung deposits which obviously accumulated as a result of penning large numbers of cattle, sheep, and goats onsite. Alternatively, in cases where the vegetation cover was depleted, particularly during the drought seasons, there is a possibility that cattle at Chumnungwa could have been seasonally transferred to distant cattle pots along the bushveld of the Bubi and Unmzingwane Rivers where herdsman looked after them. Another strategy to avert the crisis was through loaning part of the herd to nearby relatives and friends situated in good grazing areas such as the Buhwa area, where other Iron Age societies lived (Bent 1892; Hall & Neal 1904; Von Sicard 1956; 1957; Garlake 1970; Huffman 1973, 1978). This transhumance mechanism locally known as *kuronzera* is common among the Shona and other agropastoral societies of southern Africa (Mudenge 1974; Garlake 1978; Scoones 1996; Pikirayi 2001; Smith 2005; Manyanga 2006; Van Waarden 2012). Regionally, the domestication of large herds of cattle has been argued to be one of the factors that enriched and empowered numerous Iron Age societies (Garlake 1978; Hall 1987; Pikirayi 2001; Manyanga 2006). Thus, because of strong economies emerging from agropastoralism, southern Zambezia is said to have witnessed the rise of complex societies such as K2, Mapela, Bosutswe, Manyikeni, Great Zimbabwe, Danamombe, and Khami that developed to become majors centres of power (Garlake 1978; Voight 1983; Denbow et al. 2008; Tapfuma 2010; Chirikure et al. 2014; Mukwende et al. 2018). Likewise, there is no doubt that success in managing the risk of tsetse-fly promoted growth in cattle numbers at Chumnungwa, which subsequently led to the growth of Chumnungwa's economy.

Domestication of large herds of cattle and ovicaprines ensured food security at Chumnungwa. The presence of skeletal parts with butchering and burning marks shows that cattle and caprines might have been periodically slaughtered for food purposes. Apart from being sources of beef, the cattle represented at Chumnungwa could have provided milk to their respective owners. Thus, in as much as the available faunal samples of cattle could not be sexed due to heavy fragmentation, there are high chances that part of the Chumnnugwa cattle herds were dairy cattle. Sour milk is a traditional delicacy among the Shona and usually, it is consumed with *sadza,* a starchy thick porridge made of *mapfunde* (sorghum), or *rukweza* (finger millet) (Ellert 1984). The Chumnungwa Iron Age community is also likely to have benefited materially from domesticating cattle and caprines. Thus, it is possible that some of the clothing worn by residents of Chumnungwa might have been made from leather extracted from cattle or caprines represented onsite. Apart from that, the skin could have been used to make drums *(ngoma)* bellows (especially goatskin) for pumping air in furnaces during iron production (Bent 1892:44), or mats which they probably slept on, or were wrapped and buried inside during funeral rites (Aschwanden 1982, 1989). In another context, these animals could have been barter and traded in exchange for other material goods. Bent (1892:235) talks of a metal worker they met in Wedza area who anticipated exchanging his three large iron hoes for a goat. In other instances, oxen *(madhonza)* were used as drawing power for pulling or carrying heavy loads of firewood such as tree logs, as commonly practiced by some Shona people today (Katiyo 1976; Zachrisson 1978; Hanson 2005; Mavhunga 2014).

The presence of wild species in most of the middens that were excavated onsite reflected the ingenuity of the residents of Chumnungwa in diversifying their foodways to avert their vulnerability to food scarcity. As drawn from the environmental history of southern Zambezia, Mberengwa was part of the semi-arid landscapes that occasionally experienced droughts *(shangwa)* (Beach 1980; Zachrisson 1978; Manyanga 2006; Hannaford 2015). Therefore, in order to ensure food security, the residents of Chumnungwa supplemented their meat diet with wild game. Similar, to Shona practices (see Elton 1873; Beach 1977, 1980, Hamutyinei 1989; Zachrisson 1978; Shoko 2007; Mavhunga 2014; Manyanga & Pangeti 2017), hunting at Chumnungwa is likely to have been a seasonal activity that could have been done at an individual or communal level where men amalgamated forming hunting expedition parties that led them to disappear into the bush for weeks or months to hunt and only come back to their respective homesteads with the kill. Large ungulates represented at Chumnungwa such as buffalo, eland, kudu, and impala were likely to have been hunted using spears (*mapfumo*), knobkerries (*tsvimb*o), bows (*uta*) and arrows (*miseve*). Theodore Bent (1892:222, 229), one of the antiquarians who took some of his time to explore the landscape of southern Zambezia, documented his encounter with some Shona men who hunted wild game using nets (*mambure*) made from tree bark (also see Beach 1977). According to Bent, these nets would be spread to capture animals and they would drive them towards the nets by chasing them with their domesticated dogs (*imbwa*). Once trapped, these animals were speared to death. Probability is high that some of the hunters *(vahombarume)* who resided at Chumnungwa used this hunting technique. This proposition is based on ample evidence of *mapfumo* and *miseve* that were recovered onsite as discussed earlier. Nevertheless, because of the limitations of the tree bark to survive archaeological site formation processes and other depositional factors we do not have direct evidence of *mambure* at Chumnungwa. Apart from *mambure*, there is a possibility that the hunters drove the big game into the narrow pits they would have dug adjacent to waterholes and rivers and covered with grass. This hunting method is renowned in precolonial southern African history, it was even recorded by early explorers of the 19th century southern Zambezia such as Thomas Baines and Karl Mauch (see Bent 1892; Burke 1969; Hall 1977; Mavunga 2014).

Apart from hunting, the residents of Chumnungwa also relied on gathering leopard tortoises and land snails. In as much as gathering[49] is commonly presented in most archaeological texts (Hall 1987; Phillipson 2005) as gendered and insignificant to the Iron Age societies, the reality is that just like any other animal procurement strategy used by the residents of Chumnungwa it contributed to their meat economy. Thus, the land snail and leopard tortoise could have been gathered in the surrounding areas in the middle of doing other businesses such as tilling the land, herding, or even hunting (Beach 1977; Shoko 2007). While archaeozoologists (i.e. Plug 1990; 1997a) largely regard the presence of the land snail at Iron Age sites as self-introduced, visible modifications on the Chumnungwa *Achatina sp*. clearly shows that is was intentionally brought to the site as food and secondarily as a source of raw materials for making shell beads. Similarly, small-sized animals such as birds, hyraxes, and red veld mice were procured through snaring. Usually snaring was done by young boys while they were herding cattle to catch small-sized animals such as rodents and birds (Gelfand 1971; Mazarire 2016). Ultimately, the Chumnungwa society developed a strong food base that allowed nature to cushion them in times of scarcity.

Apart from nutrition purposes, the wild animals represented at Chumnungwa are likely to have been acquired for other secondary motives. For instance, some of the clothing worn by residents of Chumnungwa might have been made from leather extracted from ungulates represented at Chumnungwa such as buffalo *(nyati)*, sable *(ngwarati*), impala (*mhara*), eland *(mhofu)*, or kudu *(nhoro)*. Antelope hide could also have been used to make bowstrings *(mukosi)*, and mats. In some instances, the horns of some antelope such as the kudu could have been used for making musical instruments such as aerophones (*hwamanda*) (Ellert 1984). Bent (1892:47) records another encounter where he met a traditional healer *(n'anga)* who used *hwamanda* made of an antelope horn as his musical instrument. The skeletal parts of smaller sized mammals at Chumnungwa, such as aardvark *(hweru)*, could be used in rituals. Gelfand et al. (1985) reported that some Shona *n'anga's* used the snout and nails of aardvark to make medicinal charms for their clients. Other skeletal parts such as the phalanges of Bov III species could have been used for making divination dice *(hakata)* (Thorp 1984b, 1995; Huffman 1996) such as the one recovered from Test Pit 8 (Chapter 9).

[49] Locally known as *kushuzha*, or *kushava* (Holleman 1952; Mavhunga 2007).

10.3.3. NETWORKS OF ENTANGLEMENT

As demonstrated earlier, there is no doubt that material culture recovered at Chumnungwa was actively involved in the everyday life of the Iron Age community that occupied the site. In the long run, the residents of Chumnungwa became powerful actors who were entangled in a web of relationships that connected them with various actors who operated at local, regional, and global scales as hypothetically demonstrated in Figure 10.1. Locally, the residents of Chumnungwa interacted at various levels with Leopards Kopje, Khami, and Zimbabwe social formations that lived in and around Mberengwa. As discussed earlier, items such as pottery, jewellery, woven fibre, and cloth, were reciprocally exchanged among these Iron Age communities. The materiality of these entanglements was reflected by similarities in the design features of some material objects that were recovered at Chumnungwa and other places such as Nenga, Pamuuyu, Mundi, and Chomuruvati. It is possible that some of the livestock represented at Chumnungwa might have been acquired from their neighbours, particularly through kinship ties that were facilitated by intermarriages. For instance, as drawn from ethnography, the Shona had a proverbial concept of, *"rooranai vematongo"* which literary translates to marry within your neighbourhood. Thus, both young men and women were expected to marry partners from the same neighbourhood. However, the concept of neighbourhood in this context was not strictly restricted to families who lived around them but even those situated many miles away as long as they shared similar cultural practices, values, and belief systems. However, a prescribed bride price *(roora)* had to be paid first to allow the woman to leave her family and join her husband (Holleman 1952; Gelfand 1966; Bourdillon 1976; Aschwanden 1982, 1989; Shoko 2007). The greater part of the bride price was comprised of numerous cattle which were given to the father-in-law *(danga)* and one cow dedicated to the mother-in-law *(mombe yeumai)*. In cases where the bride *(mukaranga)* was a virgin *(mhandara)*, the son-in-law was customarily obliged to pay a stand-alone heifer *(mombe yechimanda)* to the mother-in-law as a form of appreciating her. The rationale of paying *roora* was for a son-in-law *(mukuwasha)* to thank his in-laws for naturing a virtuous *mukaranga* who would be joining their family and multiplying their clan. However, in cases where one could not afford cattle, caprines, and other valuable commodities such as hoes *(mapadza)* or grain were used as *roora* (Holleman 1952). Thus, as cattle circulated among these Iron Age societies, they connected them and created relations which mutually benefited them in their everyday life.

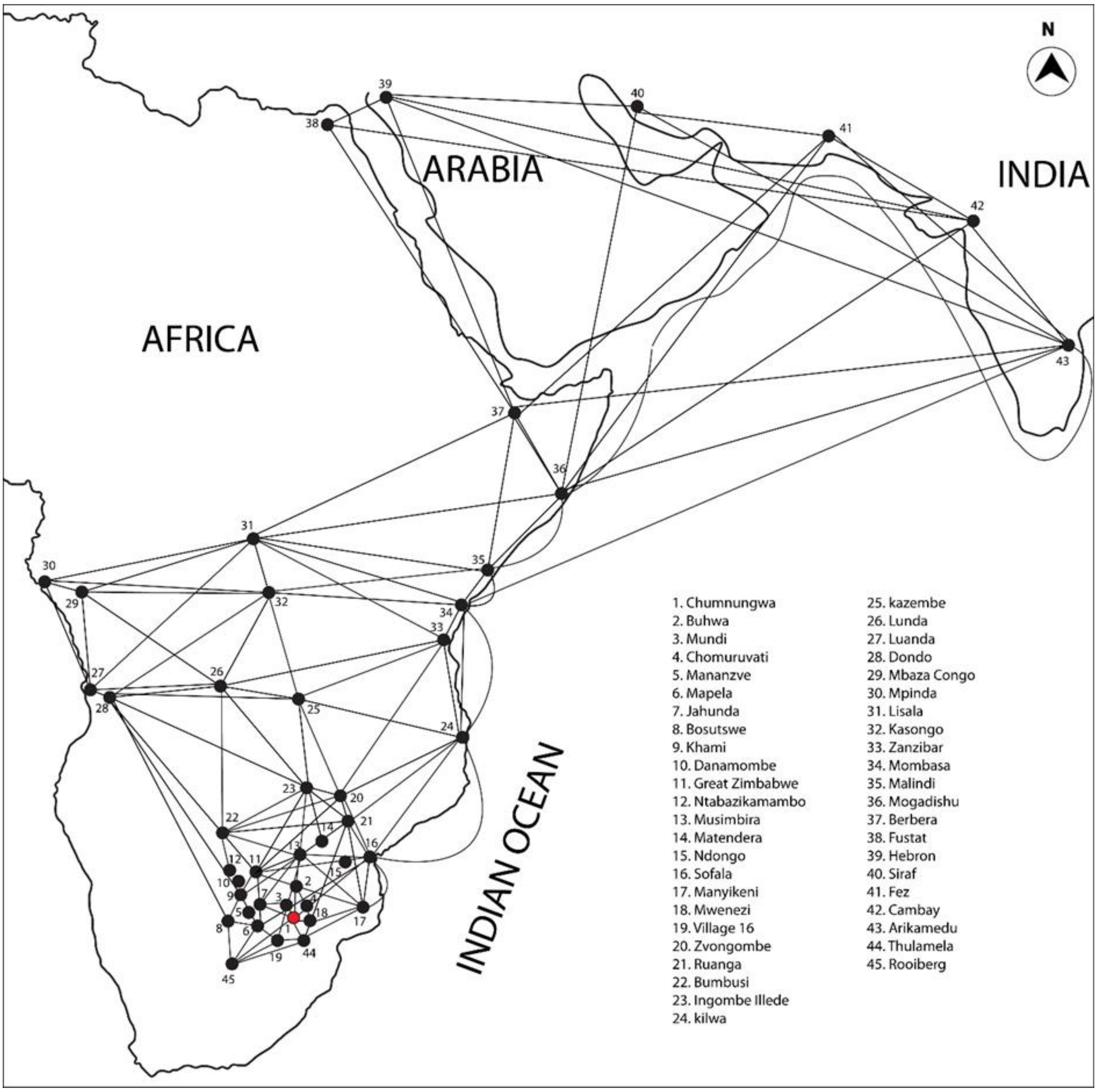


Figure 10.1. Web of relationships that connected Chumnungwa (circled in red) with various actors who operated at local, regional, and global scales.

Regionally, Chumnungwa was also entangled in the trade networks that connected Iron Age societies that were spread across Southern Zambezia. Within these regional networks, the residents of Chumnungwa used minerals and other resources that were at their disposal to acquire tin, and other key resources that were unavailable in Mberengwa. There is a possibility that part of the tin that was used to make bronze objects at Chumnungwa might have been sourced more than 150 km away in the Bikita area near Great Zimbabwe, or perhaps from the Rooiberg area in northern South Africa (Figure 10.1). Available evidence suggests these as the nearest sources of tin known so far that supplied numerous Iron Age societies including Great Zimbabwe (Molofsky et al. 2014; Chirikure 2015). It is highly possible that Chumnungwa was part of the Iron Age communities that supplied gold, iron, and copper to Great Zimbabwe, Matendera, Musimbira, Khami, Danamombe, and many other contemporary societies that were situated away from greenstone belts. Thus, unlike that which was previously thought by some scholars (i.e. Hall & Neal 1904:81; Livneh 1976:46-18; Huffman 1978:98; 2009:51; Kusimba et al. 2017:80), the processes of gold mining and distribution in Mberengwa were not necessarily controlled by territorial states such as Mapungubwe, Great Zimbabwe, and Khami whose centres of power were situated far away from greenstone belts. In fact, there is ample evidence in Mberengwa which shows that gold was a democratic resource that was locally smelted and fabricated into finished goods by numerous Iron Age societies including those who resided at Chumnungwa, Mundi, Mpopoti, Gorongwe, Buhwa, Nuanetsi, and Rupungubwe. The recovery of an HIH croisette copper ingot and welded clapper-less iron bells, onsite (Hall & Neal 1904) shows that Chumnungwa also participated in the inter-regional trade networks that linked southern Zambezia with the Zambian Copperbelt, and the Katanga region in Congo (Garlake 1973b; Vansina 1969; Swan 2007, 2008). Thus, like their contemporaries at Ingombe Ilede, Great Zimbabwe, Thulamela, Danamombe, and Manyikeni, the residents of Chumnungwa also had access to these commercial networks that facilitated the circulation of these objects between central and southern Africa. It is also through participation in these inter-regional networks that the Chumnungwa community could have acquired 'technological recipes' that were used to manufacture these iron bells and the cross-shaped copper ingots. Anthropological data collected by James Walton (1955) and Jan Vansina (1969) suggested the double iron bells to have been seldomly used as currency in inter-regional trade deals. Similarly, most literature (i.e. Fagan et al. 1969; Garlake 1970; Bison 1975; Nikis & Livingstone Smith 2017:898; Chirikure 2015) portray cross-shaped copper ingots as a form of currency that circulated among royalty within a geographical belt that connected the Upemba depression, Zambian Copperbelt, and southern Zambezia sometime around the 7th and 14th centuries. This shows us that Chumnungwa was entangled with other regions in southern Africa and beyond. The recovery of glass beads onsite exposed Chumnungwa as one of the players in the Indian Ocean trade networks that connected southern Zambezia with Asia, Europe, and the Middle East. In as much as the current study yielded few glass beads, a norm which is commonly experienced at most Iron Age sites in southern Africa (see Wood 2005, 2009), there is a possibility that Chumnungwa had more glass beads, especially within the gold burials which were poorly excavated and looted by antiquarians and treasure hunters (see Hall & Neal 1904). Nevertheless, there is a strong possibility that the glass beads recovered onsite were probably acquired by the residents of Chumnungwa directly or indirectly from coastal trade centres such as Sofala on the Mozambique coast (Wood et al. 2012). It is well known in the archaeological and historical records that glass beads were used by traders to acquire gold and other 'precious' commodities from southern Africa's interior (Freeman-Grenville 1962; Summers 1969; Beach 1980; Hall 1987; Pikirayi 2001; Ellert 2002; Miller 2002; Swan 2007; Chirikure 2015). There is a possibility that Chumnungwa might have supplied some of the gold other precious objects which were couriered to East Africa, India, and China (Freeman-Grenville 1962: 15; Summers 1969).

10.4. POLITICAL ORGANISATION

Several aspects of the political organisation of the Chumnungwa society can be deduced from the material culture that was recorded onsite. As presented in the introductory chapter, they were numerous Zimbabwe culture polities that thrived in southern Zambezia during the second millennium CE. Among these included Mapela, Mapungubwe, Great Zimbabwe, Torwa, Rozvi, and Mutapa (Hall 1987; Pikirayi 2001; Phillipson 2005; Huffman 2007; Chirikure et al. 2013a; Pwiti et al. 2013). The majority of these polities had capitals which are commonly referred to as *mizinda* meaning seats of political power (Huffman & Hanisch 1987; Chirikure et al. 2013a, 2018). These accommodated families of those in power and their servants *(varanda)*. In most instances, most of these *mizinda* were fashioned with monumental architecture in the form of drystone walled enclosures locally known as *masvingo* or *zvidzitiro* which were erected to screen royal housing and perhaps to symbolise their status and show-off their political authority (Whitty 1961; Garlake 1970, 1973; Rudd 1984; Huffman 1986, 1996, Huffman & Hanisch 1987; Pwiti 1996b; Chipunza 1994; Pikirayi 2001, 2013; Chirikure et al. 2012, 2018). According to Pikirayi (2013) in most cases, *masvingo* were part of the public works that were constructed under the leadership of the ruling royalty. Capital that financed these works is believed to have been sourced from the surplus wealth that was acquired from the taxes and fines collected from the subjects (Pikirayi 2001, 2013; Kim & Kusimba 2008). Whether the stonemasons employed by royalty were cohesively or willingly contracted we do not know, but what we know is that among the Shona, large tasks such these, including the construction of pole and *dhaka* houses *(dzimba)*, and weeding of crops on large acres of land *(masakuro)*, were collectively done as a community through work parties locally known as *nhimbe* (Kuimba 1968; Zachrisson 1978; Shoko 2007; Mugwini 2017; Chirikure 2019).

The extension of this model to this study suggests Chumnungwa as a *muzinda*. Thus, as commonly interpreted at other *mizinda* such as Mapela, Mapungubwe, Danamombe, Great

Zimbabwe, Khami, Kasekete, (see Huffman 1996; Pikirayi 2001; Pwiti et al. 2013; Chirikure et al. 2016a), stonewalling at Chumnungwa was part of public works which was strategically built to symbolise the political power, prosperity and high status of the royalty that occupied the hill whilst those of lower status probably occupied the outlying low lying areas. The labour force used to construct the walling obviously included the members of the Chumnungwa society, possibly both males and females. Nevertheless, whether or not they were forcefully contracted by the Chumnungwa royalty or not, we do not know, but what we do know is that the royalty was prosperous as evidenced by the presence of a large cattle kraal onsite. Thus, as the political economy of Chumnungwa grew, the royalty accumulated profits which they used to finance the construction of the walling which also likely served as a security barrier that restricted access to the royal residences. This is corroborated by the presence of very tall and thick walls particularly those on a granite platform that circles the northern end of the summit of Chumnungwa hill. We know from Shona history that some residences of prominent chiefs were secured using stonewalling, and palisades (see Bhila 1982; Mudenge 1988). For instance, Theodore Bent (1892:82) noted typical security infrastructure when he visited the homestead of the then Chief Charumbira near Great Zimbabwe sometime around 1891. Therefore, there is a possibility, that the stonewalling at Chumnungwa was also used to secure the royalty from any impending attacks which threatened their peace and survival. Nevertheless, the walls were not necessarily constructed to strictly seclude the royalty from other members of Chumnungwa society as implied by scholars such as Huffman (1996) at Zimbabwe culture sites with similar stone architecture. Rather, there is every possibility that the royalty could mingle with commoners in everyday or occasional events such as the trial of cases at the royal court *(dare)*. It is well known from Shona archaeology and anthropology that each *muzinda* occasionally hosted a *dare* session where the chief and his advisory council would gather and discuss pertinent matters as well as adjudicating disputes (Bullock 1927; Holleman 1958; Huffman 1986, 1996; Hanson 2005; Mugwini 2017).

Even though the culture was not static during the Iron Age (Lane 1994/5), long before the migrations of the 18th and 19th centuries, the political organisation of the Shona polities in Mberengwa have the potential to mirror the flow of political power within the Chumnungwa polity in a meaningful way that is conversant to the archaeological data. As demonstrated in Chapter 2, the historical record of Mberengwa shows the landscape was occupied by numerous independent polities who shared a similar heterarchical and hierarchical political organisation that was made up of three layers, namely homestead *(musha)*, ward *(dunhu)*, and territory *(nyika)* that could be reconfigured, resized or even disbanded at any given point (Bent 1892; Von Sicard 1951, 1953; 1955, 1956, 1957, 1958; Beach 1978, 1980; Livneh 1976; Zachrisson 1978; Ruwitah 1997; Shoko 2007; Brisch 2012). There is a possibility that the various *misha* (plural) that surrounded the hill served as the lowest political units of the Chumnungwa polity. Each *musha* thrived under the stewardship of a *Samusha* (family head) who directed the everyday operations of the family which was comprised of wives, children, and immediate relatives. The second level of political organisation was probably characterised by the dispersed villages *(matunhu)* which were an amalgamation of *misha* (plural) that varied in size and population. Whilst we do not have enough data to articulate this, the preliminary survey data presented in Chapter 2 suggest these have been set up on the outlying plains that surround Chumnungwa to accommodate the increasing population (also see Garlake 1978). *Nyika* (territory) was probably the apex layer of the Chumnungwa polity as common amongst the Shona (Von Sicard 1956; Zachrisson 1978; Beach 1980; Bhebe 1999; Shoko 2007; Chirikure et al. 2012). This comprised of all *matunhu* (villages) that created a large territory, however, not too big as this was detrimental for the maintenance of political authority. As previously postulated by Hall and Neal (1904:81) the boundaries of the Chumnungwa polity probably extended into a 50 to 60 km radius that encompassed Insiza (Filabusi) and Gwanda east where they mined gold and other precious minerals from the Filabusi, Gwanda, and Mweza greenstone belts as well as the Doro range. The leader *(mambo* or *ishe)* was obviously in charge of the political affairs, as he was at the top of the hierarchy. The village in which the leader and his family (royalty) resided was probably referred to as *guta*, as commonly practised amongst the Shona (Bullock 1927; Kuimba 1968; Garlake 1973b; Zvarevashe 1976; Zachrisson 1978). Thus, as the royalty they had sole rights to control the land that defined their polity, hence they oversaw its distribution and utilisation amongst their subjects who relied on it for agriculture, settlement, and other activities that contributed to their everyday livelihoods. So, whoever wanted land for housing or crop cultivation, had to be one of their subjects. Elsewhere, this method of bolstering political power through land control was also practiced by the prehistoric societies of ancient Hawaii as demonstrated by the work of Earle (1987). This redirects us to the possibility that the political power of the leaders at Chumnungwa was mostly hinged on control of the local land and facilitating its distribution (sensu Chirikure 2019). However, the loss of this land by the royalty to their enemies also meant a loss of their political power since it was their obligatory duty to defend it from being taken away by other competing polities (Zachrisson 1978). Such a political organisation which demonstrated a hierarchical and hereditary power structure that fell under the control of the members of the founding house of

the royalty is consistent with most complex societies of southern Zambezia studied by historians, anthropologists and archaeologists (see Beach 1978, 1980; Mudenge 1988; Huffman & Hanisch 1987; Pwiti 1996b Huffman 1996; Pikirayi 2001; Van Waarden 2012; Chirikure et al. 2018).

