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**ARCHAEOLOGY OF THE MFEKANE/DIFAQANE: LANDSCAPE
TRANSFORMATIONS IN POST 15TH CENTURY SOUTHERN
AFRICA**

**BY
WARREN R. PERRY**

**A dissertation submitted to the Graduate Faculty
in Anthropology in partial fulfillment of the
requirements for the degree of Doctor of
Philosophy, The City University of New York**

1996

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This manuscript has been read and accepted for the Graduate Faculty in Anthropology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

ARCHAEOLOGY OF THE MFECANE/DIFAQANE: LANDSCAPE TRANSFORMATIONS IN POST 15TH CENTURY SOUTHERN AFRICA

BY
WARREN R. PERRY

Advisor: Dr. James Moore

This dissertation investigates the Mfecane/Difaqane by examining the processes of class and state formation in the area of modern Natal in southeast Africa. The Mfecane/Difaqane refers to a particularly turbulent period in southern African history occurring during the early through mid-nineteenth century. According to the "settler model", this period was characterized by large-scale violence initiated by the Zulu. The "settler model" is significant because until recently there has been an almost uncritical acceptance of it and it has remained uninvestigated archaeologically.

I address this problem by reviewing the the various ways in which southern African historians have explained the

Mfecane/Difaqane. I describe the key issues in the model and their archaeological expectations. Site information collected from the archaeological literature and from my archaeological survey in Swaziland is analyzed.

My analyses show that the "settler model" is lacking along all archaeological predictions and therefore must be rejected.

ACKNOWLEDGMENTS

This dissertation is dedicated to my mother Juanita Fernandez, to Mphiwa Mbatha, and to my brother Chris. It results from the collaboration of many people over many years. I regret that everyone cannot be mentioned. In Africa I owe my greatest debt to Musi Khumalo, and Dumsani Sithebe, who befriended me and taught me about Africa and who shared their cultural expertise with me.

In the United States I thank my family who supported and encouraged me through the myriad obstacles challenging the dignity, sanity and life of African Americans here. I especially thank my wife Carmen Lopez-Perry, and my son Albizu whose sacrifices and love have allowed me to be away from home, and accepted when I was unavailable to them even when at home. I thank my sons Ronald, and Bruce, and my in-laws whose love and support I can never repay. The efforts of my dissertation committee are deeply appreciated. Special thanks to Bob Paynter whose contributions as mentor, colleague and brother are immeasurable.

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CHAPTER I

SOUTHERN AFRICA AND THE ARCHAEOLOGY OF IMPACT

Introduction: the Research Question

The formation of the Zulu state during the early nineteenth century in southeastern Africa was a moment of great political importance for the inhabitants of southern Africa. Explaining this momentous development figures prominently in the popular and professional histories of southern Africa. The period of social disruption, known as the Mfecane/Difagane, figures in any explanation of Zulu state formation. Moreover, most understandings of the social disruption and related state formation draw upon an underlying model, which I refer to as the Settler Model. The Settler Model is based on and seeks to explain information from documentary records.

In the following I submit the Settler Model to scrutiny based on considerations of the ideologies within which the Settler Model is embedded and on analyses of data from the archaeological record. My goal is to assess the adequacy of the Settler Model as an underpinning for the

study of social disruption and state formation in southern Africa. Problems with the Settler Model arising from its theoretical and empirical assessment point towards alternative lines of analysis deserving greater attention in future reserach.

The Settler Model and Its Problems

The Settler Model depicts Zulu state formation as an indigenous internal development which had cataclysmic results for southern Africans. The Zulu are said to have terrorized, pillaged and plundered their neighbors to acquire cattle, political subordinates and land to expand and consolidate their state. The explanatory events in this model are the so-called Mfecane (the crushing) and Difaqane (the scattering). These are claimed to be a common Xhosa term and a Sotho-Tswana version of the Xhosa term respectively. Mfecane/Difaqane theorists present a teleological model of an internally generated African revolution involving intense, large-scale internecine warfare; tremendous loss of life; incessant livestock raiding; famine; deprivations; forced extensive migrations; and conquests from 1818 to the 1830s. This period is

characterized by the consolidation and expansion of the Zulu and Xhosa states and the emergence of many other centralized African military polities within southeast Africa. Some of these polities (e.g., the Zulu, Xhosa and Pedi) are infamous in European history for their resistance to colonial expansion and their "warlike tendencies".

The implication is that this series of cataclysmic, black-on-black violent chain reactions was self-inflicted, initiated by Shaka and the Zulu state whose attacks on neighboring African polities had near-genocidal effects. The consequences of this chaos were far-reaching, as migrations into the interior by attacking splinter groups from coastal communities resulted in countless refugees and the flight of various groups further inland. This violence created dislocated African communities over large areas, along with vast depopulated "no-man's lands" and thousands of refugees seeking "asylum" among European colonists. For their part, Europeans could only stand by helplessly and watch until they were obliged to restore order (Afigbo et al. 1986; Bohannan and Curtin 1988; Denoon and Nyeko 1986; Omer-Cooper 1966, 1988; Shillington 1987; see Cobbing 1988 who challenges the received wisdom).

The dynamics of these momentuous changes are attributed to the Zulu in the Settler model. Only the proponents of external trade models imply any significance to European actions. For them, the ivory trade at Delagoa Bay is important but secondary to Zulu state formation. A recurring theme suggested, although not necessarily explicitly expressed, by the external trade studies is the importance of a south African political economy, imposed and maintained by force and resulting in the local and global transformation of social relations seen, for example, in the complex relationship between European colonial penetration, and the Mfecane/Difaqane.

This latter position is more consistent with recent research on any colonial situation. Much of this work concludes that any analysis of sociocultural transformation under conditions of peripheralization-colonialization must recognize that the social formations involved were not and are not autonomous bounded entities, but rather interdependent segments of a larger system (Wolf 1982; Paynter 1982, 43). This would suggest that both European and African interaction was wide-ranging, affecting the local, regional and national levels. The interactions were

of varying intensities and complexities and had profound effects upon global transformations.

Given the regional scale of the Settler Model and suggestions that alternatives would encompass much larger areas my method needs to be geographically broad enough to consider if the Zulucentric scale of the Settler Model is adequate. Zululand (see figure 1) is a dynamic geographical and political space. The Zululand discussed herein includes the traditional area north of the Tugela and Mnzinyati Rivers, to the east of the upper catchment of the White and Black Mfolozi, Mnzinyati and Phongola Rivers and to the south of the Phongola River in the modern province of Natal (Hall 1981, 25).

To evaluate the localness of the Settler Model other areas of southeastern Africa will be studied, as well. The South African provinces of the Transvaal, Natal, the Free State, and the eastern Cape east of the Orange-Vaal confluence, and south to the Sundays River are included. Archaeological materials from Swaziland, Lesotho, and southern Mozambique are also included (see figure 2).

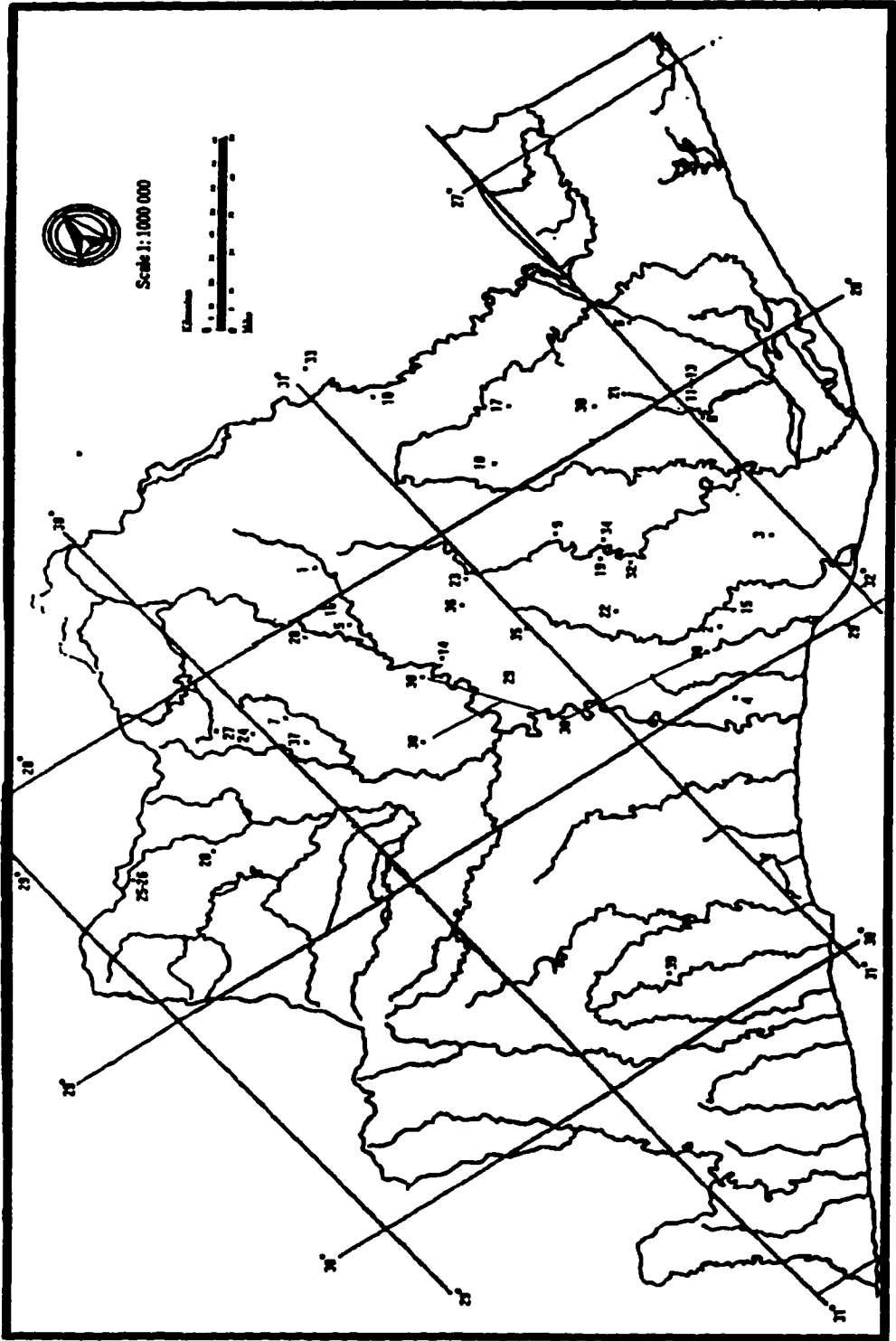


Fig 1. Map of Zululand with sites used in the analyses

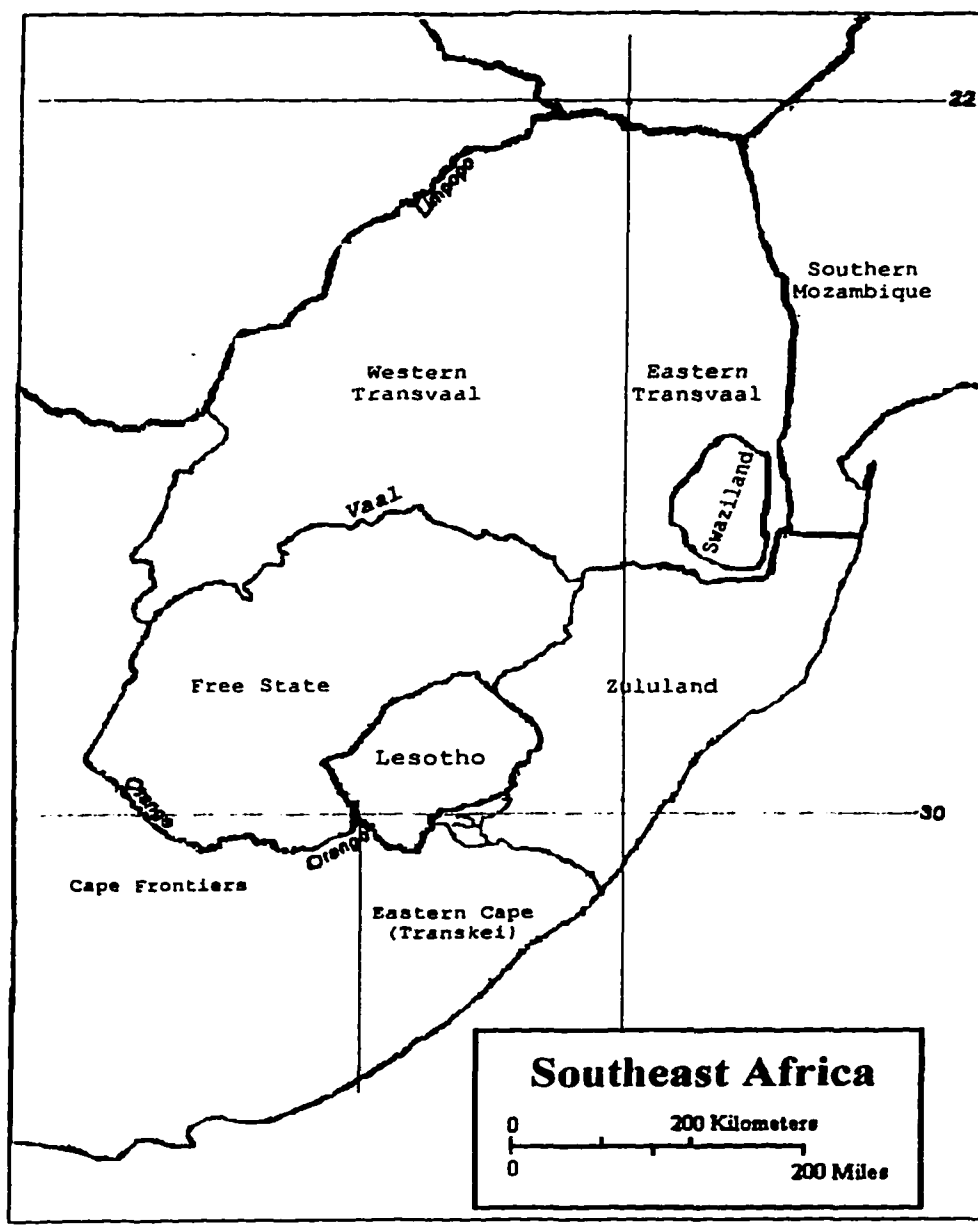


Fig 2. Map of Zululand and other areas used in the analyses within the context of southern Africa.

Middle-Range Theory: Archaeological Data and the Documentary Record

In confronting a model drawn from documentary records with archaeological data I am dealing with a set of methodological issues familiar to the field of historical archaeology, usually glossed with the phrase Middle-Range theory. Leone and others (Leone and Crosby 1987; Leone and Potter 1988a, 1988b) have argued that for historical archaeology Middle-Range theory involves forging a more productive and meaningful relationship between the documentary and archaeological records by generating a methodology sympathetic to the experiences of others.

These authors criticize archaeologists concerned with the later historical periods who link archaeological data and documentary materials as dependent data sets in which the written and/or oral record is generally checked against the "ground truth" of the archaeological record. Leone and Potter/Crosby argue that both types of "facts" are generated by different people, generally of different classes, races, times and genders and often within a conflictual context rendering them necessarily "epistemologically distinct" (Leone and Potter 1988b, 14).

Consequently a more broadly applicable method must assume the independence of each line of evidence. This enables a dialectical relationship between archaeological and documentary materials with each data set extending our information about the other as well as our knowledge of the past (Leone and Potter 1988b).

Middle-range theory involves the construction of models from the documentary record that specify relationships between people's activities, objects and cultural landscapes and arranges them against archaeological data to generate expectations and identify any disjunction (Leone and Crosby 1987, 398; Leone and Potter 1988b, 13). These "ambiguities" produced by the discrepancy between the archaeological and documentary records are the most critical elements in this method. They can be used to formulate hypotheses accounting for the particular documentary and material records. Furthermore, these unexpected deviations can be used to construct questions regarding the new contrastive case to direct future research strategies. In this way the archaeological record can now contribute to recovering the character of each particular historical case and deriving a new understanding of cultural domination and

resistance. This can be used to enhance theoretical knowledge by facilitating the search for the conscious social agency of marginalized individuals and groups attempting to resist domination (Leone and Crosby 1987, 409).

All historical sources, oral texts and written documents alike, were created to communicate a special kind of understanding, filtered through various conscious and unconscious European and African categories. They are thus psychological accounts revealing useful insights into the social and intellectual history of the writer/speaker. They are also ideologically charged by the social positioning of the writer/speaker in terms of race, class, gender and historical contexts and say as much about the writers and speakers and their time as they do about the past (Bonner 1983; Chanaiwa 1977, 31; Hall 1990, 4). Consequently we need a much wider range of sources than historical documents written by Europeans for their own consumption and appeasement, or oral traditions with similar motives of historically legitimizing a social group's primacy. Thus all sources must be read, listened to, and analyzed "looking behind the documents and memory in order to learn with

archaeological aid as much as we can about these earlier formations" (Wilmsen 1989, 64).

This is not to say, however, that archaeologists themselves are unbiased. In fact, all archaeological and historical research is politically situated, especially historical archaeology where the relationship to ideology is more conspicuous. Historical archaeology can play an important role in both sanctioning and exposing the current social and power relations in contemporary society (Blakey 1983; Hall 1984a, 1984b; Perry 1992). For instance, in southern Africa, African history is portrayed as white south African history, while other groups are represented in separate contexts, disarticulated from the exploitative relations with whites. Yet, the work of Schrire (1988) and Hall et al. (1990a) has shown that historical archaeology does not necessarily or only disclose and distinguish African societies from white ones, nor working class social life from that of elites, but can contribute a "domestic texture" absent in written documents by focusing on the roles played by material objects in the lives of ordinary people asserting dominance and resistance (Hall et al. 1990a, 84). To pursue these goals, we need to be able to

link the material objects, their archaeological contexts and their spatial relations to theoretical investigations of colonialization processes considering global-regional political economic relations centered within a specific historical setting and guided by assumptions of conscious human agency. This allows historical archaeology to play a crucial and necessary role in historical interpretations by narrowing the possibilities and furnishing alternative models (Hall 1990, 126).

In the next chapter I address the problem of the Mfecane/Difaqane by reviewing the historical literature for the various ways in which southern African historians have explained the Mfecane/Difaqane in the documentary record.

CHAPTER II

THE MFECANE/DIFAQANE PROBLEM FROM THE DOCUMENTARY RECORD

The standard story of the Mfecane/Difaqane

Much of the current historical research on southern Africa has focused on the pivotal role of the Mfecane/Difaqane and its consequent Zulu state formation as the most important events in later south African history (Denoon and Nyeko 1986; Omer-Cooper 1966, 1988; Shillington 1987). Most explanations of these events have been posed in terms of African internal economic dynamics, emphasizing catastrophic population pressure, ecological conditions favoring soil erosion, naturally increasing cattle herds depleting resources and overgrazing. Before moving to a consideration of each of these theoretical positions, I first present a sketch of the history of the Mfecane/ Difaqane period.

Mfecane/Difaqane theorists argue that late eighteenth-century political upheavals within local polities in the area that was to become the Zulu heartland (see fig 2) were the result of various internal conditions focusing upon anthropogenic environmental change. Thus, the earliest

nineteenth-century "destructive waves" of the Mfecane/Difaqane should evidence themselves in the Mfolozi-Phongola region.

Conflict between different groups in the Mfolozi-Phongola region over the need for grazing land resulted in livestock raiding by the more powerful polities, and extensive migrations by those less powerful. The confrontations also involved refugees attacking other polities in their path as they fled the Mfolozi-Phongola region. The scale of this devastation is said to have been heretofore unknown in southern Africa. This perpetual state of contention among the groups in this region culminated in the emergence of a hierarchy of centralized military polities, at the apex of which stood the Zulu state (Omer-Cooper 1966, 157).

The emergence, proliferation and dispersion of military polities drastically altered regional power relations, having significant consequences for the political economy of nineteenth-century southern Africa far beyond the margins of the Zulu state. The violent dislocation of, and incursions by African polities like the Zulu against other

agropastoral communities prompted further political and economic transformations in outlying peripheral communities.

This model posits conflict between different "ethnic" groups allowing comparison between documentary differentiation of these communities and the archaeological record. Historical accounts also provide a chronological framework for tracing the earliest reverberations from the Zulu kingdom under Shaka (c.1815) through the various migrations out of the heartland onto the borders ending with Zulu raids on the eastern Cape frontier (c.1828).

The chronological ordering proposed in this version, however, refers only to the times when fissioning militarized polities from the Zulu heartland, or from regions devastated by them, invaded a specific area.

Omer-Cooper argues that these chaotic conditions invited European intervention. European missionaries, traders and others living beyond the encroaching European frontiers were simply caught-up in the turmoil. He (1988, 66) explains that:

The previously thriving population of Natal was particularly disrupted. Many fled south. Others hid themselves in extensive areas of dense bush leaving most of the land apparently deserted

apart from the vicinity of Port Natal where a community of about five thousand lived under the protection [my emphasis] of the English traders.

Omer-Cooper implies that the African presence at Port Natal is a consequence of the Mfecane/Difaqane and that only after 1838 when the Boers defeated the Zulu of Digaane did the African populations of Natal, who had fled the Mthetwa-Zulu under Shaka, return.

Demographic Emphasis

Demographic arguments have emphasized varying kinds of population stress (e.g., Gluckman 1960; Omer-Cooper 1966, 1988; Service 1975; Shillington 1987; Stevenson 1968).

Gluckman (1960) was the first to suggest that population pressure led to increased competition for land, generating conflict that led to intra-African warfare.

Omer-Cooper's (1966) classic The Zulu Aftermath had the most effect on later African historiography by popularizing the concept Mfecane as a unique historical event that brought a violent, dramatic and sudden end to centuries of southern African social stagnation (Hall 1990; Webster 1991). His model was the first to give primary

attention to internal African dynamics. Like the colonialist historians who preceded him he upheld the "great man" theme, focusing on the character and innovations of Shaka as Mfecane/Difaqane initiator (Eldredge 1992; Etherington 1991b). His original formulation offered a detailed explanation of Zulu state emergence based on catastrophic population pressure and a lack of grazing land. Although Europeans' encroachment from the Cape is mentioned, their role is seen as secondary. By interpreting the warfare and population dislocation as independent African state formation, he did debunk the myth of impotent, African polities. Omer-Cooper (1988, 53) has since amended his original formulation, adding the effects of the ivory trade at Delagoa Bay.

Ecological Emphasis

Some explanations for Zulu state formation rest upon internal ecological processes rooted in transformations in the productive forces which gave rise to conditions of environmental deterioration that provoked expansion and conquest. It has been suggested that a lack of grazing land due to extensive overgrazing and a decline in land

productivity resulting from soil erosion, drought, disease, and increasing human and stock densities were major causes of the Zulu State (Guy 1980, 1982; Marks 1967).

Bonner (1983) looked at the rise and functioning of the nineteenth-century Swazi state with an emphasis on the interrelations of local and external forces but rejected ideas that whites were a unifying factor. He argued that access to European trade challenged the power and authority of the elders and facilitated political transformation. These changes came from two endogenous features of pre-seventeenth-century Swazi society which were intensified by the Mdlatule famine and drought.

The ethnohistorical and ethnographic documents suggest a severe drought from the 1790s to the beginning of the nineteenth century in Swaziland and southern Mozambique that resulted in famine. This drought occurred at Delagoa Bay in 1791-2 and reduced African populations' access to foodstuffs (rice and vegetables) from the interior (Deluis 1983, 18; Hedges 1978, 145-46). Other droughts ensued around the Bay in 1800, 1803, 1812 and 1816-18.

In the absence of any paleoecological evidence for supporting or rejecting the drought hypothesis, no positive

determination can be reached. I suggest that we should not neglect the role of political events in promoting famine.

Firstly, Bonner stated that "regional ecological complementarities" promoted earlier intra-regional trade and altered social relations within and between lineages and homesteads. Some lineages with access to particular resources exchangeable for cattle, such as iron, could accumulate cattle and subsequently lend surplus cattle, allowing penetration of the reproductive cycle of other lineages and resulting in the expansion and dominance of such kinship units. Thus, the increased demand for rare prestige goods like ivory and cattle broke the established social order (Bonner 1983, 13-14). This allowed some groups to circumvent the power of the lineage elders, generate a following, and dominate and extract tribute over a wide area.

Secondly, labor could not be effectively organized within the prevailing hierarchical lineage organization. Large-scale hunting and burning enhanced agropastoral production and required the co-ordination of larger groups than before. This political reorganization also provided a framework for military parties.