10.5. RECONSIDERING MBERENGWA WITHIN THE ZIMBABWE CULTURE

Now that we are acquainted with the archaeology of Chumnungwa it is vital at this juncture to reconsider the position of Mberengwa in relation to the Zimbabwe culture. For more than a century, Zimbabwe culture sites in Mberengwa have been always relegated as a 'peripheral' districts of more powerful and territorial states based at Mapungubwe, Great Zimbabwe, Khami, and Danamombe (see Hall & Neal 1904:81; Livneh 1976:46-18; Huffman 1978:98, 2009:51; Hall 1987:91-94; Ndoro 2001:22; Pikirayi 2006; Kim & Kusimba 2008:145; Swan 2008:38-40; Van Waarden 2011:56; Kusimba et al. 2017:80). In fact, as I demonstrated earlier in Chapter 2, it was Hall and Neal (1904:62, 81) who initially came up with this idea. Nevertheless, it was based on speculation and compromised datasets they derived from excavation sites they unsystematically undertook in Mberengwa during the late 19th and early 20th centuries. Later researchers who worked in Mberengwa largely built their work upon these 'centre-periphery' relations that had been postulated by Hall and Neal (1904). Archaeological evidence used to cement these relations was based on similarities in the architectural style of dry-stone walling between Zimbabwe culture sites. Thus, despite cursory research in Mberengwa, it was assumed that Great Zimbabwe and the other Zimbabwe culture state capitals spread their political boundaries into Mberengwa where they controlled mining and distribution of gold, and other valuable metals (Hall & Neal 1904:81; Livneh 1976:46-18; Huffman 1978:98; 2009:51; Kusimba et al. 2017:80). Whilst these propositions may be applicable elsewhere, existing data from Mberengwa shows us a different picture. As demonstrated in this study, Mberengwa appears to have hosted some centres of power *(mizinda)* that had monumental architecture, royal burials, and various insignias of political power that were synonymous with those recovered at Zimbabwe culture state capitals (see Table 10.2). For instance, just like at Mapungubwe, Hall and Neal (1904), exposed numerous royal burials at Mundi, Mpopoti, Nuanetsi, Chumnungwa, and many other Iron Age sites they looted in Mberengwa; which contained gold, copper, and bronze jewellery. The duo also recovered a pair of double flange-welded clapperless iron bells, a soapstone bowl, HIH croisette copper ingot, and other insignias of political power at Chumnungwa. Similarly, objects were recovered at other *mizinda* such as Danamombe, Manyikeni, Thulamela, and Great Zimbabwe (Vansina 1969; Swan 2007; Chirikure 2015). Regionally, the double iron bells are largely revered as symbols of political power in most parts of precolonial sub-Saharan Africa that began circulating in the 9th century (Walton 1955). According to Vansina (1969), these bells functioned in most cases as ‘talking drums’ which were beaten with an iron rod to produce a melodious sound during the recitation of praise poems to political leaders. Such a tradition of clan praise poetry *(nhetembo dzemadzinza)* is also common among the Shona (Hamutyinei & Plangger 1974). It is usually undertaken by a close nephew *(dunzvi)* of a chief who recites the praise poems during public gatherings to showcase the royal totem (*mutupo)*, identity, ancestry *(midzimu)*, political power as well as expressing heartfelt sentiments of gratitude to the leader for his goodwill, generosity, and acts of bravery (Hodza & Fortune 1978). Similarly, HIH copper ingots were mostly circulated among royalty within southern and central Africa (see Bison 1975; De Maret 1995; Nikis & Livingstone Smith 2017:898; Chirikure 2015). Thus, the wide presence of Iron Age sites in and around Mberengwa (Table 10.2) with drystone walling, royal burials, and various insignias of political power simply implies that centres of power within the Zimbabwe culture were multiple and not only limited to Mapungubwe, Khami, Great Zimbabwe, Mutapa, Danamombe or Dzata. In fact, as argued by Chirikure et al. (2012, 2013a), it appears that political relations within the Zimbabwe culture societies were heterarchical (sensu Crumley 1987, 2005), to the extent that there were numerous polities on the landscape of southern Zambezia which independently governed themselves rather than few territorials states as implied by Huffman (2007) and others (i.e. Kim & Kusimba 2008; Swan 2008; Van Waarden 2012). Moreover, warfare, and succession disputes constantly fragmented these polities hence the chances of having huge territorial states were very slim (see Beach 1979, 1980; Sinclair et al. 1993; Chirikure et al. 2012; 2013a; 2018; Kusimba et al. 2017).

Table 10.2. Comparison of findings recovered in Mberengwa with those from other places associated with political power (Adapted Hall & Neal 1904; Caton-Thompson 1931; Fouché 1937; Robinson 1959; Fagan et al. 1969; Summers 1969; Garlake 1978; Huffman 1996; Swan 2008; Chirikure et al. 2014; Chirikure 2015).

Centres of power	Stone walling	Soap stone	Royal burials	Gold & bronze jewellery & artefacts	Cross-shaped copper ingots	Iron bells
Chumnungwa	X	X	X	X	X	X
Mundi	X	X	X	X		
Mpopoti	X	X	X	X		
Nuanetsi	X	X	X	X		
Great Zimbabwe	X	X		X	X	X
Danamombe	X	X	X	X	X	X
Manyikeni	X	X		X		X
Khami	X	X		X		
Mapungubwe	X	X	X	X		
Thulamela	X	X	X	X		X
Mapela	X			X		
Ingombe Ilede			X	X	X	
Ntabazikamabo	X	X	X	X		

Furthermore, the distance between Mberengwa and centres of these so-called territorial states such as Mapungubwe, Great Zimbabwe, Khami, and Danamombe (see Figure 1.2) would obviously have made it difficult for the leaders to maintain their political hegemony over this distant gold-belt territory. In as much as this could work, it was always going to end up being problematic in the long run especially when one considers the logistics and diplomacy needed to maintain such a unitary state (also see Beach 1980:48; Chirikure et al. 2013a:341). The same limitations apply to Garlake's (1978:484) transhumance model which lumped all the Zimbabwe tradition sites in Mberengwa, Insiza, Beitbridge, Mwenezi, Zvishavane, Chivhu, Gwanda, Matopo, and Umzingwane districts under Chumnungwa's hegemony. Elsewhere, in Mesopotamia, Stein (1999) exposed a similar scenario where distance made it impossible for the Sumerian "city-states" to control their supposed 'peripheries' such as Hacinebi Tepe in southern Turkey during the era of the Uruk civilisation (3700–3100 BC). Thus, as similarly recorded by Stein's (1999:165) distance-parity model, political influence within the landscape of southern Zambezia is likely to have 'decayed with distance' hence control of Mberengwa by any external forces based many miles away would have been difficult.

Historical records dating from the 16th to the late 19th centuries even show us that the landscape of southern Zambezia was predominately occupied by numerous Shona polities who co-existed and autonomously governed themselves including those settling in gold-territories like Mberengwa (Elton 1873; Bent 1892; Von Sicard 1951, 1958; Burke 1969; Livneh 1976; Beach

1978, 1980; Zachrisson 1978; Bhila 1982; Mudenge 1988; Chimhundu 1992; Brisch 2012). This leaves us with the possibility that such relations could have equally existed in Mberengwa during the later Iron Age. Therefore, rather than having Chumnungwa as the 'bigger' site which dominated all these contemporary sites in and around Mberengwa, as implied by Garlake (1978), the emerging picture shows Chumnungwa as one of the autonomous polities in Mberengwa that probably shared the landscape with Mundi, Mpopoti, Nuanetsi, Pamuuyu, Chomuruvati, Nenga, Gorongwe, and many other Iron Age societies.

This tendency of relegating other places as peripheral is not new in the archaeological record of the Iron Age of southern Africa. For more than 46 years, the Shashi Limpopo-Basin was undermined as a 'peripheral' district of Great Zimbabwe. The early excavators (i.e. Fouché 1937) who worked at Mapungubwe were entrapped by conclusions drawn at Great Zimbabwe (i.e. Hall & Neal 1904; Randall-McIver 1906; Caton-Thompson 1931) which heralded the site as the birthplace of the Zimbabwe culture. Because Great Zimbabwe was bigger and more spectacular it was regarded as the 'centre' whilst Mapungubwe was treated as part of its 'peripheries'. Ironically, distance between these two sites, which exceeds 300 km as the crow flies to the southwest, was never considered as a barrier for Great Zimbabwe to maintain its political hegemony over Mapungubwe. Moreover, the 'centre-periphery' relations were maintained despite Mapungubwe exhibiting monumental architecture, and spectacular royal burials with thousands of gold artefacts which later made the site famous in global archaeology. It was only around the 1980s when Iron Age research was redirected to the site (i.e. Hall & Vogel 1980; Eloff & Meyer 1981) that new data emerged which showed that Mapungubwe was much older and more complex than previously thought. Thus, apart from exhibiting early dates for the evolution of the Zimbabwe culture, it became clear that Mapungubwe was a *muzind*a that was independent of Great Zimbabwe's hegemony (Huffman 1982; 1996). There are many lessons we can draw from the marginalisation of Mapungubwe, and Zimbabwe sites in Mberengwa, but the chief among them all is that undermining them as 'peripheries' without adequate research is as good as overshadowing their research potential.

For so long, the dominant discourses in the Iron Age archaeology of southern Zambezia has placed considerable agency on societies that resided at bigger and more spectacular sites such as Great Zimbabwe, Khami, and Danamombe. Apart from being heralded as capitals of territorial states that controlled large parts of southern Zambezia, these sites are given so much credit for their capacity to construct elaborate drystone walling and engage in various crafting activities such as soapstone working, fibre weaving, bronze, and gold working. This was even escalated to the extent that Iron Age communities who resided in gold-belt territories such as Mberengwa were portrayed as being incapable of utilising gold and other mineral resources that were at their disposal to enhance their livelihoods. This led to the belief that societies based at Great Zimbabwe, Khami, and Danamombe had taken custody of the resources and benefitted much more. However, datasets gathered from Chumnungwa, and the neighbouring sites like Mundi (see Appendix 1), actually show that Iron Age communities which resided in Mberengwa were equally as innovative as those who resided at the so-called 'bigger' sites. For instance, as recorded at Chumnungwa, they were aware of the resources that were at their disposal, and they too had the capacity to construct monumental architecture using granite and dolerite they sourced from the local batholiths. They also engaged in various crafting activities which included fibre weaving, soapstone working, shell bead making, figurine making, bone working, and smelting and smithing of gold, iron, copper, and bronze to produce various utilitarian and non-utilitarian objects they used in their everyday life. Studies carried out by Summers (1969) even acknowledged the role of Zimbabwe culture societies residing in Mberengwa towards the development of ancient mining methods that were commonly used in southern Zambezia (see Appendix 1). Similarly, Hall and Neal (1904), acknowledged Zimbabwe culture sites in Mberengwa as part of the major gold smelting precincts that operated in the region. Apart from Mberengwa, crafting was widely practiced throughout the region. For instance, there is ample evidence of bronze working in Gwanda – one of the places that was marginalised as a 'periphery' of the Zimbabwe culture (see Huffman 2009). Interestingly, new data from Gwanda now shows that bronze, which was thought to have been first worked at Mapungubwe, appeared earlier at Jahunda (Bandama et al. 2018). Likewise, the work of Van Waarden (2011) at the Mupanipani ruin in the Shashi region, north-eastern Botswana revealed Zimbabwe tradition stone architecture that predated that at Great Zimbabwe. Therefore, the question that must be asked is that if Zimbabwe culture societies that lived in Mberengwa and neighbouring regions such as Gwanda and the Shashi region were equally as innovative as those at Mapungubwe, Danamombe, Great Zimbabwe or Khami, why then marginalise them as 'peripheries' of the Zimbabwe culture as if they possessed little or no agency?

Furthermore, the way Iron Age studies have been practiced and theorised in southern Africa makes it difficult for many archaeologists and historians to envision Iron Age sites in Mberengwa as entangled hotspots that had regional, and international contacts. Rather, this thinking is reserved for Great Zimbabwe and the other 'bigger' sites such as Khami, Mapungubwe, and Danamombe (Huffman 1982; 1996; 2007; Wood 2005, 2012; Phillipson

2005; Kusimba et al. 2017). These sites are heralded as participants in trade networks that connected southern Zambezia with East Africa, Asia, Central Africa, the Middle East, and Europe (Vansina 1969; Hall 1987; Huffman 2000, 2007; Mitchell 2002; Wood 2009; Kim & Kusimba 2008). Whilst this is undisputable, the same weight of reverence is rarely applied to 'peripheral' sites such as Chumnungwa where glass beads, cross-shaped copper ingots, and a pair of double-iron gongs were recovered (Hall & Neal 1904). Surprisingly, Chumnungwa is one of the few sites in southern Zambezia that possessed iron bells apart from Danamombe, Thulamela, Great Zimbabwe, Shamrock Mine, and Manyikeni (Walton 1955; Chirikure 2015). The same applies to the HIH croisette copper ingots (Swan 2007). Elsewhere, glass beads have been recovered at Nhunguza, Ruanga (Garlake 1972), Matanga (Van Waarden 1987), Kasekete (Pwiti 1996b), Hlamba Mhlonga (Wood 2009), Mutamba (Antonites 2012), Mapela (Chirikure et al. 2014), Mananzve (Nyamushosho et al. 2018); and many other Iron Age sites that were treated as 'peripheries' of the Zimbabwe culture. Thus, it appears that most Iron Age societies that thrived in southern Africa during the second millennium CE were entangled in various networks. These networks enabled them to acquire resources they needed using what they had at their disposal. For instance, as demonstrated by this study, some communities in Mberengwa possibly used their gold to acquire tin from as far as the Bikita and Rooiberg areas, which they mixed with copper they mined from the local greenstone belts to make bronze jewellery. Likewise, local networks enabled them to barter grain, salt, artefacts, livestock other resources that were needed to facilitate everyday life. Such connectivity demonstrates agency within local and regional processes. Similarly, in a more recent study carried out in the Soutpansberg area of South Africa, Antonites (2012) showed that in as much as Mutamba was geographically situated at the 'periphery' of Mapungubwe, it was not secluded and isolated from the prevailing 13th-century wider social and economic networks. Thus, unlike as previously anticipated (Huffman 2007), residents of Mutamba participated in local and regional trade networks which enabled them to access exotica and other local goods such as gold just like the community that resided at Mapungubwe. Therefore, it is plausible to think of Chumnungwa, and other Zimbabwe culture sites in Mberengwa as redistribution centres that supplied local and exotic goods to the region.

Data generated from this study also directs us to appreciate Mberengwa as a 'laboratory' for understanding human resilience and adaptation in drylands during the Iron Age (*sensu* Mavhunga 2014; 2017). Like most agropastoralists who lived in drylands of southern Zambezia, the Iron Age societies who lived in Mberengwa were obviously vulnerable to a host of problems that included tsetse-fly, limited precipitation and too much heat (Worst 1956; Summers 1960, 1967; Robinson 1965a; Ford 1971; Garlake 1978). However, despite exposure to these environmental and climatic problems, the archaeology of Mberengwa clearly shows us that they successfully settled across the landscape and established livelihoods that were centred on stock raising, crop cultivation, mining, metallurgy, hunting and much more (Hall & Neal 1904; Von Sicard 1956, 1957; Garlake 1970; Huffman 1973, 1978, 1979; Van de Merwe 1978; Burret 2006). More specifically, material residues of the Zimbabwe community which resided at Chumnungwa revealed a long history of human settlement which stretched for more than three centuries. As demonstrated in this study, there is no doubt that useful lessons can be drawn from Chumnungwa that can enlighten us on how these societies ensured food security, particularly in seasons they experienced droughts. Furthermore, as demonstrated onsite, the residents of Chumnungwa kept a large herd of cattle, sheep, and goats. This automatically translates to success in managing the risks of tsetse-fly. Thus, useful lessons can be drawn on sustainable herd management, and dryland cropping, which can help modern farmers who are currently living in drylands which experience related challenges. Consequently, this makes Mberengwa worthy of archaeological research since it has so much to offer to both archaeologists and modern agropastoralists. However, unless we change the way we conduct archaeology and the analytical lens' with which we approach the study of the southern African past, most places such as Mberengwa that have so much potential to enlighten us about the Iron Age will remain marginalised. Centres and peripheries as epistemological categories do not fit the range and variation of political forms explored in this thesis. Instead, I have shown that concepts of power drawn from Shona anthropology and history more accurately reflect the nature of political formations in southern Africa.

10.6. CONCLUSION AND RECOMMENDATIONS

This study has considerably contributed to the Iron Age archaeology of Mberengwa (CE 200-1900). We now know that Chumnungwa was a capital *(muzinda)* of an autonomous Shona polity affiliated to the Zimbabwe tradition that thrived more or less at the same time as Mapela, Great Zimbabwe, Khami, Mapungubwe, and Danamombe. A study of the material culture that was derived from the site unequivocally demonstrated that the residents of Chumnungwa were able to exploit gold, iron, copper, soapstone, and many other mineral resources that were at their disposal, to venture into various crafting activities that produced a range of utilitarian and non-utilitarian objects that featured in their daily lives. Like most Iron Age agropastoralists societies spread across the landscape of southern Zambezia, they also took advantage of the rich biodiversity in Mberengwa which enabled them to augment their foodways and grow wealth in cattle, sheep, and goats. The finding from this study also demonstrated that the residents of Chumnungwa were powerful actors who were entangled in a web of local, regional, and international networks that enabled them to exchange material objects and ideas with other social formations in and beyond southern Zambezia. In the long run, they were able to mix these resources from these networks with what they had to enhance their everyday life.

More importantly, this study has demonstrated that Mberengwa and other landscapes in southern Africa that were previously marginalised as ‘peripheries’ of ‘bigger’ sites and territorial states such as Mapungubwe, Khami, Great Zimbabwe, and Danamombe are worth of archaeological research. We now know that out of these so-called ‘peripheries’ emerged prominent Iron Age polities that were heavily entangled not only with local, but regional, and inter-regional socio-economic processes just like their supposed ‘centres’. Archaeological data generated from this study also shows that residents of these sites had the capacity to innovate and independently govern themselves without necessarily being manipulated by the so-called ‘bigger’ sites. Therefore, as demonstrated by this study it is only a historical construct that some landscapes are relegated as ‘peripheral’, whilst others are promoted as ‘centres’ without systematic research. This calls for more research into other landscapes of southern Zambezia so as to evaluate the assumptions and criteria that were used to relegate some sites as ‘peripheries’ of ‘bigger’ sites such as Mapungubwe, Great Zimbabwe, Khami, and Danamombe.

Whilst I made considerable efforts in mapping the construction sequence of the drystone architecture at Chumnungwa using the Harris Matrix Composer v2.0b, there is still a need to date all the walling styles despite the fact that the site was occupied by a wholly developed cultural entity of the Zimbabwe tradition. Data generated from the absolute dates will be instrumental in verifying my tentative sequence of construction of stonewalling at Chumnungwa. However, this must be done cautiously, particularly when choosing areas to sample dating materials. As I noted earlier, this is because the bulk of the space inside the walled area was heavily vandalised by treasure hunters and natural agents of erosion (see Hall & Neal 1904; Matenga & Chikwanda 1999).

One notable weakness of the current study and that of previous researchers such as Hall and Neal (1904) was a failure to comprehensively model the spatial organisation of Chumnungwa walled and unwalled areas as has been done at other Iron Age settlements such as Zvongombe (Pwiti 1996b), Tsindi (Rudd 1984), Chipadze (Robins et al. 1966), Nenga (Huffman 1978), Matendera, Great Zimbabwe (Caton-Thompson 1931), Mwenezi (Manyanga 2006), Nhunguza and Ruanga (Garlake 1973a). This was because most of the open space on the summit and foothill of Chumnungwa that formed amphitheatres that accommodated most of the houses *(misha)* was heavily vandalised by treasure hunters and current villagers without proper documentation of the finds and stratigraphy (see Hall & Neal 1904; Matenga & Chikwanda 1999). Nevertheless, a survey of Chumnungwa using LiDAR imagery could reveal and capture the remaining buried evidence. This technology of 3D laser scanning has been successfully used by Sadr and Rodier (2012) to map the stone architecture of ancient Tswana towns in southern parts of Gauteng province in South Africa.

There is also a need to extend this study to other Iron Age sites in Mberengwa and around. Whilst considerable efforts have been made in the last five decades by several researchers (i.e. Summers 1969; Cook 1970; Garlake 1970, 1978; Huffman 1973, 1978, 1979 Van Der Merwe 1978; Burret 2006) towards fine-tuning the culture history of Iron Age sites in Mberengwa through standard archaeological surveys at some sites such as Chomuruvati, Chamabvepfa, Pamuuyu, Nenga, Little Buhwa, Gorongwe, Mpopoti, Chipukuswi, and Kongezi, the chronology and settlement history of most sites remains hazy and largely speculated. Up to date, Chumnungwa is the only known Zimbabwe type site in Mberengwa that we professionally excavated, and radiocarbon dated. Otherwise, the majority of what we know about Zimbabwe-type sites in Mberengwa is largely a product of unscientific surveys and excavations that were undertaken during the antiquarian era (see Hall & Neal 1904; Von Sicard 1956, 1957). The same applies to Gumanye, Ziwa, Gokomere, Refuge, and other Khami sites such as Little Chumnungwa. Moreover, over the last century, the wave of vandalism on Zimbabwe type sites in Mberengwa has skyrocketed. As discussed in Chapter 2 most of the sites with stone architecture have been targeted by mining companies, treasure hunters, and some land developers who use the stone blocks to construct local deep tanks and dam walls (see Von Sicard 1957; Huffman 1978; Matenga & Chikwanda 1999). I spent three days with my excavation team from the National Museums and Monuments of Zimbabwe searching for Mundi, one of the largest Zimbabwe types sites in Mberengwa after Chumnungwa (sensu Hall & Neal 1904). We are yet to find it, but all the feedback we got from the local leaders, including the District Administrator of the Mberengwa Rural District Council, was that either the site was submerged during the construction of Mundi-Mataga dam or was cleared for crop cultivation and settlement by the local communities. Therefore, more fieldwork is needed in Mberengwa to salvage what little there is left. Otherwise, precious data will continue to be lost that could enlighten on the development of socio-political complexity in the Iron Age archaeology of southern Zambezia, particularly in these zones which were previously assumed to be ‘peripheries’ of Mapungubwe, Great Zimbabwe, Danamombe, and Khami civilisations.

REFERENCES

Algaze, G. 1989. A New Frontier: First Results of the Tigris-Euphrates Archaeological Reconnaissance Project, 1988. *Journal of Near Eastern Studies* 48(4): 241-281.

Algaze, G. 1993. *The Uruk World System. The Dynamics of Early Mesopotamian Civilization*. Chicago. University of Chicago Press.

Alt, S. 1999. Spindle whorls and fiber production at early Cahokian settlements. *Southeastern Archaeology*, 18(2), 124–134.

Antonites, A. 2012. Political and Economic Interaction in the hinterland of the Mapungubwe Polity, AD 1200-1300. Unpublished Ph.D. thesis, University of Yale.

Antonites, A. 2019. Fibre spinning during the Mapungubwe period of southern Africa: regional specialisms in the hinterland. *African Archaeological Review* 36: 105–117.

Antonites, A. R., Bradfield, J., and Forssman T. 2016. Technological, functional and contextual aspects of the K2 and Mapungubwe worked bone industries. *African Archaeological Review*, 33(4).

Alexander, G. J. and Marais, J. 2007. *A Guide to the Reptiles of Southern Africa.* Struik: 408

Appadurai, A. 1986. *The social life of things: commodities in cultural perspective*. Cambridge: Cambridge University Press.

Aschwanden, H. 1982. *Symbols of Life: An Analysis of the Consciousness of the Karanga* Gweru. Mambo Press.

Aschwanden, H. 1987. *Symbols of Death: An Analysis of the Consciousness of the Karanga* Gweru: Mambo Press.

Aschwanden, H. 1989. *Karanga Mythology*. Gweru: Mambo Press.

Bahn, P. 1996. *Archaeology: A Very Short Introduction*. Oxford: Oxford University Press

Baltali, S. 2012. Culture contact, cultural integration, and difference: A Case from Northern Mesopotamia. *Stanford Journal of Archaeology* 2-17.

Bandama, F. 2013. The archaeology and technology of metal production in the Late Iron Age of the Southern Waterberg, Limpopo Province, South Africa. Unpublished PhD thesis. University of Cape Town.

Bandama, F., Moffett, A. J., Thondhlana, T. P. and Chirikure, S. 2016. The production, distribution and consumption of metals and alloys at Great Zimbabwe. *Archaeometry* 58 (1): 164-181. doi:10.1111/arcm.12248.

Bandama, F, Manyanga, M, and Shadreck Chirikure, S. 2018. Copper wire objects from Jahunda and Little Mapela: technology, value systems and networks in Iron Age southern Africa, *Azania: Archaeological Research in Africa*, 53:4, 528-545

Bandama, F, Chirikure, S, Hall, S, Tinguely, S. 2018. Measly but motley and manifest: the typological and chemical characterisations of glass beads from the Southern Waterberg, Limpopo province of South Africa. *Journal of Archaeological Science Reports*., 18: 90-99.

Badenhorst, S., 2008. Subsistence change among farming communities in southern Africa during the last two millennia: a search for potential causes. In: Badenhorst, S., Mitchell, P. and Driver, J. C., eds, *Animals and people: archaeozoological papers in honour of Ina Plug*. 215–228. British Archaeological Series 1849, Oxford.

Badenhorst, S. 2010. Descent of Iron Age farmers in southern Africa during the last 2000 years. *African Archaeological Review* 27: 87–106.

Badenhorst, S. 2011. Measuring change: cattle and caprines from Iron Age farming sites in southern Africa. *South African Archaeological Bulletin* 66: 167–172.

Badenhorst, S., Sinclair, P., Ekblom, A. and Plug, I. 2011. Faunal remains from Chibuene, anm Iron Age coastal trading station in central Mozambique. *Southern African Humanities*. 23(1): 1-15.

Blacking, J. 1985. Great Zimbabwe and domba. *Man* 20: 542–45

Barker, G. 1978. Economic models for the Manekweni Zimbabwe, Mozambique. *Azania* 13: 71-100

Beach, D. 1977. The Shona Economy: Branches of Production. In *The roots of rural poverty in Central and Southern Africa*. R. H. Palmer and N. Parsons, Eds. California: University of California Press .37-65.

Beach, D. N. 1978. Shona settlement around Buhwa range', *Occasional Papers of the National Museums and Monuments of Rhodesia*, 4, (iii), 106-111.

Beach, D. N. 1980. *The Shona and Zimbabwe 900-1850: an outline of Shona history*. Gwelo: Mambo Press

Beach, D. N. 1994. *The Shona and their Neighbours*. Oxford: Blackwell

Beach, D. N., Bourdillon, M.F.C., Denbow, J.R., Hall, M., Lane, P.J., Pikirayi, I., Pwiti, G., and Huffman, T.N. 1997. Review feature on Snakes and Crocodiles: Power and symbolism in ancient Zimbabwe by T.N. Huffman. *South African Archaeological Bulletin* 52: 125-143.

Beach, D. N., Bourdillon, M.F.C., Denbow, J.R., Liesegang, G., Loubser, J.H.N., Pikirayi, I., Schoenbrun, D., Soper, R., and Stahl, A.B. 1998. Cognitive archaeology and imaginary history at Great Zimbabwe * comments and reply. *Current Anthropology* 39: 47-72.

Beck, H. C. 1928. Classification and nomenclature of beads and pendants. *Archaeologia* 77: 1-76

Beck, H. C. 1931. Rhodesian beads from the 1929 excavations. In *The Zimbabwe Culture,* Caton-Thompson, G. (ed), 229–242. Oxford: Clarendon Press.

Beck, H.C. 1937. The beads of the Mapungubwe District. In *Mapungubwe: ancient Bantu civilization on the Limpopo*. L. Fouché, Ed. London: Cambridge University Press. 104-113.

Bent, J. T. 1892. *The ruined cities of Mashonaland*. London: Routledge

Bhebe, N. 1979. *Christianity and Traditional Religion in Western Zimbabwe 1859–1923.* London: Longman.