These factors combined to raise dominant lineages into positions of authority in larger scale, more diverse political structures. The resulting new polities were incorporated by an ideology in which kinship was dichotomized into aristocratic and commoner poles. Thus external trade and its exotic products subtly changed the inter-and intra-lineage relations. The elders' authority at the homesteads was dependent upon their control over access to cattle for bride-wealth payments. Elders also controlled the marriage of juniors by only granting permission prenuptially in exchange for labor services and surplus labor products until cattle was repaid. Trade threatened these homestead-lineage relations by enabling juniors access to cattle, marriage and the like. Consequently the elders of elite lineages sought to secure a monopoly of all intra-regional trade to maintain their privileged position and control over social reproduction and material production itself (Bonner 1983, 13).

Daniel (1973) proposed a geographical model of the environment as "perceived" by pre-Mfecane/Difaqane early nineteenth-century southeast African societies in southern Swaziland and northern Zululand, a region of the lower

Mfolozi valley which spawned the growing Mthetwa-Zulu power. This useful regional investigation revealed some actual locations of royal capitals and discovered general spatial and ecological relations between the sites as well. He illustrated that the powerful, emergent late nineteenth-century polities were based on similar configurations of natural resources. This suggested to Daniel that these polities were seeking to control the most productive combination of grazing lands and agricultural soils in zones with a low incidence of drought. He concluded that competition for control of these pasture lands was the cause of the rise of the Zulu state.

One major problem with Daniel's study as pointed out by Hall and Mack (1983, 182) was the use of Acocks' (1953) generalized vegetation maps. These static maps are based on twentieth-century vegetation patterns, and allow for neither local variation nor specific past land-use practices. Marker, a geographer, and Evers, an archaeologist, have examined soil erosion in the Lydenburg valley of the eastern Transvaal (1976, 163-4) and found an association between some later historical settlements and localized soil erosion. This association was attributed to

overpopulation, and changing land-use patterns. The authors note that during earlier periods of soil erosion, populations had simply moved nearby, but during 1826-27 these areas were abandoned completely.

Guy (1980, 1982) argued for a population explosion in what was to become the Zulu heartland, which caused increased cattle herding leading to extensive overgrazing and environmental degradation. Such "unscientific farming practices" combined with drought-engendered famines further intensified conflict giving rise to the Zulu state. Following Daniel, he reasoned that southern African agropastoral societies in the core area required access to a wide range of veld types. This need for greater environmental variety dictated settlement location and forced these polities to expand their territorial dominion.

Eldredge (1992, 26) pointed out that Guy's environmental degradation model neglects cultivation in his analysis of the agropastoral production process. Guy did mention the trade at Delagoa Bay but argued for its insignificance, since he saw no change in processes of production or distribution (Guy 1980, 102-19). In fact, Guy argued that despite capitalist penetration the Zulu kingdom

endured up until the Anglo-Boer War (Etherington 1991a, 10).

Vindicationist Arguments

In the United States some early African American scholars challenged the prevailing views of colonialist historiography, instead explaining the Zulu revolution as a fight to consolidate southern Africans and resist European penetration (Diop 1974, 169; DuBois 1969, 31; Clarke 1971, 35; Rodney 1981, 128-32). This explanation was generally ignored by south African and other European scholars until recently.

Chanaiwa (1980b), presented an African vindicationist argument that the Zulu state developed from an elaboration of existing conditions already extant among precontact Africans. He argued that the Zulu state formation was the result of embryonic, institutionalized class development and wealth concentration exacerbated by aristocratic/commoner antagonisms. Furthermore, he suggested that the Zulu adopted through active conscious human agency a secular subjective outlook on their own destiny by choosing military resistance to maintain autonomy over migration or refugeeism. This freed them from ethnic

and territorial boundaries, despair and inaction. Finally, the Zulu revolution offered every able bodied man an opportunity to acquire cattle, despite earlier disadvantages of birth, rank, class and political power.

External Trade

Several Africanist historians have carefully tried to relate extra-continental factors to internal ones by focusing on the historical conditions underlying these transitions. Wilson (Wilson and Thompson 1969-1971) was the first to suggest this idea but models focusing on trade for southern Africa were pioneered by Smith (1969) and subsequently refined by others, most of whom related the ivory trade at Delagoa Bay to the rise of the Zulu state (e.g., Carlson 1984; Hedges 1978; Slater 1976). Still others examined the contraction of this trade to the rise of later states like that of the nineteenth-century Pedi (Delius 1983), the Swazi (Bonner 1980, 1983), and the Sotho (Legassick 1969). Essentially, the trade proponents argue that inter-European and intra-African political and economic conflicts over control of this trade resulted in indigenous transitions in African sociocultural institutions. Specifi-

cally, trade intensified class conflict and maneuvering, becoming an exclusive prerogative of the elite for distribution of rare items to other elites, favorite retainers, and other members within the prestige systems to generate aristocratic wealth accumulation and power.

Smith (1969) examined the role of the ivory trade in class formation and wealth accumulation from a European perspective. He hypothesized that the principal factor in the rise of the Zulu state was the commercial competition to monopolize the ivory trade with European and Indian merchants at Delagoa Bay that caused rivalries among several southeast African polities within the Zulu core area. He used published sources on European commercial activity to demonstrate that the main export at Delagoa Bay was ivory, and that as this trade increased the Ndwandwe, Ngwane, and Mthetwa-Zulu ruling groups and later the Zulu used imported exotic items to accumulate wealth and power.

Slater (1976) recognized the significant role of the amabutho¹ or age-regiment system in transforming African

¹ This term refers to age-grades which were initially local institutions cross-cutting kin organization and initiating men and women into adulthood through circumcision. Since male age-grades served to provide hunters for

society. He argued that the Zulu state resulted from structural changes precipitated by its reorganization through the institutionalization of the amabutho. This militarization was no longer just defensive; it became a means to recruit and support armies and to generate state wealth through captive-and-cattle raiding and accumulation. The contradiction lay in the fact that sustained raiding induced counter-attacks, making defense a priority. The need for defense led to nucleated populations and political concentration (Eldredge 1992, 31). Slater proposes that the expansion of the ivory trade in the Delagoa Bay region led to an increase in commodity production within those African polities involved in trade, and inevitably led to internal political conflicts as elites attempted to broaden their control over local production and commercial relations.

Hedges (1978) looked at the ivory trade from an African perspective in terms of the development and transformation of African political and economic institutional structures that translated trade items into

royal hunting parties they had the potential to function politically as coercive institutions by which the aristocracy could obtain war captives, animal skins and ivory (Hedges 1978).

power. Hedges assumed suitable economic conditions and sufficient political power to control trade routes initially and maintained the view of bounded political units. Nonetheless, he recognized the political functions of kinship institutions which permitted him to identify the potential for incorporated groups to manipulate, create and rearrange their dominant lineages' traditions of origin so as to claim a common origin justifying new political relations.

Hedges proposed a two-period expansion of trade at Delagoa Bay. During the 1750s-80s ivory imported from south of the Bay was accompanied by geographical expansion of centralized polities in the Delagoa Bay-Thukela region. During the 1780-90s the ivory trade collapsed and cattle, destined for American whalers at the Bay, also coming from the south, replaced ivory as the major trade item. Although both products were important for southern African polities, ivory was a "prestige" item, acquired at least initially as a byproduct of hunting, whose circulation was dominated and controlled by elites. In contrast, cattle expropriation had devastating economic and social effects on both elites and

commoners and hence on southern African polities and culture in general.

The transition from ivory to cattle export would have produced lower transport costs, since unlike ivory which had to be carried overland by human labor power (Thorbahn 1984), cattle could transport themselves. Problems still existed however, like piracy, disease, and storage, all of which led to the need for guarding and protection. Restrictions in access to cattle had detrimental effects on all African households, especially those of commoners. Hence, cattle exports caused a severe drain on local economies and resulted in African military institutions that functioned as cattle-raiding vehicles and wars for the acquisition and protection of cattle and control of grazing lands, further necessitating effective sociopolitical organization. Thus Hedges concludes that this competition between African polities was the crucial factor in the emergence of the Zulu state.

Eldredge (1992) presented a synthetic explanation of the Mfecane/Difaqane involving factors governed both by the physical environment and by Delagoa Bay trade. She argued that an environmental crisis, presumably a drought,

initiated a scarcity of food resources which resulted in famine and increased competition over productive resources. Groups with locational advantage had greater access to food resources and were differentially empowered.

Furthermore, as local and regional ivory trade grew, elephant herds declined, reducing ivory exports. Since the ivory trade had not promoted a surplus based on agricultural intensification, local and regional production could no longer sustain continual surplus extraction. The need to increase cultivation demanded more labor; women were especially valued as they provided essential agricultural labor as well as offspring for social reproduction. This situation provoked conflict and competition over access to productive land and people. Sharper elite competition for these diminishing resources led to violent struggles for dominance and survival (Eldredge 1992, 29).

The elite of those polities able to secure agropastoral productive lands could now have better access to and control of high-status imported commodities, surplus labor and food resources. This combination of elements promoted the political consolidation of elite power, and economic growth at the expense of those groups less well

situated. Peripheral communities were differentially incorporated into the lower hierarchical levels of the dominant polities, accelerating social inequality within and between local polities. It is within this sociopolitical and ecological setting that "strong leaders" like Shaka, "who ruled with terror" acquired a following and incorporated neighboring polities (Eldredge 1992, 29).

Of the trade proponents considered so far, most present materialist explanations of state formation in southeastern Africa, all emphasize African-European interaction, and all venture beyond explanations of African-induced internal warfare. Most authors see trade as facilitating the restructuring of the productive relationships and the transformation of sociopolitical institutions within and between the polities of the Delagoa Bay-Thukela region. One result of this reorganization was an increase in elite power and authority, which according to some authors differentially subjugated conquered people rather than fully incorporating them. Finally, all explanations are couched within an historical rather than a strictly ecological, demographic or evolutionary context while seeking to address the question of why internal and

external political relations were ripe for change at this particular time and place.

Cobbing's Reanalysis

It was Cobbing's (1988) inspiring initial reformulation of the Mfecane/Difaqane with its powerful new insights, that has precipitated the destruction of the Zulucentric Mfecane/Difaqane myth, transcending the old paradigm and igniting a serious rethinking of early-nineteenth-century southern African history. He presented a provocative and enlightening argument that debunks many of the assumptions of the Mfecane/Difaqane theorists. It raises a host of questions and issues extending from the origin and identity of established south African terminology to the magnitude and role of imperial European agency in the form of surrogates like missionaries, colonial officials, traders, early colonialist historians and the Griqua and their relationships to the slave trade at Delagoa Bay and the Cape. His rigorous inquiry is supplemented by an expansive, meticulous analysis of the fundamental conflicts and contradictions inherent in colonial struggles among all

members of the capitalist social formation in nineteenth-century southern Africa.

Cobbing's scope is expansive submitting that Zulu military conquests were but one manifestation of an emergent capitalist global political economy impinging on southern African long before the emergence of the Zulu state. He seeks to illuminate African-European settler interactions by implicating African and European polities involved in slaving to supply labor for external plantations and even more desperately needed local labor for internal colonization through trading and raiding campaigns representative of mercantile capitalism that radiate far beyond the highveld or Zululand. Therefore the notion of an internal revolution solely in terms of Zulu agency is both myopic and inaccurate because organized military regiments and innovations as well as continual exchange relations between southeast African polities and Europeans preceded and persisted throughout the rein of Shaka and Zulu state emergence (Cobbing 1988:485).

Cobbing contends that the Mfecane/Difaqane is linked to disruptive, destabilizing European forces emanating from the Cape, southern Mozambique and other

European colonies in southern Africa, which were in turn inextricably bound to the developing global capitalist social formation (Etherington 1991a:3 and 12). This scope and scale have heretofore been purposely ignored by a settler version of south African history that considered the simultaneous events of the Great Trek and the alledged African self-destruction of the Mfecane/ Difaqane as isolated occurrences.

Cobbing focuses on the role of slave raiding in precipitating internal conflicts, and asserts that slaving was the most consequential determinant disrupting African societies in the Delagoa Bay and Cape areas altering demographics and social relations, inciting political instability and converting social reproduction and thus forcing a restructuring of African polities in the region. Furthermore, he insists that European farmers, traders and missionaries were in collusion and that their agents the Griqua and Korana were the principal sources of violence in the interior.

The work of Harries (1981) and Lovejoy (1983, 1989) although not attempting to describe the connection between the Mfecane/Difaqane and the slave trade, clearly

demonstrates that during the sixteenth century the external slave trade impacted heavily on southeast Africa. By the late seventeenth century the European colonial frontier and the slave trade expanded simultaneously, and by the eighteenth century a vibrant slave trade dominated commerce between Europeans and Africans (Cobbing 1988:496) and internal factors intensified slavery as the external trade contracted during the nineteenth century (Lovejoy 1989:390).

Cobbing concludes that the Mfecane/Difaqane fable is "a tenacious and still-evolving multiple historical creation of the white supremacist version of history" and a critical linchpin of apartheid propaganda legitimized in scholarship, media and more recently cinema (see Hamilton 1989). It also serves as multiply "alibi" removing any need for an explanation of the African past by ignoring and/or concealing massive external imperial agency, to authenticate white occupation of the land and ideology of separate development. Its explanations of the spatial distributions of white population movements augmented by the dearth of evidence for Zulu agency make very compelling grounds to repudiate the Mfecane/Difaqane myth as an explanation for the depopulation and destruction of the interior African

societies (Hamilton 1992:39). The concept of Mfecane/Difaqane is Zulucentric, ideologically "loaded", and historically erroneous and its ponderous apartied baggage renders it untenable as a neutral descriptive historical category, devoid of any analytical utility and hence cannot be revived and must be abandoned (Cobbing 1988:487 and 519).

Not surprisingly, such a strong critique has engendered considerable controversy. Much of it centers on the lack of records supporting an extensive slaving economy centered on Delagoa Bay (e.g., Eldredge 1992; Etherington 1991b; Hamilton 1992; Meintjes 1991). We must be aware that slaving was illegal, and therefore required the development and use of various euphemisms to cloak slaving activity. In addition slaving was an extremely profitable enterprise that could generate power and finances to maintain missions and increase converts while keeping the overseeing agencies at "home" ignorant, or at least apathetic and happy. In the final analysis this seems to be precisely the kind of case where an independent source of data, such as archaeological evidence, might help resolve the matter.

Summary

The historical discourse regarding the forces underlying the Mfecane/Difaqane has focused on the standard story, a Zulucentric version of African internal dynamics. Explanations have emphasized various anthropogenic environmental "causes" like ecological and demographic change. Vindicationist arguments from scholars of the African diaspora differed from their European counterparts in accentuating pride of Shaka's military accomplishments and some recognition of European agency. Trade advocates, with the exception of Cobbing, maintained Zulucentric explanations that recognized African-European interaction but emphasized African conflictual relations over European controlled commodities imported from Delagoa Bay.

Despite the variance in the range of debate over the settler model the major shape of the arguments remains clear. The Mfecane/Difaqane was precipitated by Zulu state formation and was the result of African internal dynamics. Even those who consider external interaction keep the variation minimal by not looking beyond Delagoa Bay. I have tried to show that there is only minor variation among explanations for the Mfecane/Difaqane and all of the

variance is still rooted in the standard settler model. In the next chapter I describe the key issues in the standard story to generate archaeological implications.

CHAPTER III

ARCHAEOLOGICAL CORRELATES OF THE SETTLER MODEL

This chapter addresses the problem of generating archaeological expectations for the standard story accounts by looking at ethnographic and ethnohistorical descriptions of the various African communities inhabiting the area affected by the Mfecane/Difaqane. Matching documentary and archaeological records is often difficult because historians have an interest in social relations and tend to treat material culture as background, only rarely describing it in detail needed for analysis. Therefore, to move to a comparison of these data sources, I have to translate, if you will, the historical accounts into archaeological expectations.

The goals of this chapter are: 1) Show that each of the different "explanations" of the Mfecane/Difaqane share a common set of assumptions about the nature of ethnic groups, their geography, and their history--in other words, the standard settler model of the Mfecane/Difaqane. 2) Present some of the archaeological correlates of the Settler Model

as a means to assess its adequacy against the archaeological data. The chapter concludes with a listing of the specific types of sites predicted by the model for pre- and post-Mfecane/Difaqane, their architectural and artifactual contents and their locations.

Ethnographic and Ethnohistorical Descriptions

The standard Settler Model of south African history espoused by Omer-Cooper and others is anchored in three assumptions regarding pre-European contact southern African people. The first of these anchors is the idea that south African society was composed of a series of relatively discrete ethnic groups that had their origin in the past and persisted into relatively recent times. The second assumption of the settler version of southern African history is that these ethnic groups were poorly articulated one to the other--that there was little systemic interaction between the groups that can be used to understand cultural transformation. The third is the Zulucentric focus discussed in the previous section, namely that these social relations were disrupted in the early nineteenth century by

the Mfecane/Difaqane when local conditions led the pre-Zulu ethnic group to become a predatory state.

It is within the context of the settler paradigm that the Mfecane/Difaqane proponents interpreted southern African history. A particularly key element is the so-called "Bantu Migration theory." This theory posits the relatively recent and rapid occupation of southern Africa by the migratory Bantu ancestors of the modern African people now inhabiting southern Africa (Huffman 1970; Phillipson 1990; see Diamond 1994 for a recent example of the uncritical acceptance of the Bantu migrations theory). This theory assumes that a new "race" of "Bantu" people, characterized by a common physical type, language, and a set of cultural traits including metallurgy, agriculture, distinctive pottery and animal husbandry arrived in southern Africa replacing or absorbing the earlier Ju/'hoansi (Khoisan) "race" (see David 1980 and Hall 1990 for attempts to debunk this theory). For instance, Omer-Cooper notes:

In South Africa the Bantu were relatively recent immigrants...it is unlikely that they were south of the Limpopo in any considerable numbers before the twelfth century A.D. at the earliest (Omer-Cooper 1966, 12).

Some of the evidence for this theory comes from the archaeological record. For example, since ceramics were part of the cultural traits associated with migrating Bantu, the apparent ceramic stasis of post-fifteenth-century, pre-Mfecane/Difagane southern Africa disclosed the spatial location of these ethnic groups.

As these later [pottery] forms have remained virtually unaltered until recent times, it seems almost certain that immigrants who brought them were ancestors of the present-day branches of the Bantu speaking peoples of South Africa (Omer-Cooper 1988, 8).

Other evidence comes from the documentary record.

For example, Omer-Cooper states:

Accounts of Portuguese sailors shipwrecked on the east coast, together with oral tradition, ...[suggest that] ...the Xhosa, vanguard of the Nguni group, were settled near the upper Umzimvuba by 1300 and possibly considerably earlier and that by 1593 they had reached as far south as the Umtata River... By the eighteenth century they had reached the Fish River and were beginning intensive settlement still further west when they encountered the first Boer farmers moving up the coast in search of grazing land (Omer-Cooper 1966, 13).

Hence, Mfecane/Difaqane theorists postulated certain pre-Mfecane/Difaqane ethnic group distributions, settlement and architectural types back onto the past. Consequently, ethnographic and ethnohistorical descriptions of the various African communities inhabiting the area affected by the Mfecane/Difaqane can be abstracted and presented in order to examine the hypothesized location and the archaeological correlates of these ethnic communities.

Many Africanist scholars have provided maps for different pre-Mfecane/Difaqane time periods (sixteenth through nineteenth centuries) indicating the distribution of the different ethnic groups in southern Africa (Bryant 1929 in Hall and Mack 1983, 167-8; Harinck 1980, 170; Hedges 1978, 10, 118, 136, 166, 171, 179; Legassick 1969, 123-5; Omer-Cooper 1966, 11, 26; Shillington 1987, 13 and 27). Almost all of these authors have, at least implicitly, followed the Bantu migrations and Mfecane/Difaqane paradigms.

The consensus is that there were three major groups of people in southern Africa during the last five-hundred years, two of whom, the "Nguni" and the Sotho-Tswana (Sotho and Tswana), belong to the southern "Bantu". The third major group, the Ju/'hoansi (Khoi-Khoi and San or Khoisan),

are felt to be the original inhabitants of southern Africa prior to the Bantu migrations. The traditional wisdom is that Nguni and Sotho-Tswana agropastoralism allowed a much more rapid population growth and relatively high population densities and encouraged a more complex sociopolitical organization than the pastroforaging Ju/'hoansi (Khoisan) groups they encountered. Culture change, as discussed in the previous chapter, came about in Zululand with the resultant development of an expansionist state which disrupted the social relations among these various ethnic groups.

Evaluating the Settler Model involves developing archaeological correlates for various presumed actions. I begin by discussing the characteristics of each of the presumed initial major ethnic groups prior to the changes wrought by the Mfecane/Difaqane. Then I consider features of southeastern polities expected under the Settler Model following the onset of Zulu state formation. This allows us to assess with archaeological material, whether isolated ethnic groups of the character presented in the standard model precede the the Mfecane/Difaqane and whether Zulu

state formation precedes the disruptions of the Mfecane/
Difaqane.

Pre-Mfecane/Difaqane Groups of Eastern Southern Africa
Nguni

Omer-Cooper (1988, 8) suggests that at contact the southern Nguni occupied the coastal lands between the Drakensberg and the Indian Ocean in and around the areas where the Mfecane/Difaqane was alledged to have originated.

The Zululand area and its pre-Mfecane/Difaqane inhabitants are described by Omer-Cooper:

Before...the emergence of the Zulu kingdom under Shaka, Zululand and Natal were the home of a large number of relatively small Nguni tribes (Omer-Cooper 1969, 208).

These populations were... virtually hemmed in between the mountains and the sea and had no outlet to the as yet unoccupied or sparsely inhabited lands to the south except by forcing a way through the numerous tribes of Natal (Omer-Cooper 1969, 213).

[They]...had been in occupation of most of the coastal corridor...for several centuries and the population in parts of the northern end of this corridor had been relatively dense from at least as early the seventeenth century (Omer-Cooper 1969, 208).

Omer-Cooper, like most disciples of the traditional wisdom, has followed Bryant's descriptions of the "Nguni" as an almost timeless homogeneous people in the past. In this context "Nguni" was/is an ethnic designation applied to all pre-Zulu, non-Ju/'hoansi (Khoisan), non-Sotho-Tswana peoples in southeast Africa. This notion has since been challenged by a number of authors (Hedges 1978, Appendix I, 253-57; Marks 1967, 1969; Wright and Hamilton 1985). Regardless of its origins, I will use this term since it has been incorporated into the settler model.

Settlement Pattern and Residence

At contact Nguni lived in dispersed isolated settlements on hill slopes with water, fuel, gardens, fields and pastures all within walking distance (Schapera 1967, 15). Mfecane/Difaqane theorists, using the "typical" Zulu homestead as a model, assume that all Nguni were characterized by similar overall architectural oppositions dubbed the "Bantu /Central Cattle Pattern" by Huffman (1982, 1984, 1986).

The "Bantu/Central Cattle Pattern" consists of settlement units spatially distinguished by:

- 1) A cattle enclosure at the center of every settlement that contained underground grain storage silos and served as a sacred burial ground for local male ancestors.
- 2) An outer arc of circular dwellings located near agricultural fields, with the principal dwellings of the homestead head at the highest elevation upslope of the central enclosure. The remaining dwellings in commoner homesteads were occupied by the extended family members. Elite homesteads were inhabited by wives arranged according to seniority and status on either side of the primary dwelling forming a semi-circle. To the left were lower status "left-hand" wives and to the right were higher status "right-hand" wives.
- 3) The interior spatial layout of the homesteads and the dwellings were also symbolized by rigid male-right/female-left divisions, usually oriented at right angles to a sacred-back/secular-front distinction (Kuper 1980, 1982; Kuper 1986). Homestead entrances were

usually oriented downhill facing east, on sloping ground directly opposite the entrance of the central cattle enclosure.

- 4) A men's court was in or adjacent to the central enclosure. This central zone between the dwellings and the central livestock enclosure formed the area for public meetings, court procedures, political discussions and ceremonies.

Sotho-Tswana

The migrations of the Sotho-Tswana into southern Africa and their subsequent dispersal throughout southern Africa are explained in the following manner:

The first [Sotho] migration may have entered Bechuanaland [modern Botswana] in the thirteenth or fourteenth century, and the ancestors of the present Tswana peoples were settled near their present habitat by about 1600 (Omer-Copper 1966, 14).