Bhebe, N. 1999. *The ZAPU and ZANU Guerrilla Warfare and the Evangelical Lutheran Church in Zimbabwe*. Gweru: Mambo.

Bhila, H.H.K. 1982. *Trade and Politics in a Shona Kingdom: the Manyika and their African and Portuguese neighbours, 1575-1902*. Harlow, Essex: Longman.

Bickle, M.J., Nisbet, E.G. 1993. The Geology of the Belingwe Greenstone Belt, Zimbabwe. In: *Geological Society of Zimbabwe Special Publications* Balkema, Rotterdam.

Binford, L. R. 1962. Archaeology as anthropology. *American Antiquity* 11: 217-225.

Binford, L. R. 1965. Archaeological Systematics and the Study of Culture Process. *American Antiquity*, 31. 2, :203-210.

Bisson M., S. 1 975. Copper currency in central Africa: the archaeological evidence. *World Archaeology*. 6(3):276-92.

Burke, E. E. 1969. *The Journals of Carl Mauch His travels in the Transvaal and Rhodesia 1869-1872*. Salisbury: National Archives of Rhodesia.

Burrett, R. 2003. Gosho 1 shelter: observations into the lithic complexities of the Pfupi industry in north eastern Zimbabwe. *Southern African Humanities* 15: 1-43.

Burrett, R. 2006. A Ziwa Tradition Site and Associated Lsa Material, Mount Buchwa, Zimbabwe. *South African Archaeological Bulletin*, 61, 183, 102-104.

Bradfield, J. 2015. Pointed bone tool technology in southern Africa: Results of use-trace analyses. *Southern African Humanities* 27: 1–27.

Bradfield, J. and Antonites, A.R. 2018. Bone hoes from the Middle Iron Age, Limpopo, South Africa. *Quaternary International* 472: 126–134.

Brain, C. K. 1974. Some suggested procedure in the analysis of bone accumulations from southern African quaternary sites. *Annals of the Transvaal Museum* 29 (1): 1-8

Brisch, G. 2012. *The Travel Chronicles of Mrs J. Theodore Bent. Volume II: The African Journeys. Mabel Bent's Diaries of 1883–1898, from the Archive of the Joint Library of the Hellenic and Roman Societies.* London. Oxford. Archaeopress.

Bronk Ramsey, C. 2013. *OxCal*. Oxford: Oxford Radiocarbon Accelerator Unit.

Bourdieu, P. 1977. *Outline of a Theory of Practice (trans. R. Nice)*. Cambridge: Cambridge University Press.

Bourdillon, M.F.C. 1976. *The Shona Peoples: An Ethnography of the Contemporary Shona with Special Reference to their Religion*, Mambo Press: Gweru.

Bullock, C. 1927. *The Mashona*. Cape Town: Juta.

Bvocho, G. 2005. Ornaments as social and chronological icons: A case study of south-eastern Zimbabwe. *Journal of Social Archaeology* 5 (3): 409-424

Calabrese, J. A. 2007. *The emergence of social and political complexity in the Shashi-Limpopo Valley of Southern Africa, AD 900 to 1300: Ethnicity, class, and polity*. Oxford: Archaeopress.

Caple, C. 2006. *Objects Reluctant Witnesses to the Past*. London: Routledge

Carruthers, V. 2016. *The Wildlife of Southern Africa: A Field Guide to the Animals and Plants of the Region*. Cape Town, Struik Publishers.

Castello, J, R. 2016. *Bovids of the World: Antelopes, Gazelles, Cattle, Goats, Sheep, and Relatives.* Oxford. Princeton University Press.

Caton-Thompson, G. 1931. *The Zimbabwe Culture: Ruins and Reactions*. Oxford: Clarendon Press

Champion, T. C. 1989. *Centre and Periphery*. London. Unwin Hyman.

Chanaiwa, D. 1973. *The Zimbabwe controversy: a case of colonial historiography (No. 8)*. Syracuse: Syracuse University.

Chakaipa, P. 1991. *Pfumo reropa,* Harare: Longman Zimbabwe.

Childe, V. 1939. The Orient and Europe. *American Journal of Archaeology*, 43(1), 10-26. doi:10.2307/499132

Childe, V. G. 1950. The urban revolution. *Town Planning Review*. 21(1): 3.

Chidumayo, E. N. 2001. Climate and phenology of savanna vegetation in southern Africa, *Journal of Vegetation Science*,12: 347–354.

Chimhundu, H. 1992. Early missionaries and the ethnolinguistic factor during the "invention of tribalism" in Zimbabwe', *Journal of African History*, 33(1): 87−109.

Chimhundu, H. and E. Mangoya. 2001. *Duramazwi guru reChiShona*. Harare: College Press.

Chipangura. N, Nyamushosho, R. T, and Pasipanodya, T, B. 2019. Living site, living values: the Matendera festival as practice in community conservation and presentation. *International Journal of Intangible Heritage* 14,16-31

Chipunza, K. T. 1994. *A diachronic analysis of the architecture of the Hill Complex at Great Zimbabwe.* Uppsala: Societas Archaeologica Upsaliensis

Chiripanhura, P. 2018. Archaeological collections as a prime research asset: Objects and great Zimbabwe's past. Unpublished Ph.D. Thesis. University of Cape Town

Chirikure, S. 2007. Metals in society Iron production and its position in Iron Age communities of southern Africa. *Journal of Social Archaeology*. 7(1): 72-100.

Chirikure, S. 2014. Land and Sea Links: 1500 Years of Connectivity between Southern Africa and the Indian Ocean Rim Regions, ad 700 to 1700. African Archaeological Review. 31(4): 705-724.

Chirikure, S., 2015. *Metals in Past Societies: A Global Perspective on Indigenous African Metallurgy*. New York. Springer

Chirikure, S., 2018. Early metallurgy and surplus without states in Africa south of the Sahara. *Tagunden des Landesmuseums fur Vorgeschite Halle* 18: 431–444.

Chirikure, S., 2019. New Perspectives on the Political Economy of Great Zimbabwe. *Journal of Archaeological Research*. doi.org/10.1007/s10814-019-09133-w

Chirikure, S., Pikirayi, I. and Pwiti, G. 2002. A comparative study of Khami pottery, Zimbabwe. Chami, F. and Pwiti, G. (Eds.) *People, Contacts and the Environments in the African Past*, 106-131

Chirikure, S. and Rehren, T. 2004. Ores, Furnaces, Slags, and Prehistoric Societies: Aspects of Iron Working in the Nyanga Agricultural Complex, AD 1300–1900. *African Archaeological Review*. 21: 135

Chirikure, S., and Rehren, T. 2006. Iron smelting in precolonial Zimbabwe: Evidence for diachronic change from Swart Village and Baranda, northern Zimbabwe. *Journal of African Archaeology* 4: 37-54

Chirikure, S., and Pikirayi, I. 2008. Inside and outside the dry-stone walls: Revisiting the material culture of Great Zimbabwe. *Antiquity,* 82, 976–993.

Chirikure, S., Manyanga, M. and Pollard, A. M. 2012. When science alone is not enough: Radiocarbon timescales, history, ethnography and elite settlements in southern Africa. *Journal of Social Archaeology*. 12(3): 356-379.

Chirikure, S., Pollard, M., Manyanga, M and Bandama, F. 2013a. A Bayesian chronology for Great Zimbabwe: re-threading the sequence of a vandalised monument. *Antiquity* 87: 854- 872.

Chirikure S., Manyanga, M., Pikirayi I and Pollard, M. 2013. New pathways of socio-political complexity in southern Africa. *African Archaeological Review* 30: 339-366.

Chirikure S., Manyanga M., Pollard A. M., Bandama F., Mahachi G., and Pikirayi, I. 2014 Zimbabwe Culture before Mapungubwe: New Evidence from Mapela Hill, South-Western Zimbabwe. *PLoS ONE* 9 (10): e111224. doi:10.1371/journal.pone.0111224.

Chirikure, S., Hall, S. and Rehren, T. 2015. When ceramic sociology meets material science: Sociological and technological aspects of crucibles and pottery from Mapungubwe, southern Africa. *Journal of Anthropological Archaeology*. 40: 23-32.

Chirikure, S., Bandama, F., House, M., Moffett, A., Mukwende, T. and Pollard, M. 2016a. Decisive evidence for multidirectional evolution of sociopolitical complexity in Southern Africa. *African Archaeological Review* 33*:* 75. doi 10.1007/s10437-016-9215-1

Chirikure, S., Bandama, F., Chipunza, K., Mahachi, G., Matenga, E., Mupira, P., Ndoro, W. 2016b. Seen but not told: Re-mapping Great Zimbabwe Using Archival Data, Satellite Imagery and Geographical Information Systems. *Journal of Archaeological Method and Theory*: 1-25.

Chirikure, S., Mukwende, T., Moffett, A.J., Nyamushosho, R.T., Bandama, F., & House, M., 2017a. No big brother here: heterarchy, Shona political succession and the relationship between great Zimbabwe and Khami, southern Africa. *Cambridge Archaeological Journal*. 28: 1, 45-66.

Chirikure, S., Nyamushosho, R T., Chimhundu, H.H., Dandara, C., Pamburai, H.H. & Manyanga, M. 2017b. *Concept and knowledge revision in the post-colony: mukwerera, the practice of asking for rain amongst the Shona of southern Africa*. In Manyanga, M & Chirikure, S (eds), Archives, Objects and Landscapes. Multidisciplinary approaches to Decolonised Zimbabwean Pasts. Langaa Publishers

Chirikure S, Nyamushosho, R, Bandama, F, Dandara, C. 2018. Elites and commoners at Great Zimbabwe: archaeological and ethnographic insights on social power. *Antiquity* 92, 364, 1056–1075.

Coates Palgrave, K., Drummond, R. B., Moll E. J, and Coates Palgrave, M. 2002. *Trees of southern Africa*. Cape Town, Struik Publishers.

Cochran, M. and Beaudry, M. C. 2006. Material culture studies and historical archaeology. In D. Hicks and M. C. Beaudry (eds) *The Cambridge Companion to Historical Archaeology*. Cambridge: Cambridge University Press, 191–204.

Collett D, Vines A and Hughes G. 1991. The chronology of the Valley Enclosures: implications for the interpretation of Great Zimbabwe. *The African Archaeological Review* 10: 139-161

Collett, D. P. 1993. Metaphors and representations associated with pre-colonial iron smelting in eastern and southern Africa. In Shaw, T. Sinclair, P., Andah, B., and Okpoko, J. (eds). *The Archaeology of Africa'. Food Metals and Towns.* London: Routledge. 499-511.

Cooke, C. K. 1958. A preliminary survey of the archaeology of the Mateke Hills area. *In Mateke Hills Expedition*, 55-83. Bulawayo: Rhodesian Schools Exploration Society.

Cooke, C. K. 1969. A Re-examination of the Middle Stone Age Industries of Rhodesia. *Arnoldia* 4: 7. 1-20

Cooke, C.K. 1970. *Archaeological report. Chibi Expedition: 12-14*. Bulawayo: Rhodesian Schools Exploration Society.

Connah, G. 1987. *African Civilisations. Precolonial cities and states in tropical Africa: An archaeological perspective*. Cambridge: Cambridge University Press

Connah, G. 2001. *African civilizations: An archaeological perspective*. Cambridge: Cambridge University Press.

Costin, C.L. 1991. Specialization: Issues in Defining, Documenting, and Explaining the Organization of Production. In *Archaeological Method and Theory*. M. Schiffer, Ed. Tucson: University of Arizona Press. 1-56.

Costin, C.L. 1998. Introduction: Craft and Social Identity', in C.L. Costin and R.P. Wright (eds) *Craft and Social Identity*. 3–16. Arlington: American Anthropological Association

Costin, C.L. 2001. Craft production systems. In *Archaeology at the millennium: A sourcebook.* G. M. Feinman and T. D. Price, Eds. Springer Science and Business Media. 273-327.

Costin, C.L. 2005. Craft production. In *Handbook of archaeological methods*, 2. H. D. G. Maschner and C. Chippindale, Eds. New York: AltaMira Press. 1034-1037.

Crumley, C., L. 1987. A Dialectical Critique of Hierarchy. In *Power Relations and State Formation*, Thomas C. Patterson and Christine Ward Gailey, eds. Washington: American Anthropological Association.

Daly, P, 1969. Approaches to Faunal Analysis in Archaeology. *American Antiquity 34*(2): 146-153

Davison, C.C. 1972. Glass beads in African archaeology. Unpublished Ph.D. Thesis. Berkeley, University of California.

Davison, P., and Harries, P. 1980. Cotton weaving in south-East Africa: its history and technology. *Textile History*. 11(1): 175-192.

Davies, M. 1987. The Archaeology of Standing Structures. *Australian Journal of Historical Archaeology*, 5: 54-64.

Davies, M. 1993, The application of the Harris Matrix to the recording of standing structures. In: E. Harris et. al. (eds.) *Practices of archaeological stratigraphy*. London. Academic Press.

Deacon, J. 1984. Later Stone Age people and their descendants in southern Africa. In: R.G. Klein, ed, *Southern African Paleoenvironments and Prehistory.* Rotterdam: Balkema, pp. 221–328.

De Graaf G. 1981. *The Rodents of Southern Africa*. Durban. Butterworths and Co. Publishing.

Denbow, J. 1983. Iron Age economics: herding, wealth and politics along the fringes of the Kalahari Desert during the Early Iron Age, Unpublished PhD. thesis: Indiana University

Denbow, J.R. 1990. Congo to Kalahari: data and hypotheses about the political economy of the western stream of the Early Iron Age. *African Archaeological Review*. 8(1): 139-175.

Denbow, J. R. 1999. Material culture and the dialectics of identity in the Kalahari: AD700-1700. In *Beyond Chiefdoms: pathways to complexity in Africa*. McIntosh S. K. (ed.), 110-123. Cambridge: Cambridge University Press

Denbow, J., Smith, J., Ndobochani, N. M., Atwood, K., and Miller, D. 2008. Archaeological excavations at Bosutswe, Botswana: cultural chronology, paleoecology and economy. *Journal of Archaeological Science* 35: 459-480

Denbow, D., Klehm, C., and Dussubieux, L. L. 2015. The glass beads of Kaitshaa and early Indian Ocean trade into the far interior of southern Africa. *Antiquity* 89: 361-377 http://dx.doi.org/10.15184/aqy.2014.50

De Waal, D, C. 1986. *With Rhodes in Mashonaland*. Bulawayo. Books of Rhodesia.

Dietler, M. 1998. Consumption, agency, and cultural entanglement: theoretical implications of a Mediterranean colonial encounter. In *Studies in culture contact: Interaction, culture change, and archaeology*. J. Cusick, Ed. Carbondale: Southern Illinois University Press. 288- 315.

Drewett, P. 1999. *Field archaeology: an introduction*. London: Routledge.

Dussubieux, L., Robertshaw, P. and Glascock, M.D. 2009. LA-ICP-MS analysis of African glass beads: laboratory inter-comparison with an emphasis on the impact of corrosion on data interpretation. *International Journal of Mass Spectrometry*. 284(1): 152-161.

Du Toit, A.P. 1965. A preliminary survey of the beads of Ingombe Ilede, northern Rhodesia. *Man* 65:11–15

Doke, C.M. 1931. *Report on the Unification of the Shona Dialects*, London: Hertford.

Driver, J.C. 1999. Manual for description of vertebrae remains. Unpublished Report. Cortez: Crow Canyon Archaeological Center.

Driver, J.C. 2005. Review of zooarchaeology and conservation biology. *Canadian Journal of Archaeology* 29: 127–129.

Dyvart, K, F, Sealy, J, Fredriksen, P, 2018. Osteological and stable isotope (δ13C and δ15N) analysis of faunal remains from Khami, Zimbabwe. *Azania: Archaeological Research in Africa 53* (4), 507-527.

Earle, T.K. 1987. Specialization and the Production of Wealth: Hawaiian Chiefdoms and the Inka Empire. In *Specialization, exchange, and complex societies*. E. M. Brumfiel and T.K. Earle, Eds. Cambridge: Cambridge University Press. 64-75.

Earle, T. 2001 Institutionalization of chiefdoms: Why landscapes are built. In from Leaders to Rulers, edited by J. Haas, 105–124. Kluwer Academic/Plenum, New York

Ellert, H. 1984. *The material culture of Zimbabwe*. Harare: Longman.

Ellert, H. 1993. *Rivers of Gold*. Gweru: Mambo Press

Elton, F. 1873. Journal of an Exploration of the Limpopo River. *The Journal of the Royal Geographical Society* 42, 1-49.

Esterhuysen, A. B. 2008. Ceramic alliances; Pottery and the history of Kekana Ndebele in the Old Transvaal. In N. Swanepoel, A. B. Esterhuysen, & P. Bonner (Eds.), *Five hundred* *years rediscovered: Southern African precedents and prospects.* Johannesburg: Wits University Press.

Evers, T. M. 1988. The recognition of groups in the Iron Age of Southern Africa. Unpublished PhD thesis. University of the Witwatersrand

Fagan, B.M. 1967. *Iron Age cultures in Zambia*, *volume I*: Kalomo and Kangila. London: Chatto & Windus.

Fagan, B.M., Daniels, S.G.H. and Phillipson, D.W. 1969. *Iron Age Cultures in Zambia*. Chatto and Windus.

Fatherley, K. 2009. Socio-political status of Leokwe people in the Shashe-Limpopo Basin during the Middle Iron Age through faunal analysis. Unpublished MSc dissertation. University of Witwatersrand, Johannesburg

Fontein, J. 2006. *Silence of Great Zimbabwe: Contested landscapes and the power of heritage,* London: UCL Press.

Forrestall, P. 1904. NC Chibi to CNC Salisbury, 8-9 February 1904, National Archives of Rhodesia, N3/33/8

Ford, J. 1971. *The Role of the Trypanosomiases in African Ecology*. Oxford: Clarendon Press

Fouché, L. 1937. *Mapungubwe: Ancient Bantu civilisations on the Limpopo*. Cambridge: Cambridge University Press

Franklin, J. H. 1935. Traps in Common Use Amongst the VaKaranga. *NADA* 9: 74–80.

Fraser, L.M. and Badenhorst, S., 2014. Livestock use in the Limpopo Valley of southern Africa during the Iron Age. *The South African Archaeological Bulletin*, 192-198.

Fredriksen, P. D. and Chirikure, S. 2015. Beyond Static Models: An evaluation of present status and future prospects for Iron Age research in southern Africa. *Cambridge Archaeological Journal* 25 (3): 597-614

Freeman-Grenville, G.S.P. 1962. *The East African Coast: select documents from the first to the earlier nineteenth century*. London: Oxford University Press.

Friedman, J, and Rowlands, M, J. 1977. Notes towards an epigenetic model of the evolution of 'civilization.' In *The Evolution of Social Systems,* ed. J Friedman, MJ Rowlands, pp. 201-76. London: Duckworth

Gardner, G. A. 1963. *Mapungubwe: Volume II*. Pretoria: J. L. van Schaik

Garlake, P. S. 1966. Iron Age Archaeology. In *Shashi Expedition,* 19-22. Salisbury: Rhodesian Schools Exploration Society

Garlake, P. S. 1968. Test excavations at Mapela Hill, near the Shashi River, Rhodesia. *Arnoldia Rhodesia 3* (34): 1-29

Garlake, P.S. 1970. Rhodesian ruins: a preliminary assessment of their styles and chronology. *Journal of African History*. 11(4): 495-513.

Garlake, P. S. 1973a. Excavations at the Nhunguza and Ruanga ruins. *South African Archaeological Bulletin* 27:107-143.

Garlake, P. S. 1973b. *Great Zimbabwe*. London: Thames and Hudson.

Garlake, P. 1978. Pastoralism and Zimbabwe. *Journal of African History 19(4)*, 479-93

Garlake, P.S. 1982. Prehistory and ideology in Zimbabwe. *Africa.* 52(03): 1-19.

Gelfand, M. 1966. *An African's religion: the spirit of Nyajena*, Cape Town: Juta.

Gelfand, M. 1971. *Diet and Nutrition in an African Culture.* Edinburgh: L & S Livingstone.

Gelfand, M. 1977. *The Spiritual Beliefs of the Shona.* Gwelo: Mambo Press.

Gelfand, M. 1979. *Growing up in Shona society: from birth to marriage*. Gwelo: Mambo Press.

Gelfand, M., S. Mari, R.B. Drummond and Ndemera, B. 1985. *The Traditional Medical Practitioner in Zimbabwe.* Cape Town: Rustica Press.

Giddens, A. 1979. *Central Problems in Social Theory*. London: Macmillan.

Gifford-Gonzalez D. 2018. *An Introduction to Zooarchaeology*. Cham. Springer.

Gombe, J. 1986. *Tsika DzaVaShona*, Harare: College Press Publishers.

Gosden, C. 1999. *Anthropology and archaeology: a changing relationship.* London: Routledge.

Gosden, C. 2006. Material culture and long-term change. In C. Tilley, W. Keane, S. Ku¨chler, M. J. Rowlands and P. Spyer (eds) *Handbook of Material Culture*. London: Sage,425–441.

Gosselain, O.P. 1999. In pots we trust. The processing of clay and symbols in sub-Saharan Africa. *Journal of Material Culture*. 4: 205-230.

Granziera, P. 2005. Huaxtepec: The Sacred Garden of an Aztec Emperor. *Landscape Research*. 30:1, 81-107, DOI: 10.1080/0142639042000324776

Grigoryan, Y. 2014. *Archaeology of the periphery*. Moscow. Moscow Urban Forum.

Hanson, B., 2005. *Takadini*. Fidalyn Productions, Harare

Harding, A. 2013. World Systems, Cores, and Peripheries in Prehistoric Europe. *European Journal of Archaeology,* 16(3), 378-400. doi:10.1179/1461957113Y.0000000032

Hall, M. 1984. Pots and politics: ceramic interpretations in southern Africa. *World Archaeology* 15 (3): 262-273

Hall, M. 1987. *The Changing Past: farmers, kings and traders in southern Africa 200-1860*. Cape Town: David Phillip

Hall, R. N. 1905. *Great Zimbabwe*, Methuen, London.

Hall, R.N. and Neal, W.G. 1904. *The ancient ruins of Rhodesia*. London: Methuen.

Hall, S. and Smith, B., 2000. Empowering places: rock shelters and ritual control in farmer forager interactions in the Northern Province. *South African Archaeological Society Goodwin Series*. 8: 30-46

Hall, T.D., Nick Kardulias, P. and Chase-Dunn, C. 2011. World-Systems Analysis and Archaeology: Continuing the Dialogue. *Journal of Archaeological Research* 19, 233–279.

Hamutyinei, M.A. 1989. *Musango munenyama*, Harare: Longman.

Hamutyinei, A. M., and Plangger, A. B. 1974. *Tsumo-Shumo: Shona proverbial lore and wisdom.* Gweru: Mambo Press.

Hannaford, M. J. 2015. The consequences of past climate change for state formation and security in southern Africa. Unpublished PhD thesis. University of Sheffield

Hannaford MJ, Nash DJ. 2016. Climate, history, society over the last millennium in southeast Africa. *WIREs Climate Change* 7: 370– 392.

Hannan, M. 1994. *Standard Shona dictionary*. Harare: College Press.

Hanisch, E. O. M. 1980. An archaeological interpretation of certain Iron Age sites in the Limpopo / Shashi valley. Unpublished MA. thesis. University of Pretoria

Harris, E, C. 1989. *Principles of Archaeological Stratigraphy*. London. Academic Press.

Harris, E, C., Brown III, M, R., and Brown, G, J. 1993. *Practices of Archaeological Stratigraphy*. London. Academic Press.

Harris, E., C. 2013 Urban sites and the stratigraphic revolution in archaeology. *Papers from the Institute of Archaeology* 23(1), DOI: http://doi.org/10.5334/pia.439

Herbert, E.W. 1984. *Red Gold of Africa: Copper in Precolonial History and Culture*. Madison: University of Wisconsin Press.

Herbert, E.W. 1996. Metals and power at Great Zimbabwe. In *Aspects of African Archaeology: Papers from the 10th Congress of the Pan African Association for Prehistory and Related Studies*. G. Pwiti and R. C. Soper, Eds. Harare: University of Zimbabwe. 641-647.

Hicks, D and Beaudry, M. C. 2010. Oxford Handbook of Material Culture Studies. Oxford. Oxford University Press.

Hill, J. N., and Evans, R. K. 1972. A model for classification and typology. In Clarke, D. L. (ed.), *Models in Archaeology*, Methuen, London. 231–273.

Hodder, I. 1982. *Symbols in action*. Cambridge: Cambridge University Press.

Hodder, I. 1989. This is not an article about material culture as text. *Journal of Anthropological Archaeology* (8). 3. 250-269.

Hodder, I. 2011. Human-thing entanglement: towards an integrated archaeological perspective. *Journal of the Royal Anthropological Institute.* 17(1): 154-177.

Hodder, I. 2012. *Entangled: an archaeology of the relationships between humans and things*. New York: John Wiley and Sons.

Hodza, A, C, and Fortune, G. 1978. *Shona Praise Poetry*. Oxford, The Oxford Library of African Literature.

Hofmann, A and Kusky, T. 2004. The Belingwe greenstone belt: ensialic or oceanic? *Developments in Precambrian Geology* 13, 487-53.

Hogg, A.G., Hua, Q., Blackwell, P.G., Niu, M., Buck, C.E., Guilderson, T.P., Heaton, T.J., Palmer, J.G., Reimer, P.J., Reimer, R.W., Turney, C.S.M. and Zimmerman, S.R.H. 2013. Shcal13 southern hemisphere calibration, 0–50,000 years cal BP. *Radiocarbon.* 55: 1889– 1903.

Holmgren, K., Karl’en, W., Lauritzen, S.E., Lee-Thorp, J.A., Partridge, T.C., Piketh, S., Repinski, P., Stevenson, C., Svanered,O., Tyson, P.D., 1999. A 3000-year high-resolution record of palaeoclimate for north-eastern South Africa. *The Holocene* 9 (3),295–309.

Holleman, J.F. 1952. *Shona customary law: With reference to kinship, marriage, the family and the estate.* Manchester: Manchester University Press.

House, M. 2016. The archaeology of Mapela Hill, South-Western Zimbabwe. Unpublished M.Sc. thesis, University of Cape Town

Huffman, T. N. 1971. Cloth from the Iron Age in Rhodesia. *Arnoldia* 14 (5): 1-19

Huffman, T. N. 1972. The rise and fall of Zimbabwe. *Journal of African History* 13 (3), 353-66.

Huffman, T. N. 1973. Archaeology report - Iron Age. In Bukwa Expedition 23rd Edition, 19-21. Salisbury: *Rhodesian Schools Exploration Society*.

Huffman, T. N. 1974. The Leopard’s Kopje Tradition. *Museum Memoir* 6. Salisbury: National Museums and Monuments of Rhodesia

Huffman, T. N. 1978. The Iron Age of the Buhwa district, Rhodesia. *Occassional Papers of the National Museum of Rhodesia*. A, 4 (3): 81-100.