The origin of the Kgatla Kwena chiefdom clusters was the main historical development in the Sotho-Tswana area from the sixteenth to the late eighteenth century ...[and]...the expansion of these groups seems to have pushed some others into arid country on the fringes of cultivable land where they came into parti-

cularly close contact with surviving Khoisan groups (Omer-Cooper 1988, 16).

At European contact the Sotho-Tswana inhabited the interior plateau region and less well watered areas west of the Great Escarpment. There were a substantial number of eastern Sotho who, since at least the seventeenth century, populated portions of the eastern Transvaal (Meyer 1984, 224). Because of the scarcity of good grazing land in these areas, agriculture was emphasized over livestock herding until recently (Legassick 1969, 118). Today the Sotho-Tswana populate Bophuthatswana, the Free State and Lesotho. They are also scattered throughout Swaziland, Zululand and the northern and eastern Transvaal among the Nguni.

Settlement Pattern and Residence

At European contact the Tswana lived in large centralized towns surrounded by several miles of agricultural fields and extensive grazing lands with cattle often kept at outposts located away from the towns (Shillington 1987, 15). The Sotho lived in large compact villages larger than Nguni homesteads but smaller than Tswana towns although similarly structured (Omer-Copper 1988, 10).

Colonial Sotho-Tswana settlements, towns and village units typically ranged between 50-300 inhabitants (Schapera 1967). They were divided into wards or hamlets consisting of groups of patrilineally related families concentrated around the senior clan head's dwelling. The ward or hamlet was often in a single settlement but could also be scattered over the countryside (Legassick 1969, 99). Sotho-Tswana settlements surrounded a centrally located cattle enclosure. Although Sotho-Tswana ranked their wives, they did not organize left and right-hand houses spatially (Omer-Copper 1988, 12).

Ju/'hoansi (Khoisan)

The term Khoisan is a combination of the term San and the term Khoi-Khoi. Both these terms were used by Europeans to describe pastroforaging communities in southern Africa (for a thorough discussion of these terms see Lee 1979, 29-38; Wilmsen 1989, 24-26 regarding San and Elphick 1977, xxi-xxii considering Khoi). According to Lee (1979, 31 and 38, and 1993) the term Zhu/twasi or Ju/'hoansi ("real or genuine people") and the term Khoi ("the people") are the terms preferred by the people themselves. For our purposes, the term Ju/'hoansi will be used hereafter. Khoisan will

only be used in direct quotes from the Mfecane/Difagane theorists and when explaining something about the term itself or its constituents.

Omer-Cooper describes the Ju/'hoansi (San in this case) as:

...the most ancient of southern Africa's surviving peoples...[who]...were hunting and gathering people who practiced no agriculture and kept no domestic animals except dogs (Omer-Cooper 1988, 3).

In the settler model then, the Ju/'hoansi, unlike the agropastoral Nguni and Sotho-Tswana, are assumed to be gatherer-hunters with no cultivation. Documentary descriptions of Ju/'hoansi pastroforagers have most often focused upon the polar types Khoi and San, labeling these in terms of ethnicity. Omer-Cooper distinguishes between the Khoi and the San in terms of political organization, economy, environment, and ethnicity. For instance, Khoi polities were based on cattle while San "bands" were grounded in a gatherer-hunter economy. In describing ethnic differences he says:

In South Africa and Namibia the San coexisted with a related people known as the Khoi-Khoi,...The two peoples together constitute the group known as

the Khoi-san peoples. The origins of the Khoi...are still not known with certainty. It seems most probable that they began as a community of San who were in close contact with Bantu-speaking cattle keepers and adopted pastoralism from them (Omer-Cooper 1988, 5).

This can be compared to Shillington's (1987, 6) descriptions of the pastoral mode:

Compared with the San, the Khoi-khoi lived in larger, more settled communities...because their livestock provided them with a steady supply of food close at hand. Nevertheless it was still necessary for them to move settlement several times a year... between mountain, valley and coast.

Settlement Pattern and Residence

Historical and ethnographic descriptions of Ju/'hoansi have focused upon cave and rock paintings, and "stone age" artifact assemblages but have supplied few details of settlement distribution, architecture and the like. For example:

The San lived in simple shelters of branches or caves in the hillside, and lacked material possessions other than their bows and arrows. They entered into trading relationships with other peoples, exchanging animal skins and ostrich egg-shell beads for other goods, particularly iron for arrowheads....Like the San they [Khoi] did not engage in agriculture and apart from their animals their material

culture remained very basic. For clothing they had only cloaks...made from the skins of their cattle or of wild animals...Their homes were simple shelters woven of branches, twigs and grass which were sometimes carried on the backs of oxen when they moved their encampments (Omer-Cooper 1988, 5).

Omer-Cooper describes the population and locational attributes of the foraging mode:

The [San] men hunted wild animals using bows and poisoned arrows. The women collected wild bulbs, tubers and fruits, digging up the hard ground with pointed sticks weighted with heavy stones. They were organized into small communities; a hunting band was made up of a few hundred members at most. Each band occupied an extensive but clearly defined territory. Within this territory the band would migrate from warterhole to waterhole in pursuit of wild game and wildgrowing vegetable foods (Omer-Cooper 1988, 3).

In addition...small San communities survived here and there in isolated and barren pockets in territories long occupied by Bantu-speaking populations...like...the mountains of Lesotho...until the second half of the nineteenth century (Omer-Cooper 1988, 5).

A number of such [Khoisan] communities lived along the coast, feeding mainly on shellfish (Omer-Cooper 1988, 7).

Shillington also describes Ju/'hoansi (Khoi in this case) settlement layouts and population estimates:

A Khoisan settlement was much larger than those of the San and at times contained up to one or two hundred people. They...consisted of between ten and forty circular dwellings...arranged in a circle (Shillington 1987, 6-7).

Thus, Ju/'hoansi settlements are described as small, scattered ephemeral cave and open foraging sites and pastoral camps reflective of pastroforaging production.

Differences between Settlement Layouts, by Ethnicity

Despite the prevalence of "Bantu/Central Cattle Pattern" homesteads at Nguni agropastoral settlements, the documents suggest "ethnic" differences in settlement architecture, dwellings and other aspects of material culture, which differed slightly from group to group.

In describing Nguni settlements and those of the Sotho-Tswana Omer-Cooper (1988, 10) says:

As agriculturalists, the Bantu-speaking people lived a more settled life in more substantial dwellings than the Khoi. Most Nguni peoples built low, dome-shaped huts of woven grass. Sotho-Tswana, who relied rather more on agriculture than the Nguni, built substantial thatched round huts of mud. The

lower parts of the walls of these houses were sometimes faced with stone as a protection against rain. Their cattle enclosures were also often built of dry-stone walling. Huts were kept free of dust by treating the floors with a polish made of earth and cow dung. The walls were frequently ornamented with geometric designs drawn in colored clay.

Sotho-Tswana dwellings are further distinguished from Nguni by other architectural features. For instance, houses are round with conical, pointed, detachable roofs and cylindrical mud walls (Omer-Copper 1966, 133).

Proponents of the conventional wisdom generally see different ethnic groups, characterized by different material culture, house form and the like, occupying different geographical areas. Some, however, recognize the simplicity and limitations of such generalizations. Omer-Cooper hints that ethnic communities might blend at the margins or frontiers of their principal territories. He cautions:

Though the Nguni-speakers of the coastal area could be distinguished from the Sotho-Tswana group of the interior plateau, the two groups were not entirely separate from one another. There were tribes of Nguni origin living on the Transvaal high veld and in parts of modern Lesotho, while on the edges of the Drakensberg and particularly in the north-east corner of the coastal corridor, in the neighborhood of modern

Swaziland, Sotho and Nguni peoples were in close contact with one another (Omer-Cooper 1969, 208).

European and Mixed Communities

Finally, Omer-Cooper (1966, 21-23, 1988, 52-54) acknowledges sixteenth-and-seventeenth-century conflictual interaction between Europeans and Africans at Delagoa Bay and the Cape respectively. Yet he argues that beyond their immediate areas of interaction, European-African conflict had little influence upon the Mfecane/Difaqane.

The Cape frontiers including the Free State are presumed to have been occupied by Ju/'hoansi until the mid-to-late seventeenth-century when Ju/'hoansi were joined by Nguni, European, and mixed communities living in these regions. According to the settler model European communities were on the extreme southern periphery of Zulu expansion, but remained "relatively unaffected" by the Mfecane/Difaqane except for accommodating fleeing refugees (Omer-Cooper 1966, 176). Mixed frontier communities had a greater impact on interior African polities.

Griquas...established a fairly elaborate polity modeled on Boer conceptions. With their wagons, horses and guns they had a

great military advantage over the Bantu and...terrorized a wide area (Omer-Cooper 1966, 23).

The discussion so far demonstrates that the present conventional understanding of southern African history, especially the Mfecane/Difaqane, is based on a combination of the direct historical approach and a dash of diffusionism. The pre-Mfecane/Difaqane communities and their spatial distribution across the landscape are read out of the contemporary ethnographic and historic documents. Equally important is the Zulucentric focus of the settler paradigm.

Archaeological Implications for Nguni, Sotho-Tswana, and Ju'hoansi

The historical models discussed so far comprise a series of hypotheses concerning sequential transformations in both the forces and relations of production which, if correct, should be consistent with the archaeological data. Some predictions regarding the expected spatial distribution and association of objects, ecofacts, features, landscape and site types, will be derived from these hypotheses. Hypotheses drawn from the documents will be organized into a

pre-Mfecane/Difaqane period, and a post-Mfecane/Difaqane period which includes the Mfecane/Difaqane itself.

Recall that there are three basic propositions of the settler model: the presence of discrete ethnic groups; these bounded groups are only loosely articulated; a Zulucentric focus (i.e., some internal conditions in Zululand precipitated Zulu state formation and hence the Mfecane/Difaqane). Although the assumptions of the settler model are very interesting, the question remains--is it true?

If proposition one of the settler model is true we should expect different ethnic groups to be distinguished by different architectural and artifactual forms as well as different geographic locations. If the second proposition is correct we should expect little evidence of interaction among these ethnic groups. If the final suggestion, Zulucentricity, were valid we should expect evidence for the various hypotheses to be present in the Zulu heartland, but an absence of such evidence, or evidence of different conditions on Zululand's peripheries.

There are a variety of theories within the settler model's proposition of Zulucentricity accounting for the

Mfecane/Difaqane. The anthropological literature and the debates from standard story historians suggests that three factors might be significant "explanations" of the Mfecane/Difaqane: ecological change, external trade, and demographic change.

Here are the implications for these variants of the settler model. If the ecological argument is correct, we could expect to find paleoecological evidence for widespread drought, soil erosion and/or exhaustion in Zululand. If the trade argument were an adequate explanation of the Mfecane/Difaqane, we might expect that an expansion of trade in European items in Zululand would precede the period of Zulu state formation. If the population pressure and stress argument were correct, then we might expect a dramatic increase in population in the area of Zululand during pre-Mfecane/Difaqane times resulting in the Zulu state.

I argue that the different variants of the settler model all share a common set of assumptions about the nature of ethnic groups and their site types, population movements through time and accross space, changes in social hierarchy,

and the kinds of long range and local interaction that differentiate the pre-Mfecane/Difagane from the post-Mfecane/Difagane.

For purposes of analysis I will assume that the settler version is accurate in order to generate archaeological implications of this model. I present the types of sites postulated by the model, along with their expected locations, dates and material culture correlates.

The documentary sources indicate that pre-Mfecane /Difagane southern Africa was populated by Nguni and Sotho-Tswana agropastoralists who had come from the north into regions already occupied, or at least seasonally utilized by Ju/'hoansi pastroforagers. The primary interactions were among and between the agropastoral communities with differing degrees of dependence upon livestock and cultivation. Each group had certain "preferred" environments based upon particular subsistence strategies. These interactions were cross-cut by those among and between pastroforager communities. In some areas far removed from the Mfecane/Difagane heartland there was interaction between mixed communities and African communities.

The settler model also suggests that variation in size and density of settlements would indicate differences in economic type. Such differences between Nguni and Sotho-Tswana agropastoral and Ju/'hoansi pastroforager sites should be greater than those among agropastoralists in distinct geographical regions.

Racially mixed settlements should be different from either those in African or European frontier communities. They should be aggregated in and restricted to the frontiers, and found in different environmental locations than Nguni agropastoral settlements. For instance, "mixed" settlements could be in areas of open country with little concern for defensive locations unlike horseless African communities. Historical documents say that mixed community architecture remained essentially African, with rectangular European structures usually restricted to public buildings (Fredrickson 1981; Omer-Cooper 1988; Shillington 1987). These settlements should contain both African and European structures, material culture forms, trash dump locations and differences in diet indicated by food residues.

Nguni and Sotho-Tswana

Nguni and Sotho communities occupied the well watered lands east of the Drakensberg escarpment in what is today southern Mozambique, the eastern Transvaal, Swaziland, Zululand and southward to the eastern Cape (Transkei and Ciskei) (Omer-Cooper 1966, 4). Those Nguni and Sotho communities who settled in the areas that became the Mthetwa-Zulu heartland emphasized cattle herding over agriculture.

In these areas we should expect a preference for river valley agropastoral settlements located so as to best exploit inland seasonal grazing as well as coastal hunting and trapping resources. We might also expect evidence of long-term occupation like deeper deposits, and more pottery, especially larger storage vessels, along with evidence of storage facilities like grain storage pits. Furthermore, we might expect their sites to contain more and larger animal enclosures, with cattle remains dominating the faunal assemblages, than found in other areas less hospitable to cattle herding.

In the eastern Transvaal lowveld, only the northerly river valleys were suitable for cultivation and

were free of tsetse fly and trypanosomiasis. Thus, we might expect sparsely populated Sotho sites restricted to these fertile areas. These sites should also be clustered in the vicinity of permanent water sources, near productive agricultural land.

There should be more Sotho-Tswana communities in the western highveld plateau west of the Drakensberg, than in the eastern Transvaal. These communities facing ecological conditions less amenable to cattle herding, concentrated on agriculture. Therefore, on the dryer plateau we might expect agropastoral settlements to cluster around permanent water sources and contain fewer, and perhaps smaller livestock enclosures and more and larger storage facilities and vessels. However, the absence of insect-borne animal and human diseases would have enabled goats and sheep and perhaps moderate-size cattle herds to be kept.

The documents suggest negligible conflict between Nguni and Sotho-Tswana prior to the Mfecane/Difaqane. The major sources of conflict in these communities were internal fissioning as individual and group rivals sought political independence from their parent group, and periodic conflict

over grazing land which sometimes resulted in raiding. Thus pre-Mfecane/Difagane warfare among and between these polities should be difficult to detect, because often those in authority lacked the power to coerce others into more organized types of warfare.

Ju/'hoansi

Documentary descriptions of Ju/'hoansi

pastorforagers have most often focused upon the polar types Khoi and San, labeling these in terms of ethnicity. In modeling the settler logic, we can assume that whereas both kinds of sites should have been occupied and might be detectable, those focusing on foraging should have been inhabited in greater numbers. Despite the difficulty with distinguishing gatherer-hunters from pastorforagers (Maggs and Whitelaw 1991, 6) an important distinction between these polar types is the presence or absence of livestock. Indeed, faunal remains would provide the strongest basis for discriminating the different foci of the pastorforaging continuum (Yellen 1984, 64). It follows that communities emphasizing pastoralism should be located in areas where there is access to good pasturage. Those emphasizing foraging should be located near reliable water sources and

near foraging resources. These sites should contain greater amounts of seasonally stratified wild game and possible marine resources like shellfish, especially at coastal sites. Therefore, theoretically at least, we can assume what examples of each might look like archaeologically and where they might be situated geographically.

Ju/'hoansi sites would have been occupied for shorter time periods (principally determined by the seasonal availability of foraging resources) by smaller, more mobile groups. This relatively short duration by less sedentary communities suggests that sites should be smaller, less densely occupied and widely scattered throughout areas unsuitable for agropastoralism. This should be true for both ephemeral, small, seasonal forager camps and open, temporary, pastoral camps. Consequently, these sites might be difficult to detect archaeologically, unlike cave and rock shelter sites which might be less subject to human disturbance.

The year-round abundance of wild game and sea resources in the eastern Transvaal lowveld coupled with an environment generally unsuitable for agropastoralism

suggests that Ju/'hoansi sites should predominate the landscapes away from the fertile northern river valleys.

Assuming the validity of ethnographic descriptions, there may be some outstanding features of material culture associated with their specific economic activity that could help distinguish Khoi from San settlements. For example, the presence of "pointed base" and grass-tempered pottery in archaeological assemblages could indicate Khoi while the absence of ceramics, and the presence of ostrich egg-shell beads might identify San (Hall 1990:44; Maggs 1971:53; Phillipson 1993:206). Perhaps disproportionate percentages of stone tools, circular stone digging stick weights, and projectile points in lithic assemblages could be used to identify San as well.

These classes of archaeological data can identify economic and ethnic differences proposed by the settler version of south African history.

European and Mixed Communities

European and mixed settlements should be widely dispersed along the frontier and exhibit European material culture and evidence of horse-dependent activities like stables, barns, and wagon maintenance equipment and

materials. Despite the presence of African architectural forms at European sites resulting from African captives and refugees, rectangular dwellings and structures should predominate among the domestic structures, like houses, animal enclosures, and above-ground storage facilities. Mixed communities should have similar kinds of structures and material cultural forms, but in this case the African cultural forms should predominate.

Archaeological Implications for Post-Mfecane/ Difagane Communities

The variants of the settler model postulate that for various reasons Zululand became overcrowded, polities became militarized, and Zulu expansion and conquest dominated local and regional interaction. Zulu state formation is seen as the first event of this kind in southeast Africa south of the Limpopo River. Omer-Cooper (1966, 34) describes the new military settlement type.

In the central area of the Zulu kingdom a series of military settlements was established...These were modified to meet the requirements of a permanent standing army. Each of them was circular in construction and contained a royal section opposite the entrance. On either side were the huts of soldiers around a central cattle

enclosure. Gibixhegu was more than three miles in circumference and contained about one thousand four hundred huts...Each settlement also contained a section of royal women...

The Swazi underwent a similar transformation as they expanded into modern Swaziland by conquering various Sotho groups. The Swazi political system was/is a dual monarchy in which the nation was/is governed by a "King", (Ngwenyama) and a "Queen Mother", (Ndlovukazi), known metaphorically as the "twins" (emapahla). The "king" and his military regiments live at the administrative capital the (lilawu) while the "Queen mother" and her military regiments, live at the ritual capital (Umphakatsi). The Swazi were invaded by the Zulu but only some of the young male population were soldiers housed at the military capitals (Kuper 1972, 613; Omer-Cooper 1966, 49).

The southern highveld in the Free State was invaded by several Nguni groups fleeing the Zulu inspired Mfecane/Difaqane (Omer-Cooper 1966, 86). These Nguni attacks caused many refugees to flee to the Cape Colony.

Under the impact of the devastation caused...by the spread of the Mfecane, hundreds of Sotho refugees flocked into the Cape Colony hoping to find protec-

tion...among the white colonists. They came at a favourable time, for the 1820 experiment in settling British settlers on small farms... where they were to till the land without the aid of Bantu labour, had failed...Those...settlers who remained...were demanding large farms...and labour to work them (Omer-Cooper 1966, 93).

Omer-Cooper (1966, 93) describes the Mfecane/Difqane transformations in the areas of the southeastern Cape frontier and western Transvaal.

Before 1823 the area inhabited by the southern Tswana tribes (now divided between the British Bechuanaland District of the Cape Province and the Bechuanaland Protectorate) had enjoyed relative peace and prosperity. The cattle-raiding of the Korana and the banditry of the lawless Griqua Bergenaars had brought much suffering to some tribes but it had not fundamentally affected tribal distribution and way of life.

The following discussion of the effects of state and class formation on settlement patterns, site types, architectural and artifactual contents will be describing the kinds of archaeological materials likely to be encountered in the Mfecane/Difqane period. The subsequent

archaeological expectations are drawn from the documentary sources.

The Mfecane/Difaqane should have left a variety of material cultural traces in the Zulu and Swazi heartlands and on the peripheries, especially those archaeological manifestations of military conflict and social inequality.

Heartland Sites

We can expect that the social dichotomy between aristocrats and commoners was more pronounced and generally manifested spatially by a core group of royal families and military commanders owing their allegiance, authority and power to the King residing at heartland royal capitals. Permanently barracked at these royal military settlements were military regiments consisting of all unmarried men between 20-40 years old and war captives. These sites and settlement units were imposed on a network of smaller commoner villages, with aristocrat homesteads being larger-scale replicas of commoner ones.

Since only older men, women, and children remained in these commoner villages, the predominance of age-and gender-specific material culture could aid in detecting the different settlement types. Centralized cattle demand

imposed on these smaller heartland sites prompted a greater dependence on agriculture. Perhaps in these areas granaries might be expected to increase in number and size.

Archaeological evidence of heartland military barracks, like standardized dwelling size, military shield production and storage facilities and a predominance of male military objects and ritual artifacts that exhibit differential distribution according to gender-specific and functionally specific activities should appear in these royal capitals. The central court areas of these enclosures should be relatively large and contain broken beer pots, ash from council fires, slaughtered cattle from fines and tribute, wild animal bones and other refuse from elite families using the court (Huffman 1984, 4; Parkington and Cronin 1979).

Faunal remains can be used in a number of ways to detect asymmetrical social relations. Central enclosure size, as well as the number of enclosures of varying sizes are important indexes of the amount of cattle at a site mirroring wealth accumulation and concentration and hence power relations (Hall 1981; Huffman 1984, 38; 1986).

Denbow and Wilmsen (1983, 1986) and Hall and Mack (1983) have demonstrated how stratified polities in Botswana and in Natal respectively, exhibited disproportionate distributions of cattle age classes, indicating social stratification among or between site occupants (see Tanaka 1990, 515 for an East African ethnographic case that does not support this archaeological supposition).

At elite centers, bones of young and prime age animals should be prevalent implying an elite cattle culling strategy, resulting from selective consumption of prime animals emphasizing higher quality beef and greater meat yield (Denbow and Wilsen 1983, 1986). This pattern suggests that elites were further removed from the herding process and reflects differential access to power and wealth. Another culling pattern emphasizing older animals also found at a royal capital has been explained as reflecting a need for military shield production using cowhide (Plug and Brown 1982, 120).

Elite and commoner diets probably also differed in the relative proportions of items such as cattle, sheep/goat and game as well as in different cattle body parts. Elites ate more beef than goats, sheep or game, and preferred

different cattle parts (Shillington 1987:12; Watson and Watson 1990).

Mortuary data can also shed light on social relations of inequality. Atypical locations, manner of interment, age of burials and their contents have been most often used to gauge the degree of social stratification. For example, most Swazi and Zulu commoner men were buried at the entrance to their central cattle enclosures, unless struck by lightning or killed in battle, in which case they were buried away from the homestead, while royalty were/are buried in mountain caves (Berglund 1976; Kuper 1947).

Although social inequality may seem apparent in burial effort and types and number of goods interred, there is no automatic isomorphic relationship between buried wealth and socioeconomic status without independent evidence. It is important to try and distinguish whether the ascriptive status being signaled is related to gender, social role or something else.

Zululand and Natal

The settlement typology for these regions and this period should consist of at least six different types of settlement:

- (1) Many large-size, densely populated, heartland military settlements with long-occupations, large storage facilities and cattle enclosures located near prime agropastoral land.
- (2) Surrounding the large settlements described in (1), many smaller settlements with fewer and smaller livestock enclosures. Documents suggest that Zulu royal capitals were provisioned with agricultural produce supplied by these communities for their age-regiments serving at the capital. Thus larger grain stores in these sites can be seen as surrogates of forced sedentarization of full-time farming border communities. There may also be medium-size sites inhabited by local elite along with evidence of site desertion by displaced populations.
- (3) On the periphery large, densely populated, clustered, and fortified settlements with defensive locations and constructions reflecting the absorption of refugees and

conflict. Livestock enclosures and grain stores should be smaller and protected, dispersed away from settlements, situated in atypical, disguised, altered or hidden locations, and/or fortified or built in caves and other not easily accessible locations. Perhaps these sites may have different material cultural traditions. Sites should be located, and architecturally arranged to concentrate labor, minimize transport costs and facilitate rapid mobilization and deployment of troops during crises.