Huffman, T. N. 1979. Test Excavations at Chamabvefva, Southern Mashonaland. *South African Archaeological Bulletin,* 34, No. 129, 57-70

Huffman, T. N. 1980. Ceramics, classifications and Iron Age entities. *African Studies* 29 (2), 123-174

Huffman, T. N. 1981. Snakes and Birds: expressive space at Great Zimbabwe. *African Studies* 40: 131-150

Huffman, T.N. 1982. Archaeology and ethnohistory of the African Iron Age. *Annual review of Anthropology.* 11: 133-150.

Huffman, T. N. 1984. Expressive space in the Zimbabwe culture. *Man (New Series)* 19 (4): 593-612

Huffman, T. N. 1986. Iron Age settlement patterns and the origins of class distinctions in Southern Africa. F. Wendorf and E. Close (eds) *Advances in World Archaeology* 5: 291-338

Huffman, T. N. 1996. *Snakes and crocodiles: Power and symbolism in ancient Zimbabwe.* Johannesburg: Witwatersrand Press

Huffman, T. N. 2000. Mapungubwe and the origins of the Zimbabwe Culture. Leslie, M. and Maggs, T. (Eds), *African Naissance: The Limpopo Valley 1000 Years Ago*, The South African Archaeological Society Goodwin Series 8: 14–29

Huffman, T. N. 2007. *Handbook to the Iron Age: The Archaeology of Pre-colonial farming societies in Southern Africa*. Pietermaritzburg: University of KwaZulu-Natal Press

Huffman, T. N. 2008. Climate change during the Iron Age in the Shashe-Limpopo Basin, southern Africa. *Journal of Archaeological Science* 35: 2032-2047

Huffman, T. N. 2009. Mapungubwe and Great Zimbabwe: The origin and spread of social complexity in southern Africa. *Journal of Anthropological Archaeology* 28: 37-54

Huffman, T. N. 2010. Revisiting Great Zimbabwe, *Azania: Archaeological Research in Africa,* 45:3, 321-328

Huffman, T. N. 2012. Historical archaeology of the Mapungubwe area: Boer, Birwa, Sotho-Tswana and Machete. *Southern African Humanities* 24: 33–59

Huffman, T. N. 2015. Mapela, Mapungubwe and the origins of states in southern Africa, *South African Archaeological Bulletin* 70 (201): 15-27

Huffman, T. N. and Vogel, J. C. 1991. The chronology of Great Zimbabwe. *South African Archaeological Bulletin* 46, 61-70.

Huffman, T.N., and Hanisch, E.O. 1987. Settlement hierarchies in the northern Transvaal: Zimbabwe ruins and Venda history. *African Studies*. 46(1): 79-116.

Huffman, T. N., and Justin Du Piesanie, J. 2011. Khami and the Venda in the Mapungubwe Landscape. *Journal of African Archaeology* 9 (2): 189-206. doi 10.3213/2191-5784-10197

Holladay, J. S., Jr. 1992. House, Israelite Pp. 308–18 in *Anchor Bible Dictionary*, Vol. 3, ed. D. Freedman. New York: Doubleday.

Jackson, A. P. 1954. Ample Food without Ploughing. *NADA* 31: 62–6.

Jacobson, L. 1987. The size variability of ostrich eggshell beads from central Namibia and its relevance as a stylistic and temporal marker. *South African Archaeological Bulletin* 42: 55–58.

Jerie, S., and Matanga, E. 2011. The effectiveness of ethno-science-based strategies in drought mitigation in Mberengwa district of southern Zimbabwe. *Journal of Sustainable Development in Africa*, 13(4), 395-409.

Jonsson, J. 1998. *Early Plant Economy in Zimbabwe (Studies in African Archaeology 16).* Uppsala: Department of Archaeology and Ancient History.

Jonsson, J. 2002. *The plant economy of Early and late Farming Communities (c. 200 BC-AD1800) in Zimbabwe. Evidence from Matopos, Great Zimbabwe, Nyanga, Mwenezi Ranch and Malumba*. Uppsala: Department of Archaeology and Ancient History

Kardulias, N, and Hall, T, D. 2008. Archaeology and world-systems analysis. *World Archaeology*. 40:4, 572-583, DOI: 10.1080/00438240802453252

Katiyo, W. 1976. *A Son of the Soil*. London: Rex Collings

Kay, G. 1970. *Rhodesia: A Human Geography*. England: University of London Press.

Karklins, K. 1985. *Glass Beads: The 19th Century Levin Catalogue and Venetian Bead Book and Guide to Description of Glass Beads*. Studies in Archaeology, Architecture and History. Ottawa: Parks Canada

Kidd, K. E. and Kidd, M. A. 1970. A classification system for glass beads for the use of field archaeologists. *Canadian Historic Sites: Occasional Papers in Archaeology and History* 1: 45-89

Kim, N and Kusimba, C. 2008. Pathways to social complexity and political centralisation in the southern Zambezian region. *African Archaeological Review* 25, 131-152.

Kinahan, J. 2000. *Cattle for Beads: the historical contact and trade on the Namib Coast*. Uppsala: Societa Archaeologica Uppsaliensis

Klein, R. G. & K. Cruz-Uribe 1984. *The Analysis of Animal Bones from Archaeological Sites*. Chicago: University of Chicago Press.

Klehm, C. E. 2017. Local dynamics and the emergence of social inequality in Iron Age Botswana. *Current Anthropology* 58: 604–633.

Koleini, F., Prinsloo, L. C., Biemond, W. M., Colomban, P., Ngo, A., Boeyens, J. C. A. and van der Ryst, M. M. 2015. Towards refining the classification of glass trade beads imported into southern Africa from the 8th to the 16th century AD. *Journal of Cultural Heritage* 19, 435–44.

Koleini, F., Pikirayi, I., and Colomban, P., 2017, Revisiting Baranda: a multi-analytical approach in classifying sixteenth/seventeenth-century glass beads from northern Zimbabwe, *Antiquity*, 91(357), 751–64.

Koleini, F, Machiridza, H, L, Pikirayi, I, and Colomban, P. 2019. The chronology of Insiza cluster Khami-phase sites in south-western Zimbabwe: Compositional insights from pXRF and Raman Analysis of excavated exotic glass finds. *Archaeometry* 61, 4: 874–890

Kohl, P. L. 1978. The balance of trade in southwestern Asia in the mid-third millennium B.C. *Current Anthropology*. 19:463-92.

Kopytoff, I. 1987. *The African Frontier: The Reproduction of Traditional African Societies*. Indiana University Press, Bloomington.

Kuimba, G, 1968. *Tambaoga Mwanangu*. Rhodesia. Longman

Kusimba, C. M., Kim, N. C., and Kusimba, S. B. 2017. Trade and state formation in ancient east African coast and southern Zambezia. In Chacon, R. J., and Mendoza, R. G. (eds.), *Feast, Famine or Fighting? Multiple Pathways to Social Complexity*, Springer, Cham, Switzerland. 61–89.

Lane, P. 1994/1995. The use and Abuse of Ethnography in the study of the Southern African Iron Age. *Azania.* 29/30: 24-30.

Lev-Tov, J., Porter, B., and Routledge, B. 2010. Measuring Local Diversity in Early Iron Age Animal Economies: A view from Khirbat al-Mudayna al-Aliya (Jordan). *Bulletin of the American Schools of Oriental Research* 361:67-93

Linnaeus, C. 1735. *Systema naturae, sive Regna tria naturae. Systematice proposita per Classes, Ordines, Genera, & Species*. Lugduni Batavorum, Apud Theodorum Haak.

Lindahl, A and Matenga, E. 1995. *Present and past: ceramics and homesteads: an ethnoarchaeological project in the Buhera district, Zimbabwe*. Studies in African Archaeology 11. Uppsala: Societas Archaeologica Upsaliensis

Lindahl, A and Pikirayi, I. 2010. Ceramics and Change: An Overview of pottery production techniques in northern South Africa and eastern Zimbabwe during the first and second millennium AD. *Archaeological and Anthropological Sciences* 2 (3):133- 149.

Livneh, A. 1976. Precolonial Polities in southern Zambesia and their political communications. Unpublished PhD theis. OAS University of London.

Livingstone Smith, A, Cornelissen, E, Gosselain, O.P, and MacEachern, S. 2017. *Field Manual for African Archaeology*. Royal. Tervuren. Museum for Central Africa.

Loubser, J. H. N. 1991. The ethnoarchaeology of Venda-speakers in southern Africa. *Navorsinge van die Nasionale Museum* 7 (8): 145–464

Lucas, G. 2010. Fieldwork and Collecting. In the *Oxford Handbook of Material Culture Studies.* eds Hicks, D and Beaudry, M. C. Oxford. Oxford University Press

Lyman, R. 1994. *Vertebrate Taphonomy. Cambridge Manuals in Archaeology*. Cambridge: Cambridge University Press.

Lyman, R.L. 2008. *Quantitative Paleozoology*. Cambridge: Cambridge University Press.

Maggs, T. M. 1976. *Iron Age communities of the southern Highveld*. Occasional Publication 2. Pietermaritzburg: Natal Museum.

Maggs, T. 1980. Msuluzi confluence: a seventh century Early Iron Age site on the Tugela River. *Southern African Humanities*. 24(1): 111-45.

Magoma, M, Badenhorst, S, Pikirayi, I. 2018. Feasting among Venda-speakers of South Africa: The Late Iron Age fauna from Mutokolwe. *Anthropozoologica*, 53 (17): 195-205

Maldonado, D. 2000. *Deidades y Espacio Ritual en Cuauhna´huac y Huaxtepec* (Mexico: Universidad Nacional Autono´ma de Me´xico, Instituto de Investigaciones Antropolo´ gicas).

Mapara, J. 2007. An analysis of the reliability and validity of the Shona novel as a historical document', unpublished PhD thesis, University of South Africa, Pretoria.

Manyanga, M. 2001. *Choices and Constraints: Animal resource exploitation in south-eastern Zimbabwe c. AD 900-1500* (Studies in African Archaeology 18). Uppsala: Department of Archaeology and Ancient History.

Manyanga, M. 2006. *Resilient Landscapes: Socio-environmental dynamics in the Shashi-Limpopo Basin, Southern Zimbabwe c. AD 800 to the present*. Uppsala: Societa Archaeologica Uppsaliensis

Manyanga, M; Pikirayi, I and Ndoro, W. 2000. Copying and Dryland Environments: Preliminary Results from Mapungubwe and Zimbabwe Phase Sites in the Mateke Hills, south-eastern Zimbabwe. *South African Archaeological Society Godwin Series*, 8, pp 69- 77.

Manyanga, M., Pikirayi, I. and Chirikure, S. 2010. Conceptualising the Urban Mind in Pre-European Southern Africa: Rethinking Mapungubwe and Great Zimbabwe. In *The Urban 309 Mind: Cultural and Environmental Dynamics*. P.J.J. Sinclair, G. Nordquist, F. Herschend and C. Isendahl, Eds. Uppsala University: Department of Archaeology and Ancient History. 573-590.

Manyanga, M, and Pangeti, G. 2017. Precolonial hunting in Southern Africa: a changing paradigm M. Manyanga, S. Chirikure (eds.), *Archives, Objects, Places and Landscapes: Multidisciplinary Approaches to Decolonised Zimbabwean Pasts*, Langaa Research and Publishing Common Initiative Group, Bamenda.

Mapaura, A. and Timberlake, J. 2004. *A checklist of Zimbabwean vascular plant Southern African Botanical Diversity Network Report No. 33* Sabonet, Pretoria and Harare.

Marufu, H. 2008. A Comparative Study of the Material Culture from Settlement and Mortuary Contexts in Northern Zimbabwe, Unpublished MA Dissertation, History and Archaeology Department, University of Dar es Salaam

Matenga, E., 1993. *Archaeological Figurines from Zimbabwe*. Studies in African Archaeology. Uppsala: Societas Archaeologica Upsaliensis.

Matenga, E. 1998. *The Soapstone Birds of Great Zimbabwe: Symbols of a Nation*. African Publishing Group.

Matenga, E, and Chikwanda, G. 2000. Illegal mining at Chumnungwa ruins, Zimbabwe, 1995 -1997: some aspects of community attitudes towards heritage sites. *Conservation of Archaeological Sites*, 4 (3): 165 – 175.

Matson, F. R. 1965. Ceramic queries. In F. Matson (ed.), *Ceramics and Man, Viking Fund Publications in Anthropology*, No. 41,Wenner-Gren Foundation for Anthropology Research, New York. 277–287.

Martin, A., 1978. The Geology of the Belingwe-Shabani Shist Belt. *Rhodesia Geological Survey Bulletin* 83, 213.

Martindale, A. 2009. Entanglement and tinkering: structural history in the archaeology of the Northern Tsimshian. *Journal of Social Archaeology* 9, 59–91.

Martinón-Torres, M. and Rehren, T. 2009. Post-Medieval Crucible Production and Distribution: A study of materials and materialities. *Archaeometry*. 51(1): 49-74.

Mauch, C. 1874. Reisen im Inneren von Sü Afrika. *Petermanns Geographische Mitteilungen. Supplement N*. 37.

Mavhunga, C. 2007. Even the rider and a horse are a partnership: a response to Vermeulen & Sheil. *Oryx*, 41, 441-442.

Mavhunga, C. 2014. *Transient workspaces: technologies of everyday innovation in Zimbabwe*. Massachusetts. MIT Press.

Mavhunga, C. 2017. *What Do Science, Technology, and Innovation Mean from Africa?* Massachusetts. MIT Press.

Mawere, M. 2012. *The Struggle of African Indigenous Knowledge Systems in an Age of Globalization: A Case for Children's Traditional Games in South-Eastern Zimbabwe*. Bamenda: Langaa Research & Publishing CIG.

Mazarire, G, C. 2016. The Burrowed Earth: Rodents in Zimbabwe's Environmental History. *Critical African Studies* 8, 2: 109–135.

McIntosh, S, K, and McIntosh, R, J. 1981. West African Prehistory: Archaeological studies in recent decades have illuminated the prehistory of this vast region, revealing unexpected complexity in its development from 10,000 B.C. to A.D. 1000. *American Scientist*, 69, 6:602-613.

McIntosh, R.J. 2005. *Ancient Middle Niger: Urbanism and the Self-Organizing Landscape.* Cambridge: Cambridge University Press

McIntosh, S.K. and Fagan, B.M. 2017. Re-dating the Ingombe Ilede burials. *Antiquity* 91: 1069-1077.

McAdams, L. J. B., and Howman, R. 1940. Notes on the hand spinning and weaving of cotton. *NADA* 17, 96–100.

Meyer, A. 1980. "n Interpretasie van die Greefswaldpotwerk" Unpublished MA thesis. University of Pretoria

Miller, D. 1987. *Material Culture and Mass Consumption*. Oxford: Basil Blackwell

Miller, D. 2001. Metal assemblages from Greefswald areas K2, Mapungubwe hill and Mapungubwe southern terrace. *The South African Archaeological Bulletin*. 56: 83-103.

Miller, D. 2002. Smelter and smith: Iron Age metal fabrication technology in southern Africa. *Journal of Archaeological Science* 29: 1083-1131

Miller, D. and Van Der Merwe, N. J. 1994. Early metal working in sub-Saharan Africa: a review of recent research. *Journal of Africa History* 35: 1-36

Miller, D., and Killick, D. 2004. Slag identification at Southern African archaeological sites. *Journal of African Archaeology*, 2(1), 23–47.

Miller, J. M., Sawchuk, E. A., Reedman, A. L. R., and Willoughby, P. R. 2018. Land snail shell beads in the Sub-Saharan archaeological record: When, where, and why? *African Archaeological Review*, 35(3), 347–378.

Miloglav, I, and Vuković, J. 2018. *Artisans Rule: Product Standardization and Craft Specialization in Prehistoric Society*. Newcastle. Cambridge Scholars Publishing.

Ministry of Internal Affairs. 1965. Delineation Report, Belingwe, 1965: Nyamhondo.

Ministry of Internal Affairs. 1967. Delineation Report, Nuanetsi, 1967: Negari.

Mitchell, P. 2002. *The Archaeology of Southern Africa*. Cambridge: Cambridge University Press.

Mukabeta, K. 2019. Does similarity equal relationship? An archaeological study of Tsindi, a Dzimbahwe site in North-eastern Zimbabwe. Unpublished MPhil Thesis, Department of Archaeology, University of Cape Town.

Mukwende, T. 2016. An Archaeological Study of the Zimbabwe Culture Capital of Khami. South-western Zimbabwe. Unpublished PhD Thesis, Department of Archaeology, University of Cape Town.

Mukwende, T, Bandama, F, Chirikure, S, and Nyamushosho, R, T. 2018. The chronology, craft production and economy of the Butua capital of Khami, southwestern Zimbabwe, *Azania: Archaeological Research in Africa*. 53:4, 477-506.

Mungwini, P. 2017 *Indigenous Shona Philosophy: Reconstructive Insights*. Pretoria: UNISA Press.

Murimbika, M. 2006. Sacred powers and rituals of transformation: An ethnoarchaeological study of rainmaking rituals and agricultural productivity during the evolution of the Mapungubwe state, Ad 1000 to Ad 1300. Unpublished PhD thesis. University of the Witwatersrand.

Mutasa, N, M. 1978. *Mapatya*. Rhodesia. Longman

Moffett, A.J. 2017. 'Phalaborwa where the hammer is heard': Crafting together the political economy of Iron Age communities in southern Africa. AD 900-1900. Unpublished PhD thesis. University of Cape Town.

Moffett, A.J. and Chirikure, S. 2016. Exotica in Context: Reconfiguring Prestige, Power and Wealth in the Southern African Iron Age. *Journal of World Prehistory*. 29(4): 337-382.

Molofsky, L.J., Killick, D., Ducea, M.N., Macovei, M., Chesley, J.T., Ruiz, J., Thibodeau, A. and Popescu, G.C. 2014. A novel approach to lead isotope provenance studies of tin and bronze: applications to South African, Botswanan and Romanian artifacts. *Journal of Archaeological Science*. 50: 440-450.

Morais, J. 1988. *The early farming communities of southern Mozambique*. Stockholm: Central Board of National Antiquities.

Mossberg, M and Pettersson, G. 1991. A study of infiltration capacity in a semiarid environment, Mberengwa District Zimbabwe. Lunds Universitets Naturgeografiska Insitution Seminarieuppsatser Nr25

Mothulatshipi, S. M. 2008. Landscape Archaeology of the Later Farming Communities of the Shashe Limpopo Basin, Eastern Botswana: Land use Diversity and Human Behaviour. Unpublished PhD thesis. University of Edinburgh.

Monro, D.F. and Spies, C.W. 1975. Excavations at Musimbira, Bikita district, *Rhodesia. Arnoldia Rhodesia* 7(22):1-11

Monroe, J. C. 2013. Power and agency in precolonial African states. *Annual Review of Anthropology*. 42: 17-35.

Mudenge, S.I. 1974. The role of foreign trade in the Rozvi Empire: A reappraisal. *Journal of African History.* 15(3): 373-391.

Mudenge, S.I. 1988. *A political history of Munhumutapa c 1400-1902*. London: James Currey.

Muringaniza, S. J. and Ruwitah, A. 1996. Ethnography and archaeological interpretation of use of space at Zimbabwe Tradition sites. *Zimbabwea* 4: 23-33

Mtetwa, E. 2017. Technology, Ideology and Environment: The Social Dynamics of Iron Metallurgy in Great Zimbabwe, AD 900 to the Present, Ph.D. dissertation, Department of Archaeology and Ancient History, Uppsala University, Uppsala.

Mtetwa, E., Manyanga, M., Pikirayi, I., 2013. Ceramics in Zimbabwean archaeology: thinking beyond the traditional approaches. In: Manyanga, M., Katsamudanga, S. (Eds.), *Zimbabwean Archaeology in the Post-independence Era*. Sapes books, Harare.

Ndoro, W. 1991. Why decorate her? *Zimbabwea* 1.5-13.

Ndoro, W. 1996. Towards the meaning and symbolism of archaeological pottery assemblage. In *Aspects of African Archaeology. Papers from the 10th Congress of the Pan African Association for Prehistory and Related Studies*. G. Pwiti and R. Soper, Eds. Harare: University of Zimbabwe Publications. 773-780.

Ndoro, W. 2001. *Your Monument, our shrine: the preservation and presentation of Great Zimbabwe (Studies in African Archaeology 19)*. Uppsala: Department of Archaeology and Ancient History, Uppsala University.

Nikis, N, and Livingstone Smith, A. 2017. Copper, Trade and Polities: Exchange Networks in Southern Central Africa in the 2nd Millennium CE, *Journal of Southern African Studies*, 43:5, 895-911, DOI: 10.1080/03057070.2017.1356123

Nyamapfene K. 1991. *The soils of Zimbabwe*. Harare: Nehanda Publishers

Nyamushosho, R.T. 2013. Identity and Connections: An ethnoarchaeological study of pottery vessels from the Saunyama dynasty and the Nyanga archaeological complex in north-eastern Zimbabwe. Unpublished BA Honours thesis. Midlands State University.

Nyamushosho, R.T. 2017a. Living on the margin? The Iron Age Communities of Mananzve Hill, Shashi region, South-western Zimbabwe Unpublished MPhil thesis. University of Cape Town.

Nyamushosho, R.T. 2017b. Aspects of consumption and symbolism: A ceramic ethnoarchaeological study of ritual vessels among the Saunyama of north-eastern Zimbabwe. In Manyanga, M & Chirikure, S (eds), *Archives, Objects and Landscapes. Multidisciplinary approaches to Decolonised Zimbabwean Pasts*. Langaa Publishers

Nyamushosho, R.T, Chirikure, S., Bandama, F., Manyanga, M, and Mukwende, T. 2018. Are drylands marginal? The case study of Mananzve, Shashi region, southwestern Zimbabwe. *Azania Archaeological Research in Africa*. 53:4, 439-476

Nyamushosho, R.T. and Chirikure S. 2020. Archaeological implications of ethnographically grounded functional study of pottery from Nyanga, Zimbabwe. *Quaternary International*. 555: 150–164

Oates, J. 1993. Trade and Power in the Fifth and Fourth Millennium BC: New Evidence from Northern Mesopotamia. *World Archaeology* 24: 403-42

O'Connor, T. 2000. *The Archaeology of Animal Bones*. College Station: Texas A and M University Press.

Oestigaard, T. 2004. The world as artefact – material culture and archaeology, in: Fahlander, F, and Oestigaard, T (eds), *Material culture and other things post-disciplinary studies in the 21st century*, 19-52. Lindome: Bricoleur Press.

Olsen, B, Shanks, M, Webmoor, T and Witmore, C. 2012. *Archaeology: The Discipline of Things.* Berkeley. University of California Press.

Orton, J. 2007. The sampling of ephemeral shell scatters in Namaqualand, South Africa. *South African Archaeological Bulletin* 62: 74-78.

Patnaik S, M. 1995. Material Culture and Archaeology. *Indian Anthropologist*, 25. 2:59-64

Peter, B. 2001. Vitrified dung in archaeological contexts: an experimental study on the process of its formation in the Mosu and Bobirwa areas. *Pula: Botswana Journal of African Studies*, 15(1), 125-143

Pfukenyi, D. M., Mukaratirwa, S., Willingham, A. L., and Monrad, J. 2006. Epidemiological studies of Schistosoma mattheei infections in cattle in the highveld and lowveld communal grazing areas of Zimbabwe. *Onderstepoort Journal of Veterinary Research*, 73, 179-191.

Phillipson, D. W. 1969. Early iron using peoples of southern Africa. Thompson, L. (Ed), African *societies in southern Africa*, London: Heinemann: 24-49.

Phillipson, D. W. 1974. Iron Age history and archaeology in Zambia. *Journal of African History. 15* (1): 1-25.

Phillipson. 1977. *The Later Prehistory of Eastern and Southern Africa.* London: Heinemann.

Phillipson, D. W. 2005. *African archaeology (Third Edition)*. Cambridge: Cambridge University Press

Phimister, I.R. 1980. Capital and class in Zimbabwe: 1890 -1940. Henderson Seminar Paper no. 50, Harare: UZ.

Pikirayi, I. 1993. *The Archaeological Identity of the Mutapa State: Towards an Historical Archaeology of Northern Zimbabwe*, Studies in African Archaeology 6 Uppsala: Societas Archaeologica Upsaliensis

Pikirayi, I. 1997. Pots, people and culture: an overview of ceramic studies in Zimbabwe. Pwiti, G. *Caves, Monuments and Texts: Zimbabwean Archaeology Today*, Studies in African Archaeology 14, Uppsala: Societas Archaeologica Upsaliensis: 69-108

Pikirayi, I. 1999. Taking Southern African Ceramic Studies into the twenty-first century: A Zimbabwean Perspective. *African Archaeological Review*, Vol. 16, No. 3, pp185-189.

Pikirayi, I. 2001. *The Zimbabwe Culture: origins and decline in Southern Zambesian states in Southern Africa.* Walnut Creek: Altamira Press

Pikirayi, I. 2006. The demise of Great Zimbabwe, AD 1420–1550: an environmental reappraisal. A. Green and R. Leech (eds) *Cities in the World, 1500–2000. The Society for Post-Medieval Archaeology* Monograph 3, Leeds, UK: Maney Publishing: 31–47

Pikirayi, I. 2007. Ceramics and group identity: Towards a social archaeology in southern African Iron Age ceramic studies. *Journal of Social Archaeology* 7(3): 286-301

Pikirayi, I. 2013. Stone architecture and the development of power in the Zimbabwe tradition AD 1270-1830, *Azania: Archaeological Research in Africa* 48:2, 282-300.

Pikirayi, I., Lindahl, A., 2013. Ceramics, ethnohistory, and ethnography: locating meaning in southern African Iron Age ceramic assemblages. *African Archaeological Review*. 30, 455–473.

Plug, I. 1988. Hunters and herders; an archaeozoological study of some prehistoric communities in the Kruger National Park. Unpublished DPhil thesis, University of Pretoria.

Plug, I. 1989. Aspects of life in the Kruger national park during the early Iron Age. *South African Archaeological Society Goodwin Series*. 6:62-68.

Plug, I. 1997a. Early Iron Age buffalo hunters on the Kadzi River, Zimbabwe. *African Archaeological Review* 14: 85–105

Plug, I. 1997b. The faunal samples from Thulamela 2232AC2, Kruger National Park, South Africa. *National Cultural Museum* 6, 78-93.

Plug, I. 2000. Overview of Iron Age fauna from the Limpopo valley. Leslie, M. and Maggs, T. (Eds), *African Naissance: The Limpopo Valley 1000 Years Ago*, *South African Archaeological Society Goodwin Series* 8:117-126

Plug, I. 2014. *What bone is that? A guide to the identification of Southern African mammal bones.* Cape Town: Rosslyn Press.

Plug, I and Voigt, E.A. 1985. Archaeozoological studies of Iron Age communities in southern Africa. In: F. Wendorf and A. Close, eds, *Advances in World Archaeology* 4: 189–238.

Plug, I. and Badenhorst, S. 2001. The distribution of macromammals in southern Africa over the past 30 000 years. *Transvaal Museum Monograph 12*. Pretoria: Transvaal Museum.

Plug, 1.,and Badenhorst, S. 2002. Appendix a: bones from the Muo Ozi Midden Irene 11. in K. soper, *Nyanga: Ancient fields and agricultural history in Zimbabwe. Memoirs of the British Institute in Eastern Africa Number* 16 (pp. 242-248). London: British Institute in Eastern Africa.

Posnansky, M. 1961. Iron Age in East and central Africa-points of comparison. *The South African. Archaeological Bulletin*. 16: 134-136.

Porter, B. W. 2013. Complex Communities: *The Archaeology of Early Iron Age West-Central Jordan*. Arizona: University of Arizona Press

Posselt, F, W. T. 1935. *Fact and fiction: a short account of the natives of Southern Rhodesia*. Bulawayo, Books of Rhodesia.

Prown, J. D. 1982. Mind in Matter: An Introduction to Material Culture Theory and Method *Winterthur Portfolio,* Vol. 17, No. 1. The University of Chicago Press,1-19.

Pwiti, G. 1991. Trade and economies in southern Africa: The archaeological evidence. *Zambezia.* 18(2): 119-129.

Pwiti, G. 1996a. Peasants, Chiefs and Kings: A model for the development of cultural complexity in northern Zimbabwe. *Zambezia* XXIII (i): 31-52.

Pwiti, G. 1996b. *Continuity and Change: An Archaeological Study of Farming Communities in Northern Zimbabwe, AD 500–1700,* Studies in African Archaeology 13. Uppsala: Societas Archaeologica Upsaliensis

Pwiti, G. 2005. Southern Africa and the East African coast. In *African archaeology: A critical Introduction.* A.B. Stahl, Ed. Oxford: Blackwell Publishing. 378-91.

Pwiti, G and Mawoko, 1997. Faunal remains from Kasekete, a Zimbabwe Tradition site in the Zambezi valley, Northern Zimbabwe. *Zimbabwea* 5: 22-29

Pwiti, G, Ndoro, W, and Kapumha, R. 2013. The stone building cultures of southern Africa. In Manyanga, M. and Katsamudanga, S (Eds). *Zimbabwean archaeology in the post-independence era*. Harare: SAPES Books: 117-142

Randall-MacIver, D. R. 1906. *Medieval Rhodesia*. London: Macmillan

Ranganai, R. T., Whaler, K. A. and Ebinger C. J. 2008. Gravity anomaly patterns in the south-central Zimbabwe Archaean craton and their geological interpretation. *Journal of African Earth Sciences* 51, 257– 276,

Renfrew, C. 1984. *Approaches to Social Archaeology*. Edinburgh: Edinburgh University Press

Renfrew, C., and Cherry, J. 1986. Peer polity interaction and socio-political change. In R. Preucel and I. Hodder (Eds.), *Contemporary archaeology in theory: A reader (114–142).* Oxford: Blackwell

Reid, A. 1996. Cattle herds and the redistribution of cattle resources. *World Archaeology.* 28(1): 43-57.

Reid, A. and Segobye, A. 2000. Politics, society and trade on the eastern margins of the Kalahari. Leslie, M. and Maggs, T. (Eds), *African Naissance: The Limpopo Valley 1000 Years Ago*, *South African Archaeological Society Goodwin Series* 8: 58-68

Reitz, E. J. and Wing, E. S. 1999. *Zooarchaeology. Cambridge Manuals in Archaeology*. Cambridge University Press, Cambridge.

Renfrew, C. and Bahn, P. 2004. *Archaeology: Theories, methods and practice*. London: Thames and Hudson

Robertshaw, P; Wood, M; Melchiorre, E; Popelka-Filcoff, R. S and Glascock, M. D. 2010. Southern African glass beads: chemistry, glass sources and patterns of trade. *Journal of Archaeological Science* 37:1898–1912

Robertshaw, P., and Wood, M., 2017, The glass beads from Ingombe Ilede, *Antiquity*, 91(358), 1078–84.

Rice, P. M. 1987. *Pottery Analysis: A Sourcebook*, University of Chicago Press, Chicago.

Robins, P. A., Whitty, A., and Fagan, B. 1966. Excavations at Harleigh Farm, near Rusape, Rhodesia, 1958-1962. *The South African Archaeological Bulletin*, 21, 82:61-80.

Robinson, K. R. 1959. *Khami Ruins*. Cambridge: Cambridge University Press

Robinson, K. R. 1961. Zimbabwe Pottery. *Occasional Papers of the National Museums and Monuments of Southern Rhodesia* 23A: 227-229

Robinson, K. R. 1965a. A note on the Iron Age sites in the Zambezi valley and on the escarpment in the Sipolilo district, southern Rhodesia. *Arnoldia* 1: 1-12

Robinson, K. R. 1965b. The Leopards Kopje culture: a preliminary report on recent work, *Arnoldia* 1 (25): 1-7

Robinson, K. R. 1966. The Leopard's Kopje Culture, its position in the Iron Age of Southern Rhodesia. *South African Archaeological Bulletin* 21: 5-51

Robinson, K. R. 1985. Dated Iron Age sites from the Upper Umguza valley 1982: their possible implications. *South African Archaeological Bulletin* 43: 49-52

Robinson, K. R. 1988. Clay Figurines from South-Western Zimbabwe: A Closer Look in the Light of Recent Evidence. *The South African Archaeological Bulletin*, 43.147: 49-52.

Routledge, B. 2000. The Politics of Mesha: Segmented Identities and State Formation in Iron Age Moab. *Journal of the Economic and Social History of the Orient* 43:221-256.

Routledge, B. 2009 Average Families? House Size Variability in the Southern Levantine Iron Age. Pp. 42–60 in *The Family in Life and in Death: The Family in Ancient Israel. Sociological and Archaeological Perspectives,* ed. P. Dutcher-Walls. International Library of Hebrew Bible/Old Testament Studies 504. London: T & T Clark

Rowlands, M. J., Larsen, M. S., and Kristiansen, K. 1987. *Centre and Periphery in the Ancient World*, Cambridge University Press, Cambridge, UK

Rudd, S. 1984. Excavations at Lekkerwater Ruins, Tsindi Hill, Theydon, Zimbabwe. *South African Archaeological Bulletin* 39: 83–105.

Russell, N. 2011. *Social zooarchaeology: Humans and animals in prehistory*. Cambridge: Cambridge University Press.

Ruwitah, A.R. 1997. Lost tribe, lost language? The invention of a false Remba indentity. *Zimbabwea.* 5: 53-71.

Ruwitah, A. R. 1999. Kupakasa: Precolonial cotton production and trade in the Zambezi and Save valleys. *Zimbabwea* 7.1

Saitowitz, S. 1996. Glass Beads as Indicators of Contact and Trade in Southern Africa ca. AD 900- AD 1250. Unpublished Ph.D. Thesis. University of Cape Town.

Sadr, K. 2008. An ageless view of first millennium AD southern African ceramics. *Journal of African Archaeology* 6: 103-129

Sadr, K and Sampson C. G. 2006. Through Thick and Thin: Early Pottery in Southern Africa. *Journal of African Archaeology*. 4, 2: 235-252.

Sadr, K. 2012. The Origins and Spread of Dry Laid, Stone-Walled Architecture in Pre-Colonial Southern Africa. *Journal of Southern African Studies* 38(2): 257–263.

Sadr, K. and Rodier, X. 2012. Google Earth, GIS and stone-walled structures in southern Gauteng, South Africa. *Journal of Archaeological Science* 39: 1034-1042

Schofield, J.F. 1938. A preliminary study of the prehistoric beads of the Northern Transvaal and Natal. Transactions of the Royal Society of South Africa. 26(4): 341-371.

Schoeman, M. H. 2006. Clouding Power? Rain control in Shashe/Limpopo State formation. PhD. thesis. University of the Witwatersrand

Schoeman, A. 2017. Southern Africa. In *the Oxford handbook of prehistoric figurines*. T. Insoll (ed). Oxford. Oxford University Press.

Schofield, J.F. 1938. A preliminary study of the prehistoric beads of the Northern Transvaal and Natal. *Transactions of the Royal Society of South Africa*. 26(4): 341-371.

Schofield, J. F. 1948. Primitive Pottery. An Introduction to South African Ceramics, Prehistoric and Protohistoric. Cape Town: *South African Archaeological Society*

Schofield, J.F. 1958. South African beads. In *Inyanga: Prehistoric Settlements in southern Rhodesia*. R. Summers, Ed. Cambridge: Cambridge University Press. 180-229.

Scholfield, J.R., Nyamushosho, R.T, Mushangwe, C, Chirikure, S, Bandama, B, and Mukwende, T. forthcoming. Mtanye revisited: New insights into the Middle Iron Age of southern Zambezia

Scoones, I. 1993. Why are there so many animals? Cattle population dynamics in the communal areas of Zimbabwe. In *Range Ecology at Disequilibrium. New Models of Natural Viability and Pastoral Adaptation in African Savannas*, Behnke, R., I. Scoones & C. Kerven (eds), 1−30. London: Overseas Development Institute.

Scoones, I. 1996. *Hazards and Opportunities: farming livelihoods in Dryland Africa, lessons from Zimbabwe*. London: Zed Books.

Scoones, I. 2001. *Dynamics and Diversity: Soil Fertility and Farming Livelihoods in Africa*. London. Earthscan.

Shanks, M. and Hodder, I. 1995. Processual, post-processual and interpretive archaeologies. In I. Hodder, M. Shanks, A. Alexandri, V. Buchli, J. Carman, J. Last and G. Lucas (eds) *Interpreting Archaeology: finding meaning in the past*. London: Routledge, 3–29.

Shanxi Team of Archaeology Institute of CASS, Linfen Cultural Bureau of Shanxi, 1980. Shanxi Xiangfenxian Taosi yizhi fajue jianbao (initial report on excavation at Taosi site in Xiangfen County, Shanxi). Kaogu 1, 18–31

Shenjere, P. 2011. The animal economy of prehistoric farming communities of Manicaland, eastern Zimbabwe. Unpublished PhD thesis. University of Dar es Salaam

Shenjere-Nyabezi, P., Pwiti, G. and Manyanga. M. 2013. Making the most out of rubbish: trends in archaeozoological studies in post-independence Zimbabwe. Manyanga, M. and Katsamudanga, S (Eds). *Zimbabwean archaeology in the post-independence era*. Harare: SAPES Books: 117-142

Shenjere-Nyabezi, P. 2017. Ndongo: a Zimbabwe culture site in the Middle Save. In Manyanga, M & Chirikure, S (eds), Archives, Objects and Landscapes. Multidisciplinary approaches to Decolonised Zimbabwean Pasts. Langaa Publishers.137–167.

Shepard, A. O. 1956. *Ceramics for the archaeologist*. Publication. Washington, DC: Carnegie Institution of Washington.

Shepherd, N. 2002. The politics of archaeology in Africa. *Annual Review of Anthropology*. 31: 189-209.

Shimada, I, 2007. *Craft Production in Complex Societies: Multicraft and Producer Perspectives*. Salt Lake. The University of Utah Press

Shoko, T. 2007. *Karanga Indigenous Religion in Zimbabwe: health and well-being,* Aldershot: Ashgate.

Sibanda, H. M. and Ndlovu, N. R. 1992. The value of indigenous browseable tree species in livestock production in semi-arid communal grazing areas of Zimbabwe. *Proceedings of the joint feed resources network workshop*. Gaborone: 55-61

Simmons, D. M., Stachiw, M. O. and Worrell, J. E. 1993. The total site matrix: strata and structure at the Bixby Site. In E. C. Harris, M. R. Brown, III and G. J. Brown (eds.), *Practices of archaeological stratigraphy*, Academic Press, London, 181-197.

Sinamai, A. 1997. Wood from the Western Entrance of the Great Enclosure, Great Zimbabwe. *Zimbabwea* 5: 48–52.

Sinamai, A., 2009. Dry Stone structures, Domboshaba, Botswana. In Joffroy, T., Moriset, S. (eds.) *Projet Situes: Ten years of Experience*. CRAterre Editions, Grenoble. pp. 86-93.

Sinclair, P.J. 1987. Space, time and social formation: a territorial approach to the archaeology and anthropology of Zimbabwe and Mozambique ca 0-1700 AD. Uppsala: Societas Archaeologica Upsaliensis.

Sinclair, P. J. J. and Lundmark, H. 1984. A spatial analysis of archaeological sites from Zimbabwe. M. Hall, G. Avery, D. M. Avery, M. L. Wilson and A. J. B. Humphreys (Eds). *Frontiers: Southern Africa Archaeology Today.* Oxford: Archaeopress

Sinclair, P. J. J., I. Pikirayi, G. Pwiti & R. Soper 1993. Urban Trajectories on the Zimbabwean Plateau. In *The Archaeology of Africa: food, metals and towns*, Shaw, T., P. J. J. Sinclair, B. Andah, & A. Okpoko (eds), 705-31. London: Routledge.

Sinclair, P., Ekblom, A. and Wood, M. 2012. Trade and society on the south-east African coast in the later first millennium AD: the case of Chibuene. *Antiquit*y 86: 723–737.

Sinopoli, C. M. 2003. *The Political Economy of Craft Production: Crafting Empire in South India, c. 1350-1650.* Cambridge: Cambridge University Press.

Skibo, J. M., Schiffer, M. B., & Butts, T. C. 1997. Ceramic surface treatment and abrasion resistance: An experimental study. *Journal of Archaeological Science*, 24(4), 311–317.

Skinner, J. D and Smithers R. H. N. 1990. *The Mammals of the Southern African Subregion*. Pretoria: University of Pretoria.

Skinner J. D, Chimimba C, T. 2005. *The Mammals of the Southern African Subregion*. Cambridge. Cambridge University Press.

Smith, J. M. 2005. Climate change and agropastoral sustainability in the Shashe-Limpopo River basin from AD 900. Unpublished PhD. thesis. University of the Witwatersrand

Smith, J., Lee-Thorp, J. and Hall, S. 2007. Climate change and agropastoralist settlement in the Shashe-Limpopo River Basin, southern Africa: AD 880 to 1700. *South African Archaeological Bulletin* 62: 115–125

Smithers R. H. N. 1986. *Land Mammals of Southern Africa*, Johannesburg: Macmillan.

Summers R. 1957. Human figures in clay and stone from Southern Rhodesia and adjoining territories. *Occasional Papers of the National Museums of Southern Rhodesia* 21 A 3:61-75.

Summers, R. 1958. *Inyanga: Prehistoric Settlements in Southern Rhodesia*. Cambridge University Press, Cambridge.

Summers, R. 1959. Excavations at DhloDhlo ruins', Unpublished report, Archaeological survey, Museum of Human Sciences, Harare.

Summers, R., Robinson, K. R., and Whitty, A. 1961. Zimbabwe excavations, 1958. *Occasional Papers of the National Museums and Monuments of Southern Rhodesia, Series A, Human Sciences* 3: 226–333.

Summers, R. 1965. *Zimbabwe: a Rhodesian mystery*. Johannesburg: Thomas Nelson.

Summers, R. 1960. Environment and culture in southern Africa: a study in the personality of a land-locked country. *Proceedings of the American Philosophical Society* 104 (3), 266-292

Summers, R. 1969. *Ancient mining in Rhodesia and adjacent areas.* Museums Memoir No. 3. Salisbury: National Museums and Monuments of Rhodesia.

Summers, R., Robinson, K., and Whitty, A. 1961. Zimbabwe excavations. *Occasional Papers of the National Museums of Rhodesia* 3 (23 A): 15-332

Stahl, A.B. 1999. Perceiving variability in time and space: the evolutionary mapping of African societies. In *Beyond chiefdoms: Pathways to complexity in Africa*. S.K. McIntosh, Ed. Cambridge: Cambridge University Press. 39-550.

Stahl, A.B. 2002. Colonial entanglements and the practices of taste: An alternative to logocentric approaches. *American Anthropologist*. 104(3): 827-845.

Stein, G. 1999. *Rethinking World-Systems: Diasporas, Colonies, and Interaction in Uruk Mesopotamia.* Tucson, AZ: University of Arizona Press.

Steyn, M., Miller, S., Nienaber, WC. and Loots, M. 1998. Late Iron Age gold burials from Thulamela (Pafuri region, Kruger national Park). *South African Archaeological Bulletin* 53:73-85

Steyn, B, and Alexander A. 2019. Plant use in southern Africa's Middle Iron Age: the archaeobotany of Mutamba, *Azania: Archaeological Research in Africa*, DOI: 10.1080/0067270X.2019.1644018

Stevens, C. 1931. *The Zimbabwe temple (pp. 1–8). LXI*: Journal of the Royal Anthropological Institute.

Söderström, H., 1984. *God Gave Growth: The History of the Lutheran Church in Zimbabwe, 1903–1980.* Gweru. Mambo Press.

Söderström, H, Bergman, S, and Bergman, T. 2003. *The History of the Evangelical Lutheran Church in Zimbabwe 1903-2003.* Uppsala. Church of Sweden

Soper, R. C. 1971. A general review of Early Iron Age in Southern half of Africa. *Azania* 6:5-37

Soper, R. 2002. *Nyanga: ancient fields, settlements and agricultural history in Zimbabwe*. London: British Institute in Eastern Africa Memoir 16.

Soper, R. C., and G. Pwiti. 1988. Preliminary Report on Excavations at Wazi Hill, Centenary. *Zimbabwean Prehistory* 20: 16-20.

Swan, L. 2007. Economic and ideological roles of copper ingots in prehistoric Zimbabwe. *Antiquity*. 81(314): 999-1012.

Swan, L. 2008. Minerals and Managers: production contexts as evidence for social organization in Zimbabwean prehistory. Studies in Global Archaeology 12, Uppsala: Department of Archaeology and Ancient History, Uppsala University.

Sykes, N. 2014. *Beastly questions: Animal answers to archaeological issues*. London: Bloomsbury Academic.

Tapela, M. C. 2001. An archaeological examination of ostrich eggshell beads in Botswana. *Pula: Botswana Journal of African Studies* 15 (1): 60-74

Tapfuma, P. 2010. An analysis of faunal remains from the site of Danan’ombe. A Zimbabwe tradition site in central Zimbabwe. Unpublished Honours dissertation. University of Zimbabwe

Theal, G.M. 1898–1903. *Records of South-Eastern Africa, Vol 1-9*. Facsimile reprint. Cape Town.

Thomas, N. 1991. *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific*. Cambridge, MA: Harvard University Press.

Thomsen, C. J. 1836. *Ledetraad til Nordisk Oldkundskab* (Guide to Northern Archaeology)

Thompson, J, G. 1965. The soils of Rhodesia and their classification. Rhodesia agri. J. Tech. Bull. 6. Govt. Printers, Salisbury, Rhodesia. 66.

Thompson, J, G. and Purves, W, D. 1981. A guide to the soils of Zimbabwe. Zimbabwe Agri J tech handbook 3. Infor Services. Dept. of Research and Specialists Services, Harare, Zimbabwe

Thompson, M.W. 1977. *General Pitt-Rivers: Evolution and archaeology in the nineteenth century*. Bradford-on-Avon: Moonraker Press.

Thorp, C. 1984a. Faunal remains as evidence of social stratification at Great Zimbabwe. Unpublished MA thesis, University of Witwatersrand.

Thorp, C. 1984b. A cultural interpretation of faunal the assemblage from Khami Hill Ruin. *In Frontiers: southern African archaeology today*, Hall, M., G. Avery, D. M. Avery, M. L. Wilson & A. J. B. Humphreys (eds), 266−77. Cambridge: British Archaeological Report.

Thorp, C. 1995. Kings, Commoners and Cattle at Zimbabwe Tradition Sites. *Museum Memoir (New Series)* 1. Harare: National Museums and Monuments of Zimbabwe

Thorp, C. 2009. Excavations at Hlamba Mlonga hill, Malilangwe Trust, Southeastern Zimbabwe. *Journal of African Archaeology* 7 (2): 191–218.

Thorp, C. 2010. Induna Cave, south-eastern Zimbabwe: a 'contact period' assemblage in a changing social landscape. *Southern African Humanities* 22: 113–47

Tiley, S. and Burger, E. 2002. Cowries in the archaeological and maritime record. *Strandloper* 267: 3

Tilley, C. 2006. Introduction. Tilley, C., Keane, W., Kuchler, S., Rowlands, M and Spyer, P. (eds.) *Handbook of material culture*. London: Sage

Tilley, C., Keane, W., Kuchler, S., Rowlands, M and Spyer, P. 2006. *Handbook of material culture*. London: Sage

Torr, S. R., Mangwiro, T. N. C. and Hall, D. R. 2011. Shoo fly, don't bother me! Efficacy of traditional methods of protecting cattle from tsetse. *Medical and Veterinary Entomology* 25: 192–201 doi: 10.1111/j.1365-2915.2010.00942.x

Trigger, B. G. 2003. *Understanding early civilisations: A comparative study*. Cambridge: Cambridge University Press

Tyson, P.D. and Lindesay, J.A. 1992. The climate of the last 2000 years in southern Africa. *Holocene* 2: 271-278

Tyson, P.D, and Preston-Whyte, R. A. 2000. The Weather and Climate of Southern Africa, Cape Town: Oxford University Press

Van der Merwe, N. J. 1978. Field methodology and Iron Age metallurgy at Buhwa, Rhodesia. *Occasional papers, National Museums and Monuments of Rhodesia*. A. 4(3): 101-105.

Van der Sleen, W. G. N. 1967. *A Handbook on Beads*. Liege: Musee du Verre.

Van der Sleen, W. (1958). Ancient Glass Beads with Special Reference to the Beads of East and Central Africa and the Indian Ocean. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland, 88*(2), 203-216. doi:10.2307/2844252

Van Doornum, B. L. 2005. Changing Places, Spaces and Identity in the Shashe-Limpopo Region of Limpopo Province, South Africa. Unpublished Ph.D. thesis. University of the Witwatersrand

Van Schalkwyk, J.A. and Hanisch, E.O.M. 2002. *Sculptured in Clay. Iron Age Figurines from Schroda, Limpopo Province*, South Africa. Pretoria: National Cultural History Museum

Van Riet Lowe, C. 1955. *The glass beads of Mapungubwe*. Pretoria: Government Printer

Vansina, J. 1969. The bells of kings. *Journal of African History* 10: 187–197.

Vansina, J. 1971. Once Upon a Time: Oral Traditions as History in Africa. *Daedalus*. 100, (2): 442-468.

Vansina, J. 1995. New linguistic evidence and ‘the Bantu expansion. *Journal of African History* 36: 173–195

Van Waarden, C. 1987. Matanga, a Late Zimbabwe cattle post. *South African Archaeological Bulletin* 42: 107-124

Van Warden, C. 1989. The granaries of Vumba: structural interpretation of a Khami period commoner site. *Journal of Anthropological Archaeology* 8: 131-157

Van Waarden, C. 1998. The Later Iron Age. Lane, P., Reid, A. and Segobye, A. (Eds.) *Ditswa Mmung: The Archaeology of Botswana.* Gaborone: Pula Press and the Botswana Society: 115–60

Van Waarden, C. 2011. The origin of the Zimbabwe Tradition walling. *Zimbabwean Prehistory* 29: 54-77

Van Waarden, C. 2012. *Butua and the end of an era: The effect of the collapse of the Kalanga state on ordinary citizens: An analysis of behaviour under stress*. Oxford: Archaeopress

Vincent, V. and Thomas, R. G. 1960. *An agricultural survey of southern Rhodesia*. Salisbury: Government Printer

Voigt, E. 1983. *Mapungubwe: An Archaeozoological interpretation of an Iron Age community*. Pretoria: Transvaal Museum

Von Sicard, H. 1948. The origins of some the tribes in the Belingwe reserve. *NADA* 25, 93-104.

Von Sicard, H. 1950. The origins of some the tribes in the Belingwe reserve. *NADA* 27, 7- 19.

Von Sicard, H. 1951. The origins of some the tribes in the Belingwe reserve. *NADA* 28, 5- 25.

Von Sicard, H. 1952. The origins of some the tribes in the Belingwe reserve. *NADA* 29, 43-64.

Von Sicard, H. 1953. The Lemba ancestor Baramina. *African studies* 12. 57-61.

Von Sicard, H. 1955. The origins of some the tribes in the Belingwe reserve. *NADA* 32, 77-92.

Von Sicard, H. 1956. Places of ancient occupation in Chief Negove’s country. *NADA* 33, 32-50.

Von Sicard, H. 1957. Places of ancient occupation in Chief Negove’s country. *NADA* 34, 8-30.

Von Sicard, H. 1965. *Ngano dze Cikaranga: Karangamärchen.* Uppsala. Universitä Uppsala.

Wallerstein, I.M. 1974. *The modern world system. Capitalist agriculture and the European world economy in the sixteenth century*. New York: Academic Press.

Walker, N, J. 1972. A preliminary report on the Stone Age of Doddiburn area. In: 22nd Expedition: Tshibidzini. Bulawayo: *Rhodesian Schools Exploration Society* 10-13.

Walker, N. J., 1995. *Late Pleistocene and Holocene Hunter-gatherers of the Matopos: An archaeological study of change and continuity in Zimbabwe*. Uppsala: Societas Archaeologica Upsaliensis.

Walker, N.J. and Thorp, C. 1997. Stone Age Archaeology in Zimbabwe. In: G. Pwiti, ed., *Caves, monuments and texts: Zimbabwean archaeology today*. Studies in African Archaeology 14. Uppsala: Uppsala University, pp. 9–32.

Wailes, B. 1996. *Craft specialization and social evolution: In memory of V. Gordon Childe*. Philadelphia. University of Pennsylvania Museum.

Walton, J. 1955. Iron Gongs from the Congo and Southern Rhodesia. *Man,* 55: 20-23

Ward, V. and Maggs, T. 1988. The slipped disc: a guide to the identification of shell disc beads. *Southern African Humanities*. 29(2): 407-16.

Wilmsen, E. N. 2009. Hills and the brilliance of beads: myths and the interpretation of Iron Age sites in southern Africa. *Southern African Humanities*. 21(1): 263-274.

Wilmsen, E. N. 2015. Ostrich eggshells and their beads. *South African Archaeological Bulletin,* 70(201), 89–105.

Wild, H. 1958. The Flora Zambesiaca. Proceedings of the 3rd AETFAT Congress, Coimbra, Portugal. Mem. *Soc. Brot*. 13: 53-56

Willoughby, J. 1893. *A Narrative of further excavations at Zimbabwe.* London: George Philip and Son.