- (4) Also on the periphery various refuge sites like caves, rock shelters and caverns should exist in otherwise depopulated zones or in areas heretofore unoccupied.
- (5) At the extreme margins sites should resemble pre-Mfecane/Difaqane medium-size settlements showing little concern for defense with medium-size livestock enclosures.
- (6) Initially there should be a variety of small-scale European settlements and African sites

that are hastily abandoned. This should be followed by the emergence of large, agglomerated, densely occupied settlements around the European trading posts.

Peripheral Sites

Since the Mfecane/Difaqane was later amplified by the Mdlatlule drought and famine in 1824-5 we might anticipate evidence of large-scale famine, scarcity and hardship particularly in the less powerful peripheral sites where cattle raiding caused a greater dependence on agriculture (Omer-Cooper 1988, 53). Increases in "starvation" food preparation materials (i.e., grinding stones etc.) and floral remains of these foods themselves, or even settlements moved to locations where these foods are available could indicate such stress.

Since cattle are not frequently killed for food by commoners they should be under-represented archaeologically at commoner sites and both younger and older animals should be recovered representing "natural" mortality (Marker and Evers 1976, 61). This primary producer herd management strategy that only slaughters nonreproductive age cattle and keeps cattle of both sexes until they are fully adult,

serves to preserve breeding stocks and emphasizes maximum increase in herd size (Denbow and Wilmsen 1986, 1513). Faunal assemblages at peripheral and marginal sites should reveal a culling pattern in which old animals (greater than 3.5 years) predominate. Hall and Mack (1983, 187) argue that this conservative pattern is the typical herd profile for post-fifteenth-century commoner sites in Zululand as well as today.

One definitive sign of the conflictual relations that permeated the Mfecane/Difaqane is the increasing intensity and severity of warfare. Battles took place at still-remembered locations away from the military settlements and usually in peripheral territories. These are often referred to both ethnographically and in the local oral texts. For instance, the surface collection of one hoard from Isandlundlu Hill, the site of the battle between the Zulu and the Mpondo in 1827, yielded 6 spears including typical Zulu foliate type spearheads, along with other southern Nguni spearheads (Maggs 1991, 132). The spatial configurations and combination of spearhead styles supports the implication of a battle locale.

In regions where Europeans were involved in warfare the evidence may be clearer. The earliest firearms in southeast Africa were African trade muskets and later flintlocks dating from the sixteenth to the eighteenth centuries, many of which were surplus military weapons destined for the open grasslands of southern Africa (White 1971, 177-83; Bailey and Nie 1978, 7 and 15). Hall (1990, 139) argues that muskets and rifles were only occasionally available in the first part of the nineteenth century but Edgerton (1988, 38) says that the Zulu were using muzzle-loading rifles in warfare since the 1820s. The records of European gun exporters detailing their exports to Natal and the Cape are sketchy for earlier periods and do not include illegally traded weapons (White 1971, 183).

An essential local resource for conducting successful warfare during the Mfecane/Difaqane was iron and its production. Since iron-rich soils and the concomitant slow-burning tree types are generally restricted to the coastal areas, it is here that we should expect to observe important transformations of iron producing sites brought on by the Mfecane/Difaqane. These transformations include

increasing variability and numbers of sites and furnaces and perhaps increasing density of site distributions.

Maggs' (1991, 132) studies of iron and metal hoards show no connection between their distribution and that of iron producing sources. Hoards were found buried both within iron-producing settlements and in areas far from such settlements.

Finally, mortuary remains could indicate disease and starvation conditions alleged to be endemic to the Mfecane/Difaqane. Disease, nutrition, war-related traumas, evidence of injury and mortality patterns can furnish information on differential diet and exposure to risk.

Swaziland, the Eastern Transvaal, Southern mozambique, and the Highveld

After their defeat by the Ndwandwe (c.1820) the militarized Ngwane-Swazi ruling elite and their entourages seeking sanctuary moved north of the Phongola River into what is today southern Swaziland. Here they encountered and incorporated "those found ahead" Emakhandzambili, many of whom sought refuge in mountainous regions for defense (Bonner 1983; Kuper 1947, 13; Matsebula 1980, 3).

Oral accounts suggest that the Swazi settlements and landscapes occupied during these moves resembled an elite military occupation with "true" Swazi along with elite clans of "those found ahead" living in the heartland, while "those coming after" lived on the periphery. Later, elite family members were distributed strategically throughout those peripheral areas in an extensive network of royal villages which served to better control, supervise, and administer local regiments and affairs and to monitor the borders against enemies (Bonner 1980, 1982, 1983; Kuper 1947:45; Omer-Copper 1978:17). Documents and oral texts also indicate that only the elite possessed cattle while commoners kept sheep and goats.

The Mfecane/Difaqane was precipitated in southern Mozambique by fragmented Ndwandwe polities after their defeat by the Zulu in 1818. The Ndwandwe remained the paramount African polity in the Delagoa Bay region, battling the Portuguese until 1828 when dislodged by the Zulu. The iron-working communities living in southern Mozambique were granted autonomy by the Zulu because they were blacksmiths (Omer-Cooper 1966, 37). This suggests that their expertise

was necessary for iron production probably for military technology.

Omer-Cooper argues that the interior plateau saw no population stress from groups fleeing the Mfecane/Difaqane. Offshoots of the Mfecane/Difaqane attacked the highveld polities and disturbed population distributions rather than adding to them. Escaping military polities from the heartland attacked polities on the Free State plains causing refugees to abandon their ancestral homes and seek protection through incorporation into the BaSotho polity in their mountain-top fortresses in Lesotho or at colonial European settlements (Omer-Cooper 1966, 92). The Mfecane/Difaqane settlement typology for these regions should consist of at least seven different types of settlements:

- (1) Small to medium size nucleated military settlements with medium-size cattle enclosures located near prime agropastoral land in Swaziland.
- (2) Large sites with few and small animal enclosures in southern Mozambique.
- (3) Large agglomerated, settlements with medium cattle enclosures on the highveld.

- (4) Many stone-walled settlements, except in southern Mozambique, near areas with adequate stone for construction.
- (5) Refuge sites like caves, rock shelters and caverns
- (6) In coastal areas we might expect iron-producing sites.
- (7) European forts in coastal areas like southern Mozambique.

The Cape Frontiers

The settlement typology for the Cape frontiers at the extreme margins of the Zulu state during the Mfecane/Difaqane period should consist of at least four different types of settlement:

- (1) Sites resembling pre-Mfecane/Difaqane medium-size settlements except more densely populated, reflecting absorption of refugees, with little concern for defense and with medium-size livestock enclosures.
- (2) Small to medium size European farmsteads.

- (3) Large, more densely occupied towns around European trading posts and mission stations.
- (4) Large racially mixed settlements.

Summary of the Mfecane/Difaqane archaeological expectations

The conventional wisdom suggests that the earliest archaeological manifestations should appear in the Mfolozi-Phongola region. These archaeological correlates should be related to population increase, overgrazing, environmental destruction, conflict over pasturage, cattle raiding, centralized military polities and migrations from the heartland onto the periphery. The landscapes, architecture and settlement distributions must have changed accordingly and have implications for the archaeological record.

The salient features of the settlement patterns are as follows. The Settler Model scenario implies a core area and peripheries each with different types, sizes and distributions of sites and settlements. Moreover, there should be a correspondence between wealth, political power and settlement hierarchies. In the heartland areas of the different polities, large military capitals with more, larger, and elaborately decorated settlement units along

with bigger central courts, storage facilities and cattle enclosures located near prime agropastoral land are predicted. Such settlements should exhibit standardized dwelling size, male military object production and storage structures and greater number and types of aristocratic and ritual materials. The network of smaller settlements in the heartland should contain fewer and smaller livestock enclosures and larger grain stores and perhaps some medium size sites. The number of iron-production sites and furnaces in the coastal heartland should increase dramatically. These differences within the heartlands will result in multi-tiered regional settlement hierarchies.

European and African peripheral settlements should be large, densely populated and display clumped distributions with fewer, smaller and more dispersed animal enclosures and grain stores than in the heartland. Refuge sites and small abandoned European sites with circular and rectangular architecture are predicted. Peripheral occupations should have evidence of defensive considerations and/or relocation where "starvation" foods are available. At the extreme margins of the Zulu state, European and African settlements should appear relatively unaffected

except for signs of refugee accommodation. Less complex settlement hierarchies should characterize the peripheral and frontier areas.

Both heartland and peripheral small sites should exhibit a wide array of different livestock enclosure sizes and locations indicating the presence of both cattle and sheep/goats. All settlements should exhibit the so-called "Bantu/central cattle pattern" with its upslope location of the homestead head's dwelling. At heartland military sites large deposits of cattle bones, especially in the central courts, should exhibit an "elite cattle culling pattern" along with differentially distributed specific cattle body parts. When both elite and nonelite culling patterns occur within a single site, they should exhibit differential midden distributions.

Faunal remains at peripheral and marginal smaller sites should be dominated numerically by sheep/goat bones. When cattle are present, they should display a "primary producer or bimodal cattle culling pattern" representing "natural" mortality.

The most prominent features of mortuary remains for investigating the standard story of the Mfecane/Difaqane

involves differential location of burials revealing social status seen archaeologically in commoner homestead and elite mountain burials. In peripheral areas skeletal remains with evidence of combat, burnt and abandoned settlements along with locationally modified and architecturally fortified storage facilities, livestock enclosures and settlements are expected. Battlefields might reveal African skeletal remains, and African weaponry. European forts, towns and farmsteads with evidence of defacement and burning are only expected at the margins.

Conclusion

The foregoing discussion has shown that advocates of the settler model have used colonial ethnography and historic documents to retrodict settlement arrangements, ethnic groups and their geographical distributions into the pre-Mfecane/Difaqane past. Documentary accounts are used to construct pre-Mfecane/Difaqane and Mfecane/Difaqane models to generate potential archaeological implications. I now summarize several important points about these models and their expectations made in this chapter.

The first point involves the diverse ecological situations resulting in the differential distributions of Nguni agropastoralists and Ju/'hoansi pastroforagers and their site types and "preferred" environments. Conventional settler projections envision particular ethnic groups associated with different geographic regions, based upon definite subsistence strategies. Nguni and Sotho agropastoral communities occupied southern Mozambique, the eastern Transvaal, Swaziland, Zululand and the eastern Cape (Transkei and Ciskei). The Sotho-Tswana inhabited the western highveld while the Ju/'hoansi occupied the Cape frontiers. In these areas, environmental constraints determined whether agriculture or livestock herding was accentuated. Thus in the Zulu heartland and Swaziland, cattle herding was emphasized over agriculture while in the eastern Transvaal and southern Mozambique, cultivation and herding were restricted to certain areas only. In the drier highveld, agropastoralists stressed agriculture and foraging and pastoralism was the main mode of production on the Cape frontiers.

The second point concerns the expected settlements and material worlds for the pre-Mfecane/Difaqane and the

Mfecane/Difaqane periods necessary to support the standard version of the Mfecane/Difaqane. Pre-Mfecane/Difaqane economic and ethnic types should show differences in faunal remains, material culture, and site size hierarchies and be located in geographic regions suitable to their subsistence strategy. For example, African agropastoral sites should be large with deep deposits, located near good agropastoral land, and displaying a limited range of settlement types. African pastroforager sites are expected to be smaller, with shallow deposits and widely scattered in areas suitable for pastroforaging. These sites are expected to have more hunted game, more lithics, far fewer livestock bones, and also arrange themselves in simple settlement hierarchies. Only at Delagoa Bay and the Cape frontiers are European and "mixed" sites and material culture expected to be present.

The earliest archaeological manifestations of the Mfecane/Difaqane should appear in the Mfolozi-Phongola region. The standard story predicts population increase, overgrazing, environmental destruction, conflict, and centralized military polities developing first in this heartland. As repercussions spread from this area, other

regions should show the effects of contact with these militarized polities.

The heartland is expected to contain large military capitals and smaller surrounding settlements near prime agropastoral land with more dwellings, structures, cattle enclosures and elite objects than earlier settlements. These military sites should contain large deposits of cattle bones, characterized by an "elite cattle culling pattern". Very complex settlement hierarchies should characterize this heartland area, along with evidence for ecological degradation, population growth and/or external trade all preceding the widespread disruptions of the Mfecane/Difigane.

With the spread of the effects of Zulu state formation areas away from the heartland should show evidence of defensive considerations and/or relocation, refuge sites, abandoned African and small European sites with fewer, smaller and more dispersed animal enclosures and grain stores than in the heartland. Sheep/goat remains should dominate faunal assemblages and cattle, when present, should display a "primary producer cattle culling pattern". Human

skeletal and artifactual remains, settlement location and architecture, are expected to reveal evidence of conflict.