Wilson, K. B. 1990. Ecological Dynamics and Human Welfare: A Case Study of Population, Health and Nutrition in Zimbabwe. Unpublished PhD thesis, University College London.

Wilson, A.H. 2001. Compositional and lithological controls on the PGEbearing sulphide zones in the Selukwe Subchamber, Great Dyke: a combined equilibrium – Rayleigh fractionation model, Journal of Petrology, 42, 1845-1867.

Whitelaw, G. 1993. Customs and Settlement Patterns in the First Millennium AD: Evidence from Nanda, an Early Iron Age site in the Mngeni Valley, Natal. *Natal Museum Journal of Humanities* 5: 47–81.

Whittaker, J, C, Caulkins, D, and Kamp, K, A. 1998. Evaluating Consistency in Typology and Classification. *Journal of Archaeological Method and Theory*,5, (2): 129-164

Whitty, A. 1957. The origins of the stone architecture of Zimbabwe. In *Proceedings of the Third Pan-African Congress on Prehistory, Livingstone*, 1955, edited by J.D. Clark and S. Cole, 366-377. London: Chatto and Windus.

Whitty, A. 1959. A Classification of Prehistoric Stone Buildings in Mashonaland, Southern Rhodesia. *The South African Archaeological Bulletin,* 14 (54), pp 57-71.

Whitty, A. 1961. Architectural Style at Great Zimbabwe. *Occasional Paper of the National Museums of Southern Rhodesia* 3a: 289-305

Worst, B. G. 1956 The geology of the country between Belingwe and West Nicholson. *Bulletin Geology Survey. Southern Rhodesia* 43, 218.

Worst, B. G. 1962. The geology of the Buhwa iron ore deposits and adjoining country: Belingwe- district. *Bulletin Geology Survey. Southern Rhodesia* 53, 114.

Wood, M. 2000. Making connections: relationships between international trade and glass beads from the Shashe-Limpopo area. South African Archaeological Society *Goodwin Series*. 8: 78-90.

Wood, M. 2005. Glass beads and pre-European trade in the Shashe-Limpopo Region. Unpublished M.A. thesis. University of Witwatersrand

Wood, M. 2009. The Glass Beads from Hlamba Mlonga, Zimbabwe: Classification, Context and Interpretation. *Journal of African Archaeology* 7 (2): 219–238

Wood, M. 2011. A glass bead sequence for southern Africa from the 8th to the 16th century AD. *Journal of African Archaeology* 9 (1): 67-8.

Wood, M. 2012. Interconnections: Glass beads and trade in southern and eastern Africa and the Indian Ocean–7th to 16th centuries AD. Studies in Global Archaeology 17. Uppsala: Department of Archaeology and Ancient History, Uppsala University.

Wood, M., Dussubieux, L. and Robertshaw, P. 2012. The glass of Chibuene, Mozambique: new insights into early Indian Ocean trade. *South African Archaeological Bulletin* 67: 59–74

Woodborne, S., G. Hall, I. Robertson, A. Patrut, M. Rouault, N.J. Loader and M. Hofmeyr 2015 A 1000-Year Carbon Isotope Rainfall Proxy Record from South African Baobab Trees (Adansonia digitata L.). *Plos one* 10(5):1-18.

Wynne-Jones, S. 2013. Material culture, space and identity. Mitchell, P and Lane, P. *The Oxford handbook of African archaeology*. Oxford: Oxford University Press

Wynne-Jones, S. 2016. *A Material Culture: Consumption and Materiality on the Coast of Precolonial East Africa.* Oxford: Oxford University Press.

Yoffee, N. 2005. *Myths of the archaic state: Evolution of the earliest cities, states, and civilizations.* Cambridge: Cambridge University Press.

Zachrisson P. 1978. An African Area in Change: Belingwe 1894–1946: A Study of Colonialism, Missionary Activity and African Responses in Southern Rhodesia. *Bulletin of the Department of History, 17*; Gothenburg: University of Gothenburg.

Zvarevashe, I.M. 1976. *Kurauone*, Harare: College Press.

Zwaan, J.C., 2006. Gemmology, geology and origin of the Sandawana emerald deposits, Zimbabwe. *Scripta Geologica*, 131, 211.

Appendix 1: Inventory of the currently known Iron Age sites in Mberengwa and the surrounding areas

Site #	Site Name	Period	Cultural Phase	Dates	Research Action Taken	Ceramic Types	Bead Series	Burials	Metals	Walling Type	Other Finds & Features	References
1	Chumnungwa	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	9 burials including woman and child?	Copper ingot, double iron bells, gold pellets, copper crossbar, gold bangles,	Free standing walling with chevron designs	Soapstone bowls, tuyeres, *dhaka* floors, phallic figurines	Hall & Neal (1904), Garlake (1970), & Matenga (1993)
2	Little Chumnungwa	LIA?	Khami?	?	Surveyed and excavated	?	?	?	?	Retaining walling with herring-bone designs	?	Hall & Neal (1904), Von Sicard 1957, Garlake (1970)
3	Check Ruin/ Cesingo 4	LIA?	Khami?	?	Surveyed and not excavated	?	?	?	Fine gold ornaments	Free standing walling with check/chess board designs- inside & outside	*Dhaka* floors	Hall & Neal (1904), Von Sicard 1957

4	Chomuruvati/ Mwadzi/ Lower Lundi/ Lundi/ 2030:DA1	LIA	Khami	?	Surveyed and excavate d	Khami pottery	Khami series	?	Iron bangles, fine copper wire, copper beads,	Free standing & revetment walls with check & chord designs)	House remains *(dhaka),* shell beads, grinding stones, stone scrappers, *Achatina sp* beads	Bent (1892), Hall & Neal (1904) Cooke (1970), Garlake (1970) Van Der Merwe (1978), Brisch (2012)
5	Watoba	LIA?	Zimbabwe?		Surveyed and excavate d	?	?	?	Gold beads, copper beads and wire, bangles	Free standing with check and chessboard designs	*Dhaka* floors	Hall & Neal (1904)
6	Isinknombo	LIA?	Zimbabwe?	?	Surveyed and excavate d	?	?	Three skeletons with gold ornament s, (each with a gold bead necklace)	Iron bangles with gold bands, copper beads, gold beads, tacks &necklace s	Free standing walling	Blow pipes, crucibles with gold flux, *dhaka* floors,	Hall & Neal 1904
7	Gombo's 1	LIA?	Zimbabwe?	?	Surveyed and excavate d	?	?	?	Gold dust	Free standing walling	?	Hall & Neal 1904

8	Gombo’s 2	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Copper wire, iron slag, copper beads	Free standing walling	Tuyeres	Hall & Neal 1904
9	Molindula	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Fine gold dust	Free standing walling	Glazed ceramics?	Hall & Neal 1904
10	Ruins [1] (Unnamed)	LIA?	Zimbabwe	?	Surveyed and excavated	?	?	Human remains	Gold dust gold pellet., iron bangles, copper bangles, beads	Free standing walling with herring-bone designs and, rounded entrance	?	Hall & Neal 1904
11	Ruins [2] (Unnamed)	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	?	Free standing walling with herring-bone designs &, rounded entrance	?	Hall & Neal 1904
12	Ruins [3] (Unnamed)	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Gold beads and dust	Free standing walling with check designs & rounded entrance	?	Hall & Neal 1904

13	Rupungubwe/ Nhongogwe/ Burangwe/ 2030:CA13	LIA	Khami	?	Surveyed and excavated	?	?	?	Smelted copper, gold bangles, gold beads, copper beads	Free standing walling both with check designs square and rounded entrances	Gold working crucibles, house platforms	Von Sicard 1957, Hall & Neal 1904 Garlake 1970, Huffman 1978
14	Ihurzi	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Fine gold & copper	Free standing walling with herring-bone designs	?	Hall & Neal 1904
15	Sesinga	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Gold fragment, fine gold	?	Gold working Crucibles,	Hall & Neal 1904
16	Mundi/ Mupandashango/ Cesingo 2	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	17 human skeletal remains with gold ornaments	Gold ounces, wire bangles, nails, iron pin, arrowhead, metal wire coil	Free standing walling with check/chess board designs- inside & outside & rounded entrances	Gold working crucibles and cakes, tuyeres,	Hall & Neal 1904, Sicard 1957, Summers 1969
17	Nuanetsi	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?		Gold dust & copper beads	Free standing walling with check/ches	?	Hall & Neal 1904

										s board designs)		
18	Little Nuanetsi	LIA?	Zimbabwe?	?	Surveyed and not excavated	?	?	?	?	Free standing walling	?	Hall & Neal 1904
19	Buhwa/ Buchwa/ Vuhwa/ Masvingo/ Maswingo/ 2030:CB2/ Masingo	LIA	Khami	?	Surveyed and not excavated	Khami	Khami	?	Fine gold, fine copper wire, bronze chisel, iron beads, copper beads	Free standing & revetment walling with rounded entrance	Tuyeres, iron smelting furnace remains, smoking pipes, slag, zoomorphic pot, shell beads, house platforms, smoking pipes, porcelain, zoomorphic pot soapstone spindle whorl	Hall & Neal 1904; Von Sicard 1956, 1957, Garlake 1970, Huffman 1978, Van Der Merwe 1978
20	Little Buhwa	LIA	Zimbabwe	?	Surveyed and not excavated	?	?	?	?	Free standing walling	?	Hall & Neal 1904, Garlake 1970
21	Gorongwe/ Essengwe	LIA	Zimbabwe?	?	Surveyed and not excavated	?	?	?	Gold tacks, wire, & beads	Free standing walling with cord	Gold smelting crucibles,	Hall & Neal 1904,

										designs and squared entrances		Garlake 1970
22	Little Gorongwe	LIA	Zimbabwe?	?	Surveyed and not excavated	?	?	?	Processed gold, dust, & beads	Free standing walling	?	Hall & Neal 1904; Garlake 1970
23	Escep(g)we	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Gold bangles, beads, copper bangles, & beads,	Free standing walling with check/chess board designs	Gold and copper working crucibles	Hall & Neal 1904
24	Little Escep(g)we	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	?	Iron slag	Free standing walling	Iron smelting tuyeres	Hall & Neal 1904
25	Ruins [1] (Unnamed)	LIA?	Zimbabwe?	?	Surveyed and excavated	?	?	Human remains	Gold dust, pellets, iron bangles, copper bangles, and beads	Free standing walling with herring-bone designs & rounded entrance	?	Hall & Neal 1904
26	Ruins [2] (Unnamed)	LIA?	Zimbabwe?	?	Surveyed and not excavated	?	?	?	?	Free standing walling with herring-bone	?	Hall & Neal 1904

										designs &, rounded entrance		
27	Mpopoti	LIA	Zimbabwe	?	Surveyed and excavated	Zimbabwe		Charred remains of 2 human skeletons with gold ornaments, beads	Gold beads, dust & copper wire	Free standing walling with check/chess board and herringbone designs	Gold smelting crucibles,	Hall & Neal 1904
28	Little Mpopoti	LIA?	Zimbabwe	?	Surveyed and not excavated	?	?	?	?	Free standing walling	?	Hall & Neal 1904
29	Wedza/ Baden-Powell	LIA?	Zimbabwe?	?	Surveyed and not excavated	?	?	?	?	Free standing with check/chess board and herring-bone designs	?	Hall & Neal 1904
30	Mwele/ M'wele/ Biri	LIA?	Zimbabwe?	?	Surveyed and not excavated	?	?	?	?	Free standing & revertment walling with herring-bone designs	?	Hall & Neal 1904, Von Sicard 1957

31	M'wele Tributary	LIA?	Zimbabwe?	?	Surveyed and not excavated	?	?	?	?	Free standing walling with check/chess board designs	?	Hall & Neal 1904
32	Muchingwizi/ Rugado's Kraal/ Cesingo 3/ 2030:CB3	LIA	Khami	?	Surveyed and not excavated	?	?	?	?	Free standing & revetment walling with check/chess board designs	House platforms, grinding stone	Von Sicard 1957, Garlake 1970, Huffman 1978
33	Pamuuyu/ Mhatiwa/ 2030:DA1	LIA	Zimbabwe	?	Surveyed and not excavated	?	?	?	?	Free standing walling with rounded entrance	?	Garlake 1970, Huffman 1978
34	Domboshoko	LIA?	Khami?	?	Surveyed and not excavated	?	?	?	?	Free standing& revetment walling	?	Garlake 1970
35	Chipukuswi/ Lower Lundi	LIA?	Zimbabwe?	?	Surveyed and not excavated	?	?	?	?	Free standing walling with rounded entrance	?	Garlake 1970
36	Tokwe River	LIA	Zimbabwe	?	Surveyed and no excavated	?	?	?	?	Free standing walling	?	Garlake 1970

37	Mushonganeburi/ 2030:CB41	EIA LIA	Bambata/ Gokomere/ Refuge	?	Surveyed	Bambat/ Gokomere/ Refuge	Zhizo?	?	?	?	Clay figurine of a woman with breasts, cowry shell, *dhaka* floors, grain bins, lithics, dolly holes	Von Sicard 1956, 1957, Huffman 1978
38	Nenga/ 2030:CB53	LIA	Zimbabwe	?	Surveyed	Zimbabwe	?	?	?	Free standing walling with squared entrances	House mounds,	Huffman 1978
39	Rubabvu	LIA	Khami	?	Surveyed	Khami	?	?	?	Revetment walling	?	Von Sicard 1957, Garlake 1970
40	Chisungubvu	EIA LIA	GokomereRefuge	?	Surveyed	Gokomere Refuge	?	?	?	?	*Dhaka* floors, lithics esp. scrapers, tortoise carapace	Von Sicard 1956, 1957
41	Gwamakuyo	?	?	?	Surveyed	?	?	Graves?	Iron hoe heads	?		Von Sicard 1956
42	Chamabvepfa/ Nyamabvepfa	LIA	GumanyeKhami	1621-1718 (Khami)	Surveyed And excavated	Gumanye Khami	Khami series	?	Iron hoe heads plus blade and bangle fragments	Free standing& revetment walling with herring-bone designs	Shell beads, *Dhaka* floor, slag, grinding stone, cattle and sheep bones	Garlake 1970, Huffman 1979.

43	Kongezi/ Ingangase	LIA	Zimbabwe	?	Surveyed	?	?	?	?	Free standing& revetment walling	?	Garlake 1970
44	Dwala Farm 2	LIA	Khami	?	Surveyed	?	?	?	?	Revetment walling	?	Garlake 1970
45	Lumene	LIA	Khami	?	Surveyed	?	?	?	?	Revetment walling with check decoration	?	White 1905
46	Mkashi River	LIA	Khami	?	Surveyed	?	?	?	?	Revetment walling	?	Garlake 1970
47	Mdenezero	LIA	Khami	?	Surveyed	?	?	?	?	Revetment walling	?	Van Waarden 2012
48	Ensindi 2/ Hollins Block 2	LIA	Zimbabwe	?	Surveyed	?	?	?	?	Free standing& revetment walling	?	Garlake 1970
49	Sabafu	LIA	Zimbabwe	?	Surveyed	?	?	?	?	Free standing walling	?	Van Waarden 2012
50	Zumnungwe	LIA	Zimbabwe	?	Surveyed	?	?	?	?	Free standing walling	?	Van Waarden 2012
51	2030:CA14	LIA	Refuge	?	Surveyed	Refuge	?	?	?	?	?	Huffman 1978
52	2030:CA15	EIA	Furnace	?	Surveyed	?	?	?	?	?	Furnace debris, tuyeres,	Huffman 1978, Van Der Merwe 1978
53	2030:CB1	EIA	Zhizo	?	Surveyed	Zhizo	?	?	Slag	?	Dhaka floors, female figurine	Huffman 1978

54	2030:CB5	LIA	Refuge	?	Surveyed	Refuge	?	?	?	Rough walling	House circles, haematite, Slag, grinding stones	Huffman 1978, Van Der Merwe 1978
55	2030:CB11	LIA	Refuge	?	Surveyed	Refuge	?	?	?	Rough walling	House circles, grinding stones	Huffman 1978
56	2030:CB12	EIA	Gokomere Zhizo	?	Surveyed	Gokomere Zhizo	?	?	Slag	?	*Dhaka* floors	Huffman 1978
57	2030:CB15	LIA	Refuge	?	Surveyed	Refuge	?	?	?	?	?	Huffman 1978
58	2030:CB16	EIA	Gokomere Zhizo	?	Surveyed	Gokomere Zhizo	?	?	Slag	?	*Dhaka* floors	Huffman 1978
59	2030:CB17	EIA	Zhizo	?	Surveyed	Zhizo	?	?	Slag	?	*Dhaka* floors	Huffman 1978
60	2030:CB19	EIA	Gokomere	?	Surveyed	Gokomere	?	?	?	?	?	Huffman 1978
61	2030:CB20	?	?	?	Surveyed	?	?	?	?	?	Stone circles	Huffman 1978
62	2030:CB21	?	?	?	Surveyed	?	?	?	?	?	Stone circles	Huffman 1978
63	2030:CB22	EIA	Gokomere	?	Surveyed	Gokomere	?	?	?	?	Furnace debris	Huffman 1978, Van Der Merwe 1978
64	2030:CB23	EIA	Gokomere	?	Surveyed	Gokomere	?	?	?	?	*Dhaka* floors	Huffman 1978
65	2030:CB24	EIA	Zhizo	?	Surveyed	Zhizo	?	?	Slag	?	*Dhaka* floors	Huffman 1978

66	2030:CB25	EIA	Zhizo	?	Surveyed	Zhizo	?	?	Slag	?	*Dhaka* floors	Huffman 1978
67	2030:CB36	LIA	Refuge	?	Surveyed	Refuge	?	?	?	Rough walling?	?	Huffman 1978
68	2030:CB39	?	?	?	Surveyed	Refuge	?	?	?	Rough walling	House circles, grinding stones	Huffman 1978
69	2030:CB49	EIA	Gokomere Zhizo	?	Surveyed	Gokomer e Zhizo	?	?	Slag	?	*Dhak*a floors	Huffman 1978
70	2030:CB50	LIA	Refuge	?	Surveyed	Refuge	?	?	?	Rough walling?	House circles, grinding stones, & smoking pipe, slag, dolly holes, furnace debris,	Huffman 1978, Van Der Merwe 1978
71	2030:CB51	LIA	Refuge	?	Surveyed	Refuge	?	?	?	Rough walling?	Slag, dolly holes, furnace debris,	Huffman 1978
72	2030:CB52	LIA	Gumanye Zimbabwe	?	Surveyed	Gumanye Zimbabw e	?	?	?	?	Stone circles, spindle whorl, Slag	Huffman 1978, Van Der Merwe 1978
73	2030:CB54	?	Furnace	?	Surveyed	?	?	?	?	?	Stone circles	Huffman 1978
74	Nenga 2030:CB58	LIA	Furnace	779 - 102 5	Surveyed & excavate d	Gumanye	Gumany e	?	?	?	Furnace debris	Huffman 1978, Van Der Merwe 1978

75	2030:CB59	EIA	Gokomere	?	Surveyed	Gokomere	?	?	?	?	?	Huffman 1978
76	2030:CB60	LIA	Gumanye	?	Surveyed	Gumanye	?	?	?	?	Stone circles, *dhaka* floors, clay figurines	Huffman 1978
77	2030:CB61	EIA	Gokomere Zhizo	?	Surveyed	Gokomere Zhizo	?	?	Slag	?	*Dhaka* floors	Huffman 1978
78	2030:CB62	LIA	Gumanye	?	Surveyed	Gumanye	?	?	?	?	Stone circles, *dhaka* floors, clay figurines	Huffman 1978
79	2030:CB65	?	Furnace	?	Surveyed	?	?	?	?	?	Furnace debris	Huffman 1978
80	2030:CB66	?	Furnace	?	Surveyed	?	?	?	?	?	Furnace debris	Huffman 1978
81	Chamakwangwadza cave/ 2030:DA3	EIA LIA	Gokomere/ Refuge		Surveyed	Gokomere/ Refuge	?	?	?	?	House circles, grinding stones, grain bin, sorghum seeds, marula and monkey nuts, figurine, lithics, hammerstones	Cook 1970 Huffman 1978
82	2030:DA4	EIA	Gokomere	?	Surveyed	Gokomere	?	?	?	?	?	Huffman 1978
83	2030:DA5	EIA	Gokomere	?	Surveyed	Gokomere	?	?	?	?	Slag, iron ore	Huffman 1978, Van Der Merwe 1978

84	2030:DA10	LIA	Gumanye	?	Surveyed	Gumanye	?	?	?	?	*Dhaka* floors, clay figurines, shell beads	Huffman 1978
85	2030:DA16	LIA	Gumanye	?	Surveyed	Gumanye	?	?	?	?	*Dhaka* floors, clay figurines, green glass beads	Huffman 1978
86	Chizuhwe/ Sizugwe	EIA	Gokomere	?	Surveyed	Gokomer e	?	?	?	Rough walling	46 grain bins, female figurine with tattoos	Von Sicard 1956, 1957
87	R2707	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
88	R3035	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
89	R819	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
90	R929	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
91	R930	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
92	R2699	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
93	R3026	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
94	R3027	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
95	R3041	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
96	R2700	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
97	R3037	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969

98	R3019	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
99	R869	?	Ancient Mine	?	Reported	?	?	Human skeletons	?	?	?	Summers 1969
100	R3022	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
101	R3036	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
102	R3022	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
103	R3038	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
104	R2071	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
105	R3020	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
106	R3021	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
107	R2702	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
108	R926	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
109	R3367	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
110	R3040	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
111	R2704	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
112	R2703	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
113	R2708	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
114	R2709	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
115	R2710	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969

116	R2711	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
117	R2712	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
118	R2713	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
119	R2714	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
120	R2715	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
121	R2716	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
122	R2717	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
123	R2718	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
124	R2719	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
125	R2720	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
126	R2721	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
127	R3024	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
128	R3018	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
129	R927	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
130	R928	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
131	R3023	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
132	R2732	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
133	R3274	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969

134	R3025	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
135	R2880	?	Ancient Mine	?	Reported	?	?	?	?	Revetment walling	Soapstone bowl	Summers 1969
136	R-	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
137	R2733	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
138	R3028	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
139	R3029	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
140	R3030	?	Ancient Mine	?	Reported	?	?	?	?	?	?	Summers 1969
141	Buchwa 2030 C2, 36 K 0222637 7711466	EIA	Ziwa		Surveyed	Ziwa	?	?	?	?	Stone scraper	Burrett 2006
142	Buchwa 2030 C2, 36 K 0222687 7711654	EIA	Ziwa		Surveyed	Ziwa	?	?	?	?	Stone axe	Burrett 2006
143	Rubwe ruchena	?	?	?	Surveyed	?	?	?	Iron scrapper	?	Soapstone game boards, stone monolith	Von Sicard 1956, 1957
144	Cesingo 1	LIA	?	1700?	Surveyed and not excavated	?	?	Human burials	?	Walling made out of soapstone		Von Sicard 1957
145	Nenga Hill	LIA	Refuge	?	Surveyed	Refuge	?	Human burials	?		Grinding stones, gain bins, slag, furnaces, dolly holes	Von Sicard 1957, Van Der Merwe 1978

Appendix 2: Ceramics recovered from the walled and unwalled areas of Chumnungwa

Attribute	Diagnostic	Hilltop	Foothill
Provenance		36	24
	Undiagnostic	144	91
	Total	180	115
Vessel Shape	1a.	3	2
	1b.	3	
	2a.	3	5
	2b.	9	1
	3a.		
	3b.	2	4
	4a.	3	2
	4b.	1	2
	5.	4	1
	6.		1
	Total	28	17
Lip-Form	Externally thickened	2	5
	Rounded	13	4
	Tapered	4	1
	Bevelled		2
	Square	8	3
	Total	27	15
Texture	Fine	30	15
	Medium	4	9
	Coarse	2	
	Total	36	24
Surface Treatment	Graphite burnished	12	7
	Polished	24	17
	Total	36	24
Colour	Black	11	6
	Red	10	5
	Grey-brown	9	6
	Grey	6	7
	Total	36	24
Residue (Soot)	Total	6	14
Decoration Motif	I.	8	4
	II.		
	III.		
	IV.	1	2
	V		
	VI		
	VII		
	VIII		
	IX		
	Total	9	6
Decoration Placement	Lip		
	Rim		
	Neck	2	2
	Shoulder	7	4
	Total	9	6
Decoration Technique	Incisions	6	5
	Stabs		1
	Punctuates	3	
	Incisions and impressions		
	Total	9	6

Key:
1a = Tall necked pots with flared rims   1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims   2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims   3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims   4b = Constricted pots with simple rims
5 = Deep bowls   6= Hemispherical bowls
I = Diagonal incisions   II = Alternating oblique incisions
III = fine line and broad line oblique incisions   IV = Interlocking triangles
V = Punctates   VI = Cross hatching
VII = Stabs   VIII = Incisions and impressions   IX = Arcades

Test Pit 1

Attribute		Layer 1	Layer 2	Layer 3	Total
Provenance	Diagnostic	7	1	2	10
	Undiagnostic	90	44	31	165
	Total	95	45	33	173
Vessel Shape	4a.	1			1
	4b.				
	4c.			1	1
	4d.			1	1
	4e.				
	4f.	2			2
	4g.				
	4h.				
	4i.	1			1
	4j.	1			1
	Total	5		2	7
Lip-Form	Externally thickened			1	1
	Rounded	5		1	6
	Tapered				
	Bevelled				
	Square				
	Total	5		2	7
Texture	Fine	7		2	9
	Medium		1		1
	Coarse				
	Total	7	1	2	10
Surface Treatment	Graphite burnished	5		2	7
	Polished	2	1		
	Total	7	1	2	10
Colour	Black	3	1	1	5
	Red			1	1
	Grey-brown	3			3
	Grey	1			1
	Total	7	1	2	10
Residue (Soot)	Total	4	1	1	3
Decoration Motif	I.	1	1		
	II.				
	III.	1			
	IV.				
	V				
	VI				
	VII				
	VIII				
	IX				
	Total	2	1		3
Decoration Placement	Lip				
	Rim				
	Neck				
	Shoulder	2	1		
	Total	2	1		3
Decoration Technique	Incisions	2	1		
	Stabs				
	Punctuates				
	Incisions and impressions				
	Total	2	1		3

Key:
1a = Tall necked pots with flared rims — 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims — 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims — 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims — 4b = Constricted pots with simple rims
5 = Deep bowls — 6= Hemispherical bowls
I = Diagonal incisions — II = Alternating oblique incisions
III = fine line and broad line oblique incisions — IV = Interlocking triangles
V = Punctates — VI = Cross hatching
VII = Stabs — VIII = Incisions and impressions — IX = Arcades

Test Pit 2

Attribute		Layer 1	Layer 2	Total
Provenance	Diagnostic	2	17	19
	Undiagnostic	105	102	207
	Total	107	119	226
Lip-Form	Externally thickened		4	4
	Rounded		8	8
	Tapered	1		1
	Bevelled			
	Square		1	1
	Total	1	13	14
Texture	Fine	2	13	15
	Medium		4	4
	Coarse			
	Total	2	17	19
Surface Treatment	Graphite burnished	1	6	7
	Polished	1	11	12
	Total	2	17	19
Colour	Black	1	6	7
	Red		1	1
	Grey-brown		6	6
	Grey	1	4	5
	Total	2	17	19
Residue	Soot	1	10	11
	Carbon		1	1
	Total	1		12
Vessel Shape	1a.		2	2
	1b.		1	1
	2a.		1	1
	2b.		1	1
	3a.	1		1
	3b.		7	7
	4a.			
	4b.			
	5.		1	1
	6.		2	2
	Total	1	15	16
Decoration Motif	I.			
	II.			
	III.			
	IV.		1	1
	V	1		1
	VI			
	VII			
	VIII			
	IX			
	Total	1	1	2
Decoration Placement	Lip			
	Rim			
	Neck			
	Shoulder	1	1	2
	Total	1	1	2
Decoration Technique	Incisions		1	1
	Stabs			
	Punctuates	1		1
	Incisions and impressions			
	Total	1	1	2

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls I = Diagonal incisions
II = Alternating oblique incisions III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching VII = Stabs
VIII = Incisions and impressions IX = Arcades

Test Pit 3 and Test Pit 4

		Test Pit 3		Test Pit 4	
Attribute	Diagnostic	Layer 1	Total	Layer 1	Total
Provenance		11	11	5	5
	Undiagnostic	77	77	98	98
	Total	88	88	103	103
Vessel Shape	4a.	3	3	1	1
	4b.	1	1		
	4c.	1	1	2	2
	4d.	1	1		
	4e.				
	4f.	2	2		
	4g.				
	4h.				
	4i.				
	4j.			2	2
	Total	8	8	5	5
Lip-Form	Externally thickened	1	1	2	2
	Rounded	4	4	2	2
	Tapered				
	Bevelled	2	2		
	Square	1	1	1	1
	Total	8	8	5	5
Texture	Fine	8	8	5	5
	Medium	3	3		
	Coarse				
	Total	11	11	5	5
Surface Treatment	Graphite burnished	4	4	2	2
	Polished	7	7	3	3
	Total	11	11	5	5
Colour	Black	4	4	2	2
	Red	2	2	1	1
	Grey-brown	4	4	1	1
	Grey	1	1	1	1
	Total	11	11	5	5
Residue (Soot)	Total	3	3	5	5
Decoration Motif	I.	1	1		
	II.				
	III.	1	1		
	IV.				
	V				
	VI				
	VII				
	VIII				
	IX				
	Total	2	2		
Decoration Placement	Lip				
	Rim				
	Neck				
	Shoulder	2	2		
	Total	2	2		
Decoration Technique	Incisions	2	2		
	Stabs				
	Punctuates				
	Incisions and impressions				
	Total	2	2		

Key:
1a = Tall necked pots with flared rims — 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims — 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims — 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims — 4b = Constricted pots with simple rims
5 = Deep bowls — 6= Hemispherical bowls
I = Diagonal incisions — II = Alternating oblique incisions
III = fine line and broad line oblique incisions — IV = Interlocking triangles
V = Punctates — VI = Cross hatching
VII = Stabs — VIII = Incisions and impressions — IX = Arcades

Test Pit 5

Attribute	Diagnostic	Layer 1	Layer 2	Total
Provenance		3	5	8
	Undiagnostic	22	17	39
	Total	25	22	47
Vessel Shape	4a.		2	2
	4b.			
	4c.			
	4d.	1		1
	4e.			
	4f.			
	4g.			
	4h.			
	4i.	1		1
	4j.			
	Total	2	2	4
Lip-Form	Externally thickened			
	Rounded	1	1	2
	Tapered			
	Bevelled	1		1
	Square		1	1
	Total	2	2	
Texture	Fine	1	1	2
	Medium		4	4
	Coarse	2		2
	Total	3	5	8
Surface Treatment	Graphite burnished		1	1
	Polished	3	4	7
	Total	3	5	8
Colour	Black	1		1
	Red	1	1	2
	Grey-brown			
	Grey	1	4	5
	Total	3	5	8
Residue (Soot)	Total	3	3	6
Decoration Motif	I.	1		1
	II.			
	III.			
	IV.			
	V			
	VI			
	VII		3	3
	VIII			
	IX			
	Total	1	3	4
Decoration Placement	Lip			
	Rim			
	Neck			
	Shoulder	1	3	4
	Total	1	3	4
Decoration Technique	Incisions	1		
	Stabs		3	3
	Punctuates			
	Incisions and impressions			
	Total	1	3	4

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions
III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades

Test Pit 6

Attribute		Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Total
Provenance	Diagnostic	1	1	1	2	1	6
	Undiagnostic	15	31	40	20	7	113
	Total	16	32	41	22	8	119
Lip-Form	Externally thickened						
	Rounded	1	1			1	3
	Tapered				2		2
	Bevelled			1			1
	Square						
	Total	1	1		2	1	5
Texture	Fine	1	1	1	1	1	5
	Medium				1		1
	Coarse						
	Total	1	1	1	2	1	6
Surface Treatment	Graphite burnished				1		1
	Polished	1	1	1	1	1	5
	Total	1	1	1	2	1	6
Colour	Black				1	1	2
	Red			1			1
	Grey-brown		1		1		2
	Grey	1					1
	Total	1	1	1	2	1	6
Residue	Soot	1	1		1		3
	Carbon						
	Total	1	1		1		3
Vessel Shape	1a.						
	1b.				1		1
	2a.	1					1
	2b.			1	1	1	3
	3a.						
	3b.		1				1
	4a.						
	4b.						
	5.						
	6.						
	Total	1	1	1	2	1	6
Decoration Motif	I.						
	II.						
	III.						
	IV.						
	V						
	VI						
	VII						
	VIII						
	IX						
	Total						
Decoration Placement	Lip						
	Rim						
	Neck						
	Shoulder						
	Total						
Decoration Technique	Incisions						
	Stabs						
	Punctuates						
	Incisions and impressions						
	Total						

Key:
1a = Tall necked pots with flared rims   1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims   2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims   3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims   4b = Constricted pots with simple rims
5 = Deep bowls   6= Hemispherical bowls
I = Diagonal incisions   II = Alternating oblique incisions   III = fine line and broad line oblique incisions
IV = Interlocking triangles   V = Punctates   VI = Cross hatching   VII = Stabs
VIII = Incisions and impressions   IX = Arcades

Test Pit 7 and Test Pit 8

		Test Pit 7		Test Pit 8	
Attribute	Diagnostic	Layer 1	Total	Layer 1	Total
Provenance		79	79	137	137
	Undiagnostic	955	955	1154	1154
	Total	1034	1034	1291	1291
Vessel Shape	4a.	12	12	37	37
	4b.	6	6	11	11
	4c.	12	12	26	26
	4d.	17	17	20	20
	4e.	1	1	4	4
	4f.	5	5	19	19
	4g.	1	1	2	2
	4h.	1	1	2	2
	4i.	12	12	10	10
	4j.	1	1	3	3
	Total	68	68	134	134
Lip-Form	Externally thickened	8	8	25	25
	Rounded	41	41	62	62
	Tapered	10	10	12	12
	Bevelled	11	11	17	17
	Square	6	6	18	18
	Total	76	76	134	134
Texture	Fine	71	71	126	126
	Medium	7	7	10	10
	Coarse	1	1	1	1
	Total	79	79	137	137
Surface Treatment	Graphite burnished	15	15	56	56
	Polished	64	64	81	81
	Total	79	79	137	137
Colour	Black	18	18	59	59
	Red	7	7	7	7
	Grey-brown	44	44	57	57
	Grey	10	10	14	14
	Total	79	79	137	137
Residue (Soot)	Total	67	67	112	112
Decoration Motif	I.	1	1	3	3
	II.				
	III.	3	3	2	2
	IV.	2	2	4	4
	V	1	1		
	VI			1	1
	VII				
	VIII	2	2	1	1
	IX			1	1
	Total	9	9	12	12
Decoration Placement	Lip				
	Rim				
	Neck	1	1		
	Shoulder	8	8	12	12
	Total	9	9	12	12
Decoration Technique	Incisions	8	8	11	11
	Stabs				
	Punctuates				
	Incisions and impressions	1	1	1	1
	Total	9	9	12	12

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions
III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades

Test Pit 9

Attribute	Diagnostic	Layer 1	Layer 2	Total
Provenance		3	2	5
	Undiagnostic	6	9	15
	Total	9	11	20
Vessel Shape	4a.	2		2
	4b.			
	4c.			
	4d.	1		1
	4e.			
	4f.			
	4g.			
	4h.			
	4i.		2	2
	4j.			
	Total	3	2	5
Lip-Form	Externally thickened	1		1
	Rounded	1	1	2
	Tapered			
	Bevelled	1		1
	Square		1	1
	Total	3	2	5
Texture	Fine	3	1	4
	Medium		1	1
	Coarse			
	Total	3	2	5
Surface Treatment	Graphite burnished	1		1
	Polished	2	2	4
	Total	3	2	5
Colour	Black	1		1
	Red		1	1
	Grey-brown	1	1	2
	Grey	1		1
	Total	3		
Residue (Soot)	Total	3	2	5
Decoration Motif	I.			
	II.			
	III.			
	IV.			
	V			
	VI			
	VII			
	VIII			
	IX			
	Total			
Decoration Placement	Lip			
	Rim			
	Neck			
	Shoulder			
	Total			
Decoration Technique	Incisions			
	Stabs			
	Punctuates			
	Incisions and impressions			
	Total			

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions
III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades

Test Pit 10

Attribute	Diagnostic	Layer 1	Layer 2	Total
Provenance		2	3	5
	Undiagnostic	222	21	243
	Total	224	24	248
Vessel Shape	4a.	1		1
	4b.		1	1
	4c.		1	1
	4d.			
	4e.			
	4f.	1	1	2
	4g.			
	4h.			
	4i.			
	4j.			
	Total	2	3	5
Lip-Form	Externally thickened	1	1	2
	Rounded			
	Tapered			
	Bevelled	1	1	2
	Square		1	1
	Total	2	3	5
Texture	Fine	2	3	5
	Medium			
	Coarse			
	Total	2	3	5
Surface Treatment	Graphite burnished	1	1	2
	Polished	1	2	3
	Total	2	3	5
Colour	Black	1	1	2
	Red			
	Grey-brown	1	2	3
	Grey			
	Total	2	3	5
Residue (Soot)	Total	2	2	4
Decoration Motif	I.	2	3	5
	II.	222	21	243
	III.	224	24	248
	IV.	1		1
	V		1	1
	VI		1	1
	VII			
	VIII			
	IX	1	1	2
	Total			
Decoration Placement	Lip			
	Rim			
	Neck			
	Shoulder	2	3	5
	Total	1	1	2
Decoration Technique	Incisions			
	Stabs			
	Punctuates	1	1	2
	Incisions and impressions		1	1
	Total	2	3	5

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions
III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades

Test Pit 11

Attribute	Diagnostic	Layer 1	Layer 2	Total
Provenance		5	7	12
	Undiagnostic	34	54	88
	Total	39	61	100
Vessel Shape	4a.			
	4b.	2	3	5
	4c.	1	3	4
	4d.	2	1	3
	4e.			
	4f.			
	4g.			
	4h.			
	4i.			
	4j.			
	Total	5	7	13
Lip-Form	Externally thickened			
	Rounded	3	7	13
	Tapered	1		1
	Bevelled			
	Square	1		1
	Total	5	7	12
Texture	Fine	3	7	10
	Medium	1		1
	Coarse	1		1
	Total	5	7	12
Surface Treatment	Graphite burnished	1	3	4
	Polished	4	4	8
	Total	5	7	12
Colour	Black	1	4	5
	Red			
	Grey-brown	4	1	5
	Grey		2	2
	Total	5	7	12
Residue (Soot)	Total	5	7	12
Decoration Motif	I.	3	5	8
	II.			
	III.			
	IV.			
	V			
	VI			
	VII			
	VIII			
	IX			
	Total	3	5	8
Decoration Placement	Lip			
	Rim			
	Neck			
	Shoulder	3	5	8
	Total	3	5	8
Decoration Technique	Incisions	3	5	8
	Stabs			
	Punctuates			
	Incisions and impressions			
	Total	3	5	8

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions
III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades

Test Pit 12

Attribute	Diagnostic	Layer 1	Layer 2	Total
Provenance		18	2	20
	Undiagnostic	50	17	67
	Total	68	19	87
Vessel Shape	4a.	13	2	15
	4b.			
	4c.	2		2
	4d.	1		1
	4e.			
	4f.	1		1
	4g.			
	4h.	1		1
	4i.			
	4j.			
	Total	18	2	20
Lip-Form	Externally thickened	3	1	4
	Rounded	12	1	13
	Tapered	2		2
	Bevelled			
	Square	1		1
	Total	18	2	20
Texture	Fine	7	1	8
	Medium	11	1	12
	Coarse			
	Total	18	2	20
Surface Treatment	Graphite burnished		1	1
	Polished	18	1	19
	Total	18	2	20
Colour	Black	11	1	12
	Red	2		2
	Grey-brown	1	1	2
	Grey	4		4
	Total	18	2	20
Residue (Soot)	Total	14	1	15
Decoration Motif	I.	18	2	20
	II.	50	17	67
	III.	68	19	87
	IV.	13	2	15
	V			
	VI	2		2
	VII	1		1
	VIII			
	IX	1		1
	Total			
Decoration Placement	Lip	1		1
	Rim			
	Neck			
	Shoulder	18	2	20
	Total	3	1	4
Decoration Technique	Incisions	12	1	13
	Stabs	2		2
	Punctuates			
	Incisions and impressions	1		1
	Total	18	2	20

Key:
1a = Tall necked pots with flared rims 1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims 2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims 3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims 4b = Constricted pots with simple rims
5 = Deep bowls 6= Hemispherical bowls
I = Diagonal incisions II = Alternating oblique incisions
III = fine line and broad line oblique incisions IV = Interlocking triangles
V = Punctates VI = Cross hatching
VII = Stabs VIII = Incisions and impressions IX = Arcades

Test Pit 13

Attribute	Diagnostic	Layer 1	Layer 2	Total
Provenance		13	58	71
	Undiagnostic	663	88	751
	Total	676	146	822
Vessel Shape	4a.	1	7	8
	4b.	2		2
	4c.	4	3	7
	4d.	3	1	4
	4e.		13	13
	4f.	1	21	22
	4g.		12	12
	4h.			
	4i.	2	1	3
	4j.			
	Total	13	58	71
Lip-Form	Externally thickened	4	18	22
	Rounded	6	16	22
	Tapered	2	15	17
	Bevelled	1	9	10
	Square			
	Total	13	58	71
Texture	Fine	13	31	44
	Medium		27	27
	Coarse			
	Total	13	58	71
Surface Treatment	Graphite burnished	4	23	27
	Polished	9	35	44
	Total	13	58	71
Colour	Black	3	20	23
	Red	2	11	13
	Grey-brown	7	26	33
	Grey	1	1	2
	Total	13	58	71
Residue (Soot)	Total	9	16	25
Decoration Motif	I.	1	1	2
	II.			
	III.			
	IV.			
	V			
	VI			
	VII			
	VIII			
	IX			
	Total	1	1	2
Decoration Placement	Lip			
	Rim			
	Neck			
	Shoulder	1	1	2
	Total	1	1	2
Decoration Technique	Incisions	1		1
	Stabs			
	Punctuates			
	Incisions and impressions		1	1
	Total	1	1	2

Key:
1a = Tall necked pots with flared rims   1b = Short-necked pots with thickened rolled and beaded rims
2a = Shouldered pots with thickened rims   2b = Shouldered pots with simple rims
3a = Neckless pots with thickened rims   3b = Neckless pots with simple rims
4a = Constricted pots with thickened rims   4b = Constricted pots with simple rims
5 = Deep bowls   6= Hemispherical bowls
I = Diagonal incisions   II = Alternating oblique incisions
III = fine line and broad line oblique incisions   IV = Interlocking triangles
V = Punctates   VI = Cross hatching
VII = Stabs   VIII = Incisions and impressions   IX = Arcades

Appendix 3: Inventory of glass beads recovered from the walled and unwalled areas of Chumnungwa

Bead ID	Provenance	Method of Manufacture	Shape	Size	Colour	Diaphaneity	Bead Series
	Walled Areas						
1	TP1L1	Drawn	Cylinder	Small	Green	Transparent-Translucent	MP
2	TP1L3	Drawn	Oblate	Medium	Green	Transparent-Translucent	GZ
3	TP2L1	Drawn	Oblate	Small	Turquoise-Green	Transparent-Translucent	GZ
4	TP2L2	Drawn	Oblate	Minute	Green	Transparent-Translucent	GZ
5	TP3L1	Drawn	Oblate	Medium	Yellow	Transparent-Translucent	GZ
6	TP3L1	Drawn	Oblate	Small	Turquoise-Green	Transparent-Translucent	GZ
7	TP4L1	Drawn	Oblate	Small	Turquoise-Green-Blue	Translucent	GZ
8	TP4L1	Drawn	Oblate	Medium	Black	Opaque	GZ
9	TP5L1	Drawn	Tube	Minute	Turquoise-Green-Blue	Translucent	GZ
10	TP5L2	Drawn	Cylinder	Minute	Green	Transparent-Translucent	GZ
11	TP6L1	Drawn	Oblate	Small	Green	Transparent-Translucent	GZ
12	TP6L2	Drawn	Oblate	Small	Yellow	Transparent-Translucent	GZ
13	TP6L3	Drawn	Oblate	Large	Turquoise-Green	Transparent	Khami
14	TP6L5	Drawn	Oblate	Minute	Turquoise-Green	Transparent	GZ
15	TP7L1	Drawn	Oblate	Small	Turquoise-Green	Transparent	GZ
16	TP7L1	Drawn	Oblate	Small	Blue	Translucent	GZ
17	TP7L1	Drawn	Oblate	Small	Brown-Red	Opaque	GZ
18	TP7L1	Drawn	Cylinder	Minute	Turquoise-Green	Transparent	GZ
19	TP7L1	Drawn	Cylinder	Minute	Black	Opaque	GZ
20	TP7L1	Drawn	Cylinder	Minute	Yellow	Transparent-Translucent	GZ
21	TP7L1	Drawn	Cylinder	Small	Turquoise-Green	Transparent-Translucent	GZ
22	TP7L1	Drawn	Oblate	Minute	Turquoise-Green	Transparent-Translucent	GZ
23	TP7L1	Drawn	Oblate	Minute	Yellow	Transparent	Khami
24	TP7L1	Drawn	Oblate	Medium	Turquoise-Green	Transparent-Translucent	GZ

25	TP7L1	Drawn	Cylinder	Medium	Yellow	Transparent-Translucent	Khami
26	TP7L1	Drawn	Oblate	Small	Yellow	Translucent	GZ
27	TP8L1	Drawn	Tube	Small	Turquoise-Green	Transparent-Translucent	GZ
28	TP8L1	Drawn	Tube	Small	Turquoise-Green	Transparent-Translucent	GZ
29	TP8L1	Moulded	Oblate	Large	Green	Transparent-Translucent	K2
30	TP8L1	Drawn	Cylinder	Small	Turquoise-Green	Transparent-Translucent	GZ
31	TP8L1	Drawn	Oblate	Small	Yellow	Transparent-Translucent	GZ
32	TP8L1	Drawn	Cylinder	Small	Turquoise-Green	Transparent-Translucent	GZ
33	TP8L1	Drawn	Cylinder	Small	Green	Transparent-Translucent	GZ
34	TP8L1	Drawn	Oblate	Small	Yellow	Transparent-Translucent	GZ
35	TP8L1	Drawn	Cylinder	Small	Yellow	Transparent-Translucent	GZ
36	TP8L1	Drawn	Oblate	Small	Yellow	Transparent-Translucent	GZ
37	TP8L1	Drawn	Oblate	Small	Green	Transparent-Translucent	GZ
38	TP8L1	Drawn	Cylinder	Small	Turquoise-Green	Transparent-Translucent	GZ
39	TP8L1	Drawn	Cylinder	Small	Turquoise-Green-Blue	Transparent-Translucent	GZ
40	TP8L1	Drawn	Cylinder	Small	Turquoise-Green-Blue	Transparent-Translucent	GZ
41	TP8L1	Drawn	Cylinder	Small	Yellow	Transparent-Translucent	GZ
42	TP8L1	Drawn	Oblate	Small	Turquoise-Green-Blue	Transparent-Translucent	GZ
43	TP8L1	Drawn	Oblate	Small	Turquoise-Green	Transparent-Translucent	GZ
44	TP8L1	Drawn	Oblate	Medium	Brown-Red	Opaque	Khami
45	TP8L1	Drawn	Oblate	Medium	Turquoise-Green	Transparent-Translucent	GZ
46	TP8L1	Drawn	Oblate	Small	Turquoise-Green	Transparent-Translucent	GZ
	Unwalled Areas						
47	TP9L1	Drawn	Oblate	Minute	Turquoise-Green	Transparent	GZ
48	TP9L1	Drawn	Oblate	Medium	Green	Transparent-Translucent	GZ
49	TP10L1	Drawn	Oblate	Small	Green	Transparent	GZ

50	TP10L2	Drawn	Oblate	Medium	Turquoise-Green	Transparent	GZ
51	TP11L1	Drawn	Oblate	Large	Green	Transparent-Translucent	Khami
52	TP11L1	Drawn	Tube	Small	Turquoise-Green-Blue	Translucent	GZ
53	TP11L2	Drawn	Cylinder	Minute	Turquoise-Green	Transparent	GZ
54	TP12L2	Drawn	Cylinder	Medium	Turquoise-Green	Transparent	GZ
55	TP13L1	Drawn	Oblate	Medium	Brown-Red	Opaque	GZ
56	TP13L1	Drawn	Cylinder	Minute	Turquoise-Green	Transparent	GZ
57	TP13L2	Drawn	Tube	Medium	Green	Transparent-Translucent	GZ
58	TP13L2	Drawn	Cylinder	Minute	Turquoise-Green-Blue	Transparent	GZ
59	TP13L2	Drawn	Oblate	Minute	Turquoise-Green	Transparent	GZ
60	TP13L1	Drawn	Cylinder	Minute	Turquoise-Green	Translucent	GZ

Key
TP = Test Pit   MP = Mapungubwe series   GZ = Zimbabwe series   K2 = K2 Indo Pacific series (garden rollers) Khami = Khami series

Appendix 4: Inventory of stone walling at Chumnungwa

Wall 1a

Wall 1b

Wall 1c

Wall 1d

Walls 2, 3a, and 3b

Walls 4b, and 5

Walls 6b, and 6c

Wall 7a and 7b

Walls 8a, and 9a

Wall 10

Wall 11

Wall 12

Wall 13

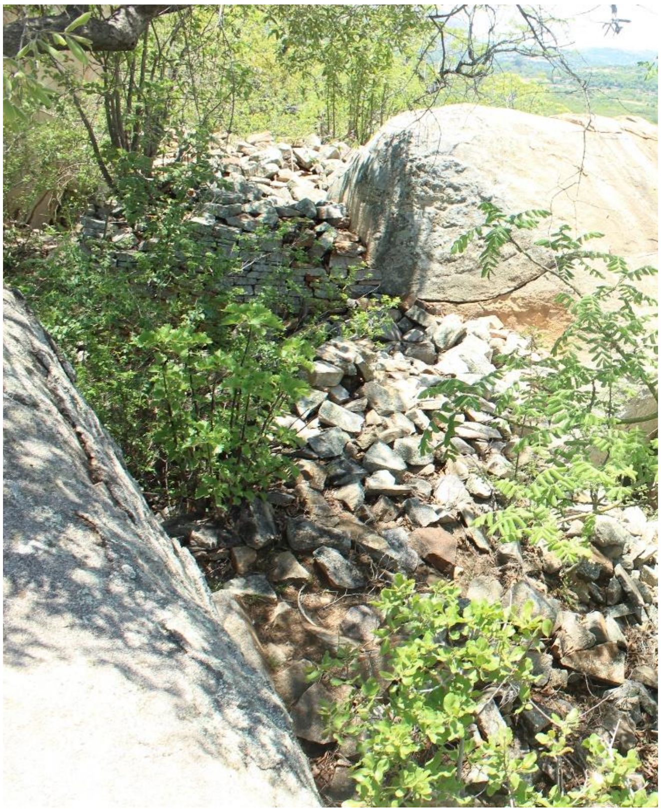
Wall 14

Wall 15

Wall 16

Wall 17a

Wall17b



Wall 18

Wall 19

Wall 20

Appendix 5: Inventory of archaeofauna recovered from the walled and unwalled areas of Chumnungwa

Test Pit 1

Non-Identifiable Fragments				
Attribute	Layer 1	Layer 2	Layer 3	Total
Enamel Fragments	1	5	2	8
Skull Fragments	4	3	2	9
Rib Fragments	5	2	1	8
Bone Flakes	12	8	7	27
Vertebral Fragments	1	6	2	9
Miscellaneous Skeletal Parts	2	1	1	4
Total	25	25	15	65

Identifiable Species												
Taxon (Common name)	Layer 1	Layer 2	Layer 3	Total Teeth			Total Skeletal Parts					
				D	U	P	P	C	PC	SCF	NISP	MNI
Bov. III wild	1	1				2					2	1
Bos taurus (Cattle)	2	2	1	1		2			2		5	3
Connochaetes (Wildebeest)			1			1					1	1
Syncerus caffer (Buffalo)			1	1							1	1
Hippotragus niger (Sable)			1		1						1	1
Total	3	3	4								10	7

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 2

Non-Identifiable Fragments			
Attribute	Layer 1	Layer 2	Total
Enamel Fragments	2	8	10
Skull Fragments	8	51	59
Rib Fragments	7	24	31
Bone Flakes	6	147	153
Vertebral Fragments	15	22	37
Miscellaneous Skeletal Parts	3	36	39
Total	41	288	329

Identifiable Species											
Taxon (Common name)	Layer 1	Layer 2	Total Teeth			Total Skeletal Parts					
			D	U	P	P	C	PC	SCF	NISP	MNI
Bov. II wild		1								1	1
Bos taurus (Cattle)		2		1	2					2	1

Syncerus caffer (Buffalo)	2		2	2	1
Total	2	3		5	3

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 3

Non-Identifiable Fragments		
Attribute	Layer 1	Total
Enamel Fragments		
Skull Fragments	2	2
Rib Fragments	3	3
Bone Flakes	26	26
Vertebral Fragments		
Miscellaneous Skeletal Parts	14	14
Total	45	45

Identifiable Species										
Taxon (Common name)	Layer 1	Total								
		Teeth				Skeletal Parts				
		D	U	P	P	C	PC	SCF	NISP	MNI
Stigmochelys pardallis (Tortoise)	3							3	3	1
Aespyceros meumpus (Impala)	1					1			1	1
Procavia capensis (Rock hyrax)	1					1			1	1
Total	5								5	3

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 4

Non-Identifiable Fragments		
Attribute	Layer 1	Total
Enamel Fragments	7	7
Skull Fragments	4	4
Rib Fragments		
Bone Flakes	17	17
Vertebral Fragments	11	11
Miscellaneous Skeletal Parts		
Total Unidentifiable	39	39

Identifiable Species										
Taxon (Common name)	Layer 1	Total								
		Teeth				Skeletal Parts				
		D	U	P	P	C	PC	SCF	NISP	MNI
Achatina sp. (Land snail)	2							2	2	1

Aespyceros meumpus (Impala)	1						1			1	1
Connochaetes (Wildebeest)	1				1					1	1
Taurotragus oryx (Eland)	1			1						1	1
Syncerus caffer (Buffalo)	2				2					2	1
Bos taurus (Cattle)	1				1					1	1
Total	8									8	6

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 5

Non-Identifiable Fragments			
Attribute	Layer 1	Layer 2	Total
Enamel Fragments	2		2
Skull Fragments	3		3
Rib Fragments		2	2
Bone Flakes	1	6	7
Vertebral Fragments		1	1
Miscellaneous Skeletal Parts	4		4
Total Unidentifiable	10	9	19

Identifiable Species											
Taxon (Common name)	Layer 1	Layer 2	Total								
			Teeth			Skeletal Parts					
			D	U	P	P	C	PC	SCF	NISP	MNI
Achatina sp. (Land snail)		3							3	3	1
Bov. II wild		1						1		1	1
Bos taurus (Cattle)	2			1	1					2	2
Total	2	4								6	4

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 6

Non-Identifiable Fragments							
Attribute	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Total
Enamel Fragments					6	4	10
Skull Fragments	3	2		3		1	9
Rib Fragments	6				1		7
Bone Flakes	9			21	28		58
Vertebral Fragments	8			4	3	2	17
Miscellaneous Skeletal Parts			4				4
Total Unidentifiable	26	2	4	28	38	7	105

Identifiable Species

Taxon (Common name)	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Teeth			Total Skeletal Parts					
							D	U	P	P	C	PC	SCF	NISP	MNI
Achatina sp. (Land snail)				3									3	3	1
Stigmochelys pardallis (Tortoise)		1				2							3	3	1
Bos taurus (Cattle)				1	1				2					2	1
Syncerus caffer (Buffalo)	1	1	1				1		2					3	1
*Hippotragus niger (*Sable)	1								1					1	1
Total	2	2	1	4	1	2								12	5

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 7

Non-Identifiable Fragments		
Attribute	Layer 1	Total
Enamel Fragments	16	16
Skull Fragments	1090	1090
Rib Fragments	215	215
Bone Flakes	1749	1749
Vertebral Fragments	580	580
Miscellaneous Skeletal Parts	74	74
Total Unidentifiable	3724	3724

Identifiable Species

Taxon (Common name)	Layer 1	Teeth			Total Skeletal Parts					
		D	U	P	P	C	PC	SCF	NISP	MNI
Aves (Bird)	1						1		1	1
Achatina sp. (Land snail)	14							14	14	2
Ovis/Capra (Sheep/Goat)	8			3			5		8	4
Connochaetes (Wildebeest)	1						1		1	1
Stigmochelys pardallis (Tortoise)	7							7	7	2
Kobus ellipsiprymnus (Waterbuck)	1						1		1	1
Bov. I wild	1						1		1	1
Bov. II wild	1						1		1	1
Bov. III wild	15						15		15	7
Bov. IV wild	1						1		1	1
Taurotragus oryx (Eland)	1						1		1	1
Syncerus caffer (Buffalo)	3			1			2		3	1
*Tragelaphus strepsiceros/*Kudu	4						4		4	2
Bos taurus (Cattle)	18		2	4			12		18	6
*Hippotragus niger (*Sable)	20			3			17		20	8

Total	96	96	39

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 8

Attribute	Non-Identifiable Fragments Layer 1	Total
Enamel Fragments	55	55
Skull Fragments	610	610
Rib Fragments	207	207
Bone Flakes	1045	1045
Vertebral Fragments	400	400
Miscellaneous Skeletal Parts	13	13
Total Unidentifiable	2330	2330

Identifiable Species

Taxon (Common name)	Layer 1	Teeth D	Teeth U	Teeth P	Skeletal Parts P	Skeletal Parts C	Skeletal Parts PC	SCF	Total NISP	Total MNI
Aves (Bird)	1						1		1	1
Achatina sp. (Land snail)	3							3	3	1
Ovis/Capra (Sheep/Goat)	5		1	1			3		5	3
Stigmochelys pardallis (Tortoise)	12							12	12	2
Procavia capensis (Rock hyrax)	3						3		3	2
Heterohyrax (Yellow-spotted rock hyrax)	2					1	1		2	1
Kobus ellipsiprymnus (waterbuck)	1						1		1	1
Bov. II wild	4						4		4	2
Bov. III wild	18			3			15		18	6
Bov. IV wild	1						1		1	1
Micromammal	16						16		16	2
Taurotragus oryx (Eland)	1						1		1	1
Syncerus caffer (Buffalo)	1						1		1	1
*Tragelaphus strepsiceros/*Kudu	7			1			6		7	3
Bos taurus (Cattle)	9		1	2			6		9	4
*Hippotragus niger (*Sable)	4						4		4	1
Total	87								88	32

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 9

Attribute	Non-Identifiable Fragments Layer 1	Layer 2	Total
Enamel Fragments	25	1	26
Skull Fragments		5	5
Rib Fragments	1		1
Bone Flakes	340	10	350
Vertebral Fragments	8	2	10
Miscellaneous Skeletal Parts		1	1

Total Unidentifiable	374	19	393

Identifiable Species

Taxon (Common name)	Layer 1	Layer 2	Teeth D	Teeth U	Teeth P	Skeletal Parts P	Skeletal Parts C	Skeletal Parts PC	Skeletal Parts SCF	Total NISP	Total MNI
Bov. III wild	3				1			2		3	2
Bos taurus (Cattle)	3	3		1	4			1		6	3
*Tragelaphus strepsiceros/*Kudu	1							1		1	1
Syncerus caffer (Buffalo)	1	1			1			1		2	1
Total	8	4								12	7

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 10

Non-Identifiable Fragments

Attribute	Layer 1	Layer 2	Layer 3	Total
Enamel Fragments		1		1
Skull Fragments		2	1	3
Rib Fragments	1	4		5
Bone Flakes	3		25	28
Vertebral Fragments	7	2		9
Miscellaneous Skeletal Parts				
Total Unidentifiable	11	9	26	46

Identifiable Species

Taxon (Common name)	Layer 1	Layer 2	Layer 3	Teeth D	Teeth U	Teeth P	Skeletal Parts P	Skeletal Parts C	Skeletal Parts PC	Skeletal Parts SCF	Total NISP	Total MNI
Bov. III wild		1							1		1	1
Bos taurus (Cattle)	1		1						2		2	1
Total	1	1	1								3	2

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 11

Non-Identifiable Fragments

Attribute	Layer 1	Layer 2	Total
Enamel Fragments		2	2
Skull Fragments	4	11	15
Rib Fragments	33	4	37
Bone Flakes	147	25	172
Vertebral Fragments	43	47	90
Miscellaneous Skeletal Parts			

Total Unidentifiable	227	89	316

Taxon (Common name)	Layer 1	Layer 2	Teeth D	Teeth U	Teeth P	P	Total Skeletal Parts C	PC	SCF	NISP	MNI
					Identifiable Species						
Orycteropus afer (Aardvark)	1						1			1	1
Ovis/Capra (Sheep/Goat)	1							1		1	1
Bov. II wild	1							1		1	1
Bov. III wild	3							3		3	1
Bos taurus (Cattle)	8	1		1	4		1	3		9	3
*Tragelaphus strepsiceros/*Kudu	1							1		1	1
Connochaetes (Wildebeest)	1				1					1	1
Syncerus caffer (Buffalo)	1				1					1	1
*Hippotragus niger (*Sable)	2							2		2	1
Total	19	1								20	11

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 12

Attribute	Layer 1	Layer 2	Layer 3	Layer 4	Total
			Non-Identifiable Fragments		
Enamel Fragments		2			2
Skull Fragments	4	6		16	26
Rib Fragments	4	36		6	46
Bone Flakes	109	63	3	114	289
Vertebral Fragments	23	99		32	154
Miscellaneous Skeletal Parts					
Total Unidentifiable	140	206	3	168	517

Taxon (Common name)	Layer 1	Layer 2	Layer 3	Layer 4	Teeth D	Teeth U	Teeth P	P	Total Skeletal Parts C	PC	SCF	NISP	MNI
						Identifiable Species							
Bov. II wild		1								1		1	1
Bov. III wild				1			1					1	1
Bos taurus (Cattle)	1		1	1			2			1		3	2
Raphicerus campestris (Steenbok)			1				1					1	1
Total	1	1	2	2								6	5

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Test Pit 13

Non-Identifiable Fragments			
Attribute	Layer 1	Layer 2	Total
Enamel Fragments	20	17	37
Skull Fragments	39	48	87
Rib Fragments	13	13	26
Bone Flakes	146	180	326
Vertebral Fragments	126	85	211
Miscellaneous Skeletal Parts			
Total Unidentifiable	344	343	687

Identifiable Species											
Taxon (Common name)	Layer 1	Layer 2	Teeth			Total Skeletal Parts					
			D	U	P	P	C	PC	SCF	NISP	MNI
Bov. II wild	1						1			1	1
Bov. III wild	2	1		1	1			1		3	1
Bos taurus (Cattle)	3	4		2	3			2		7	3
Syncerus caffer (Buffalo)	1	2		1	2					3	2
Aespyceros meumpus (Impala)	1							1		1	1
Procavia capensis (Rock hyrax)	1							1		1	1
Stigmochelys pardallis (Tortoise)		1							1	1	1
Total	9	7								17	10

D = Deciduous; U = Unerupted; P = Permanent; C = Cranial; PC = Postcranial; SCF = Shell/Carapace fragments

Appendix 6: Inventory of metals and metal working objects recovered from the walled and unwalled areas of Chumnungwa

Object Type	Provenance	Material	Quantity	Weight (g)	Production Stage
Ore	Hilltop Surface	Haematite	1	321	
Slag	Hilltop Surface	Oxide waste product	51	1536,07	
Crucible fragment	Hilltop Surface	Clay + Oxide waste product	2	28,9	Finished
Bronze ring	Hilltop Surface	Copper + Tin	1	3,8	Finished
Slag	Test Pit 1 Layer 1	Oxide waste product	12	110	
Slag	Test Pit 1 Layer 2	Oxide waste product	38	258	
Slag	Test Pit 1 Layer 3	Oxide waste product	13	110	
Bronze-wound bangle fragment	Test Pit 1 Layer 1	Copper + Tin	1	0,05	Finished
Cuprous wire	Test Pit 1 Layer 2	Copper	1	0,11	Finished
Cuprous wire	Test Pit 1 Layer 3	Copper	1	0,01	Finished
Cuprous-wound wire	Test Pit 1 Layer 3	Copper	1	0,2	Finished
Bronze ring	Test Pit 1 Layer 3	Copper + Tin	1	0,14	Finished
Slag	Test Pit 2 Layer 2	Oxide waste product	1	0,9	
Bronze wire	Test Pit 2 Layer 1	Copper + Tin	1	0,05	Finished
Iron bangle fragment with hollow core	Test Pit 2 Layer 1	Iron	14	2,19	Finished
Iron bangle fragment	Test Pit 2 Layer 2	Iron	1	0,08	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 2 Layer 2	Copper + Tin + Fibre	2	0,46	Finished
Bronze wire bangle fragment with hollow bone core	Test Pit 3 Layer 1	Copper + Tin + Bone	1	6,4	Finished
Cuprous-wound wire	Test Pit 3 Layer 1	Copper	1	0,32	Finished
Bronze bangle fragment with herringbone decoration	Test Pit 3 Layer 1	Copper + Tin	1	5,41	Finished
Iron arrowhead fragment	Test Pit 3 Layer 2	Iron	1	8	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 3 Layer 2	Copper + Tin + Fibre	1	1,47	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 3 Layer 1	Copper + Tin + Fibre	1	0,28	Finished
Slag	Test Pit 4 Layer 1	Oxide waste product	1	1,36	

Bronze-wound bangle fragment with fibre core	Test Pit 4 Layer 1	Copper + Tin + Fibre	1	0,05	Finished
Bronze wire	Test Pit 4 Layer 1	Copper + Tin	2	0,31	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 4 Layer 1	Copper + Tin + Fibre	2	0,22	Finished
Bronze-wound bangle fragment	Test Pit 4 Layer 1	Copper + Tin	1	0,59	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 4 Layer 1	Copper + Tin + Fibre	7	1,15	Finished
Tuyere fragment	Test Pit 4 Layer 1	Clay	1	32,8	Semi-finished
Slag	Test Pit 5 Layer 1	Oxide waste product	11	400	
Bronze-wound bangle fragment with fibre core	Test Pit 5 Layer 1	Copper + Tin + Fibre	2	0,52	Finished
Cuprous-wound wire	Test Pit 5 Layer 1	Copper	1	0,21	Finished
Bronze-wound bangle fragment	Test Pit 5 Layer 1	Copper + Tin	1	0,07	Finished
Bronze-wound bangle fragment	Test Pit 5 Layer 2	Copper + Tin	1	0,67	Finished
Bronze wire	Test Pit 5 Layer 2	Copper + Tin	1	0,12	Finished
Iron blade fragment	Test Pit 5 Layer 2	Iron	2	1,98	Finished
Iron bangle fragment with hollow core	Test Pit 5 Layer 2	Iron	1	0,21	Finished
Copper bangle fragment	Test Pit 5 Layer 2	Copper	1	0,08	Finished
Bronze-wound bangle fragment	Test Pit 5 Layer 2	Copper + Tin	6	0,24	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 5 Layer 2	Copper + Tin + Fibre	1	0,11	Finished
Crucible fragment	Test Pit 6 Layer 1	Clay + Oxide waste Product	1	5,69	Finished
Crucible fragment	Test Pit 6 Layer 3	Clay + Oxide waste Product	1	2,54	Finished
Iron bangle fragment with hollow core	Test Pit 6 Layer 3	Iron	17	2,39	Finished
Gold smelting crucible fragment	Test Pit 6 Layer 5	Clay + Oxide waste product + Gold	1	11,6	Finished
Iron bangle fragment with hollow core	Test Pit 6 Layer 5	Iron	11	3,63	Finished
Bronze wire	Test Pit 6 Layer 5	Copper + Tin	1	0,37	Finished
Slag	Test Pit 7 Layer 1	Oxide waste product	110	410,4	
Iron bangle fragment with hollow core	Test Pit 7 Layer 1	Iron	77	22,33	Finished

Bronze-wound bangle fragment with fibre core	Test Pit 7 Layer 1	Copper + Tin + Fibre	6	1,87	Finished
Bronze-wound bangle fragment	Test Pit 7 Layer 1	Copper + Tin	28	2,25	Finished
Bronze wire	Test Pit 7 Layer 1	Copper + Tin	5	0,67	Finished
Iron mbira key fragment	Test Pit 7 Layer 1	Iron	2	6,68	Finished
Iron blade fragment	Test Pit 7 Layer 1	Iron	4	1,93	Finished
Iron bead fragment	Test Pit 7 Layer 1	Iron	1	0,24	Finished
Slag	Test Pit 8 Layer 1	Oxide waste product	104	858,97	
Bronze-wound bangle fragment with fibre core	Test Pit 8 Layer 1	Copper + Tin + Fibre	35	13,8	Finished
Bronze wire	Test Pit 8 Layer 1	Copper + Tin	9	1,27	Finished
Bronze-wound bangle fragment	Test Pit 8 Layer 1	Copper + Tin	4	0,46	Finished
Iron hoe tang fragment	Test Pit 8 Layer 1	Iron	3	17,25	Finished
Iron bead fragment	Test Pit 8 Layer 1	Iron	10	8,66	Finished
Iron spear blade fragment	Test Pit 8 Layer 1	Iron	1	2,31	Finished
Iron bangle fragment with hollow core	Test Pit 8 Layer 1	Iron	40	21,62	Finished
Iron hoe head fragment	Test Pit 8 Layer 1	Iron	1	28,3	Finished
Iron scrapper fragment	Test Pit 8 Layer 1	Iron	1	17,9	Finished
Slag	Foothill Surface	Oxide waste product	87	455,6	
Crucible fragment	Foothill Surface	Clay + Oxide waste product	1	30,29	Finished
Copper ring	Foothill Surface	Copper	1	0,28	Finished
Copper plaited bangle fragment	Foothill Surface	Copper	1	0,57	Finished
Tuyere fragment	Test Pit 9 Layer 1	Clay + Oxide waste product	2	75,4	Finished
Bronze wire	Test Pit 9 Layer 1	Copper + Tin	2	0,65	Finished
Iron bangle fragment with hollow core	Test Pit 9 Layer 2	Iron	7	2,49	Finished
Bronze-wound bangle fragment	Test Pit 9 Layer 2	Copper + Tin	1	0,35	Finished
Iron mbira key fragment	Test Pit 9 Layer 2	Iron	1	5,81	Finished
Iron spear blade fragment	Test Pit 9 Layer 2	Iron	1	5,61	Finished

Slag	Test Pit 10 Layer 1	Oxide waste product	11	100,8	
Slag	Test Pit 11 Layer 2	Oxide waste product	8	0,8	
Slag	Test Pit 10 Layer 3	Oxide waste product	1	0,1	
Iron bangle fragment with hollow core	Test Pit 10 Layer 1	Iron	13	3,69	Finished
Bronze-wound bangle fragment	Test Pit 10 Layer 1	Copper + Tin	2	0,56	Finished
Copper wire	Test Pit 10 Layer 1	Copper	2	0,74	Finished
Bronze-wound bangle fragment	Test Pit 11 Layer 1	Copper + Tin	3	1,96	Finished
Bronze-wound bangle fragment	Test Pit 11 Layer 2	Copper + Tin	7	10,95	Finished
Iron bangle fragment	Test Pit 11 Layer 1	Iron	1	10,44	Finished
Bronze wire	Test Pit 11 Layer 1	Copper + Tin	17	1,1	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 11 Layer 1	Copper + Tin + Fibre	10	1,11	Finished
Iron bangle fragment with hollow core	Test Pit 11 Layer 1	Iron	1	0,97	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 11 Layer 2	Copper + Tin + Fibre	7	1,36	Finished
Iron ring	Test Pit 11 Layer 2	Iron	1	0,021	Finished
Cuprous wire	Test Pit 11 Layer 2	Copper	2	0,06	Finished
Iron arrowhead fragment	Test Pit 12 Layer 1	Iron	2	6,08	Finished
Bronze-wound bangle fragment	Test Pit 12 Layer 1	Copper + Tin	7	1,32	Finished
Iron bangle fragment with hollow core	Test Pit 12 Layer 2	Iron	1	0,6	Finished

Bronze-wound bangle fragment	Test Pit 12 Layer 2	Copper + Tin	6	1,97	Finished
Iron bangle fragment with hollow core	Test Pit 12 Layer 3	Iron	5	2,33	Finished
Iron bangle fragment with hollow core	Test Pit 12 Layer 4	Iron	4	0,89	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 12 Layer 4	Copper + Tin + Fibre	2	0,45	Finished
Bronze-wound bangle fragment with fibre core	Test Pit 13 Layer 1	Copper + Tin + Fibre	2	0,39	Finished
Crucible fragment	Test Pit 13 Layer 2	Clay + Oxide waste product	1	16,9	Finished
Bronze-wound bangle fragment	Test Pit 13 Layer 2	Copper + Tin	5	0,83	Finished
Iron bangle fragment with fibre core	Test Pit 13 Layer 2	Iron + Fibre	1	0,13	Finished
Iron bangle fragment with hollow core	Test Pit 13 Layer 2	Iron	3	0,97	Finished

Appendix 7: Inventory of shell beads recovered from the walled and unwalled areas of Chumnungwa

Test Pit 1

Provenance		Layer 1	Layer 2	Total
Bead Type	*Achatina*			
	Fresh Water Mussel			
	Ostrich Egg Shell	1	1	2
	Total	1	1	2
Bead Size	<7.4mm	1	1	2
	>7.4mm			
	Total	1	1	2
Surface Finish	Charred		1	1
	Uncharred	1		1
	Red Ochre			
	Total	1	1	2
Production Stage	Complete	1	1	2
	Incomplete			
	Total	1	1	2

Test Pit 2

Provenance		Layer 1	Layer 2	Total
Bead Type	*Achatina*			
	Fresh Water Mussel			
	Ostrich Egg Shell	1	1	2
	Total	1	1	2
Bead Size	<7.4mm		1	1
	>7.4mm	1		1
	Total	1	1	2
Surface Finish	Charred			
	Uncharred	1	1	2
	Red Ochre			
	Total	1	1	2
Production Stage	Complete		1	1
	Incomplete	1		1
	Total	1	1	2

Test Pit 3

Provenance		Layer 1	Total
Bead Type	*Achatina*		
	Fresh Water Mussel	2	2
	Ostrich Egg Shell		
	Total	2	2
Bead Size	<7.4mm	2	2
	>7.4mm		
	Total	2	2
Surface Finish	Charred		
	Uncharred	2	2
	Red Ochre		
	Total	2	2
Production Stage	Complete	2	2
	Incomplete		
	Total	2	2

Test Pit 4

Provenance		Layer 1	Total
Bead Type	*Achatina*		
	Fresh Water Mussel		
	Ostrich Egg Shell	2	2
	Total	2	2
Bead Size	<7.4mm	1	1
	>7.4mm	1	1
	Total	2	2
Surface Finish	Charred	1	1
	Uncharred	1	1
	Red Ochre		
	Total	2	2
Production Stage	Complete	1	1
	Incomplete	1	1
	Total	2	2

Test Pit 5

Provenance		Layer 1	Layer 2	Total
Bead Type	*Achatina*			
	Fresh Water Mussel			
	Ostrich Egg Shell	1		1
	Total	1		1
Bead Size	<7.4mm	1		1
	>7.4mm			
	Total	1		1
Surface Finish	Charred	1		1
	Uncharred			
	Red Ochre			
	Total	1		1
Production Stage	Complete	1		1
	Incomplete			
	Total	1		1

Test Pit 6

Provenance		Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Total
Bead Type	*Achatina*	1					1
	Fresh Water Mussel						
	Ostrich Egg Shell			1		1	2
	Total	1		1		1	3
Bead Size	<7.4mm	1					1
	>7.4mm			1		1	2
	Total	1		1		1	3
Surface Finish	Charred						
	Uncharred	1		1		1	3
	Red Ochre						
	Total	1		1		1	3
Production Stage	Complete	1				1	2
	Incomplete			1			1
	Total	1		1		1	3

Test Pit 7

Provenance		Layer 1	Total
Bead Type	*Achatina*	2	2
	Fresh Water Mussel		
	Ostrich Egg Shell	2	2
	Total	4	4
Bead Size	<7.4mm	1	1
	>7.4mm	3	3
	Total	4	4
Surface Finish	Charred	1	1
	Uncharred	2	2
	Red Ochre	1	1
	Total	4	4
Production Stage	Complete	2	2
	Incomplete	2	2
	Total	4	4

Test Pit 8

Provenance		Layer 1	Total
Bead Type	*Achatina*	1	1
	Fresh Water Mussel		
	Ostrich Egg Shell	4	4
	Total	5	5
Bead Size	<7.4mm	2	2
	>7.4mm	3	3
	Total	5	5
Surface Finish	Charred	2	2
	Uncharred	2	2
	Red Ochre	1	1
	Total	5	5
Production Stage	Complete	3	3
	Incomplete	2	2
	Total	5	5

Test Pit 9

Provenance		Layer 1	Layer 2	Total
Bead Type	*Achatina*			
	Fresh Water Mussel			
	Ostrich Egg Shell	2	1	3
	Total	2	1	3
Bead Size	<7.4mm		1	1
	>7.4mm	2		2
	Total	2	1	3
Surface Finish	Charred	1		1
	Uncharred	1	1	2
	Red Ochre			
	Total	2	1	3
Production Stage	Complete	2		2
	Incomplete		1	1
	Total	2	1	3

Test Pit 10

	Provenance	Layer 1	Layer 2	Layer 3	Total
Bead Type	*Achatina*	1		1	2
	Fresh Water Mussel		1		1
	Ostrich Egg Shell	2			2
	Total	3	1	1	5
Bead Size	<7.4mm	1			1
	>7.4mm	2	1	1	4
	Total	3	1	1	5
Surface Finish	Charred	1			1
	Uncharred	2	1	1	4
	Red Ochre				
	Total	3	1	1	5
Production Stage	Complete	2	1	1	4
	Incomplete	1			1
	Total	3	1	1	5

Test Pit 11

	Provenance	Layer 1	Layer 2	Total
Bead Type	*Achatina*			
	Fresh Water Mussel		1	1
	Ostrich Egg Shell	2		2
	Total	2	1	3
Bead Size	<7.4mm	1	1	2
	>7.4mm	1		1
	Total	2	1	3
Surface Finish	Charred			
	Uncharred	2	1	3
	Red Ochre			
	Total	2	1	3
Production Stage	Complete	1	1	2
	Incomplete	1		1
	Total	2	1	3

Test Pit 12

	Provenance	Layer 1	Layer 2	Layer 3	Layer 4	Total
Bead Type	*Achatina*					
	Fresh Water Mussel	1				1
	Ostrich Egg Shell		2		1	3
	Total	1	2		1	4
Bead Size	<7.4mm	1	1		1	3
	>7.4mm		1			1
	Total	1	2		1	4
Surface Finish	Charred					
	Uncharred		2		1	3
	Red Ochre	1				1
	Total	1	2		1	4
Production Stage	Complete	1	1		1	3
	Incomplete		1			1
	Total	1	2		1	4

Test Pit 13

Provenance		Layer 1	Layer 2	Total
Bead Type	*Achatina*			
	Fresh Water Mussel	1		1
	Ostrich Egg Shell	1	1	2
	Total	2	1	3
Bead Size	<7.4mm	2	1	3
	>7.4mm			
	Total	2	1	3
Surface Finish	Charred			
	Uncharred	2	1	3
	Red Ochre			
	Total	2	1	3
Production Stage	Complete	2	1	3
	Incomplete			
	Total	2	1	3