On the Cape frontiers European and African peripheral settlements should exhibit clumped distributions of large, densely populated sites with circular and rectangular architecture.

My final point concerns the role of colonial categories in the production of historical knowledge about southern Africa. All of the preceding interpretations are still influenced by colonialist concepts, specifically, the myth of a Zulucentric Mfecane/Difaqane which disregards African/European and intra-European interactions and capitalist penetration. Therefore, matching these historiographic constructs against an independent data base is critical for checking the settler model's accuracy and for rooting out colonialist biases.

In the next chapter I show that previous archaeological research in southern Africa has always assumed that the settler model is factually accurate. The model has therefore structured the questions the researchers were trying to answer.

CHAPTER IV

PREVIOUS ARCHAEOLOGICAL RESEARCH

An overall goal of this chapter is to describe the archaeological research that has been done by others to indicate the kinds of questions researchers were trying to answer. I show that the previous archaeological work addresses a variety of important questions, but always assumes the accuracy of the settler model. Therefore, I organized my fieldwork to question the assumptions of the settler model.

In this chapter I, 1) discuss recent trends in historical archaeological theory to help sharpen the problem definition and clarify the theoretical and methodological choices, 2) briefly summarize the nature of the archaeology of the pre- and post-Mfecane/Difaqane paying particular attention to surveys versus individual site investigations, to identify site reports be used in further analysis, and 3) describe the fieldwork I carried out and summarize the survey procedures I used and data I collected in Swaziland.

The Archaeology of the Mfecane/Difaqane Problem:
Approaches to an Archaeology of Impact

Symbolic and Structural Approaches

Analytic attempts at an "archaeology of the mind" (Hall 1993) seek a logical understanding of a culture through the use of emic taxonomies and meaning systems. These cognitive approaches emphasize the concept of a cultural mind constructed from a combination of attributes that assume meaning and that create, operate and mediate the various structural oppositions within a culture. The most influential proponent of this school in southern African archaeology is T. N. Huffman.

Elaborating upon the ideas of A. Kuper (1980, 1982) that identify fundamental oppositions as part of an underlying structural order in the spatial arrangements of African settlement architecture, Huffman (1980, 1982, 1986) presents a settlement layout model grounded in such oppositions for southeast African peoples. He names this model the "Bantu cattle pattern" claiming that it represents the cognitive code and rules which govern settlement architecture and ostensibly reflect the Bantu symbolic system.

Structuralist models have been criticized by a number of scholars on a variety of grounds (Davison 1988; Hall 1984c, 1993; Hodder 1986; Kus 1983; Leone and Potter 1988b). Since symbolic models tend to view archaeological materials as diagnostic of conservative behavior, they ignore the historical context of colonialism and thereby implicitly justify the political economic status quo. Leone and Potter (1988b) criticize this lack of social responsibility asserting that ethical problems arise since the knowledge used to construct these models was acquired within a context of cultural hegemony and from which a form of unconscious political oppression results. Thus, structural-functionalist approaches not only obscure power differentials like social relations of domination and resistance but are also insensitive to issues of change.

Symbolic approaches curb the possibility of investigating the archaeological materials as products of human agency by masking cultural perceptions and ambiguity necessary for an understanding of how people use these structural principles. Concern with human agency reveals how the material world is used as an active social resource, open to strategic manipulation by individuals and groups in

the activity of social life. Ordinary objects are meaningfully orchestrated in mediating, negotiating, perpetuating, contesting and transforming social relations through time and space (Bodenstein and Raum 1960; Davison 1988).

In sum, the relationship between social relations and their spatial material portrayal is complicated, scale-dependent, multidimensional, and mediated by cultural experience and ideology. These relationships involve both historical and current political, ethical and logical issues and are products of multiple axes of variability and on a variety of scales. Their meanings are context-dependent, socially constituted and continually reproduced through social action.

Historical Archaeology

In southern Africa, the primary archaeological focus has been on the "Stone Age" (Hall 1993; Perry 1992). A major practical problem resulting from this bias is that upper levels at such sites, although containing historic archaeological materials have generally been ignored and often disturbed. This concern with the "Stone-Age" was mystified under the guise of seeking the early human origins

in southern Africa. As significant as these discoveries are, they neglect the contemporary African populations and reflect the typical colonial focus of "controlled relationships with the past." This involves a denial of history by disregarding the archaeology of the more immediate ancestors of the modern African people.

In recent years, a considerable number of Africanist archaeologists have conducted research on later historical southern African sites. They have demonstrated the utility of combining archaeological and ethnohistorical approaches by focusing on the connection between archaeological data and oral traditions (e.g., Evers 1984; Maggs 1976a, 1976b, 1980; Marker and Evers 1976; Perry 1991; Scully 1978; van der Merwe and Scully 1971; Wright and Kus 1979).

Early historical archaeology of whites in southern Africa focused on restoration of elite European structures. Most of this research was done by cultural historians and architects and carried out for cultural history museums and was invariably published in more specialized cultural history journals. For example, Mason's (1975) excavation at Potchefstroom, a late-nineteenth-century British fort, was

published in a military history journal. Mason et al (1981) have begun work on nineteenth-century European farming sites on Remhoogte Farm in the Transvaal. These sites have been referred to as "cultural history relics" (Mason et al. 1981) in distinguishing them from historical sites occupied by Africans. I have seen no further research on these sites in the more generalized archaeological publications, such as the South African Archaeological Bulletin.

In the mid 1980s South African archaeologists became increasingly interested in historical archaeology of European colonial sites. Around this time H. Vos, the first full-time historical archaeologist in south Africa, excavated sites in Stellenbosch, while Abrahams (1984) excavated Van Riebeeck's mid-to-late seventeenth-century fort at the Cape and Deacon's 1984 excavations of Fort Selwyn.

Archaeology of the Underclass

More recently, the Historical Archaeology Research Unit of the University of Cape Town has embarked on several Cultural Resource Management projects. They are concerned with understanding the changing attitudes about the function of commodities in the daily life of eighteenth-to-

nineteenth-century white working-class households in urban Cape Town. They are also involved in investigating the material culture expressions of class-race-national-gender social relations and forms of resistance among the dispossessed African proletariat who came to the Cape as wage laborers and captives. This "archaeology of the underclass" has produced a growing number and variety of excavations generally in and around Cape Town. Such sites range from waterfront towns; to the official VOC (Dutch East India Company) headquarters; to Vergelegen, an eighteenth-century Cape VOC government estate (Avery 1989; Behrens 1992; Cruz-Uribe and Schrire 1991; Hall and Malan 1988; Hall et al. 1990a, 1990b; Markell et al. 1995; Saitowitz et al. 1985; Schrire 1988; Schrire and J. Deacon 1989; Schrire et al. 1995). There is also increasing interest in marine archaeological research on historical shipwrecks off the southeastern coasts (Meltzer 1984; Willcox 1984).

Avery's work at the main house at Paradise (a small, early-eighteenth-century outpost, later turned garrison) produced a predominance of mostly cross-bred European and African sheep species and only a small proportion of cattle. The body part frequencies, however,

indicate differential access to meat: working-class soldiers' quarters yielded the lower limbs of old animals, while choice, meat-bearing cuts from younger ones were associated with military officers (Avery 1989, 116).

Excavations on the late eighteenth- through early nineteenth-century Barrack Street Well, located in an underclass neighborhood, examines the impact of urbanism and wage-labor capitalism that ensued with the colonization of the Dutch by the British. This research is particularly significant because it demonstrates a greater need for critical attention to contradictions between historic documentary sources and recovered archaeological materials. The Barrack Street Well research indicates that written documents obfuscated and "sanitized" race, class, and gender relations in order to facilitate capitalist social relations and colonial commercial investment. The archaeological excavations revealed both men and women's possessions enabling contradictory interpretations of class, race and gender relations. Disjunction between written and archaeological data suggests that the particular historical context of each type of data can reveal the dynamics of often veiled social relations (Hall et al 1990a).

The Archaeology of Impact

A final theme in south African historical archaeology, designated "the archaeology of impact" by Hall (1993), assumes the concept of the frontier as an intricate, volatile zone of interaction where the economic and political impact of European penetration was felt by Africans long before actual colonial settlement (Hall 1990, 1993). If this were the case, then archaeological evidence of "impact" encounters should be present at a variety of southern African sites. Early satellite sites such as mission stations, which often required African captives and refugees to accept material culture as part of their conversion process, are locations where "impact" may be seen. Other locations include European pastoralists' homesteads, forts and trading posts. Archaeological materials from African sites, for example, glass trade beads as early indicators of coastal trade contacts between Europeans and African ruling classes, have been recovered in large numbers at various African capitals as well as at some Ju/'hoansi pastroforager sites. Interactions between Europeans and pastroforagers are especially significant because many mixed groups exiled from the Cape later turned

to cattle-and slave-raiding but have received no archaeological attention (Hall 1993, 185). One potential source of information depicting initial colonial interaction is rock art scenes, but the primary thrust of such studies remains on cognitive analyses (Hall 1993).

Schrire's (1988) excavations at Oudepost I, a seventeenth- through eighteenth-century, small, isolated Dutch trading outpost and military garrison at the western Cape, was perhaps the first excavation of a historical military site whose focus was inter-racial colonial social relations. Schrire's research has already contributed significant insights into the colonial encounter (Cruz-Urbe and Schrire 1991; Schrire 1988; Schrire and Deacon 1989; Schrire et al. 1995). First of all, her work challenges the prevailing wisdom that the elimination of Ju/'hoansi cattle herds by Europeans resulted in dispossessing Ju/'hoansi from their lands and forcing them into dependence on Europeans. Her research demonstrates that European settler resource competition and depletion of hunting territory and wild game was the principal cause of the devastation of Ju/'hoansi pastroforaging economy.

Secondly, she found "Late Stone Age" lithic assemblages in association with European colonial material culture. This "raises questions about the cultural attribution of prehistoric artefact assemblages elsewhere." Thus she concludes that "it is the context and not the form or typology that will inform on who produced them" (Schrire and Deacon 1989, 105, 110). Thirdly, the Oudepost excavations show similarities in material culture patterns resulting from supply shortages in colonial frontier military/trading posts between southern Africa and the United States (Schrire and Deacon 1989, 105). Finally, the presence of African artifact clustering around European structures, together with the absence of an indigenous midden at the post, suggests the presence of both parties (Cruz-Uribe and Schrire 1991, 93).

Since class and state formation are part of the standard settler model of the Mfecane/Difaqane, the archaeology of the Zulu, Swazi, Pedi, and Xhosa states is particularly relevant. These polities represent anomalous cases of state formation because although they were able to field large armies, incorporate neighboring polities, control vast areas, prevent fissioning and resist European

colonization, it is difficult to discern distinct classes. Thus, they are particularly crucial for understanding class and state formation in southern Africa.

There has been little archaeology in the areas to the south of Zululand (e.g., the Eastern Cape, formally the Transkei and Ciskei), and no archaeological research conducted that is concerned with the Pedi or Xhosa states. The only archaeological research in the Transkei and Ciskei that I am aware of was conducted by McKenzie (1984). His research was focused on environmental deterioration in the areas of the Eastern Cape after the fifteenth century.

Zulu state emergence was examined in the context of an ecologically focused settlement pattern study by Hall (1981). In this study he concluded that the Zulu state could have arisen from internal ecological stress in the form of an imbalance between resources and demand as grazing availability declined and stock density increased (Hall 1981, 178). The Zulu state could have also possibly resulted from:

"... overall increases in demand following internal reorganization of the Iron Age economy, for instance as a result of a political need to support a non-produc-

tive class or to meet the demands for tribute imposed by a more powerful neighbour (Hall 1981, 166).

The dilemma for archaeologists, however, lies in the fact that "...events which led to the formation of the Zulu Kingdom must best be explained as due to the re-orientation of economic demand from within farming societies" (Hall 1981, 178). The effects of economic demand, however, would be difficult to distinguish archaeologically from those of climate stress and soil erosion. Unfortunately, "...this however, is a domain that, because of limitations in both data and in methodology, is at present inappropriate for archaeology" (Hall 1981, 178).

This small sample of historical archaeology performed on European and African sites tantalizingly demonstrates the creative and productive integration of historical documents, oral texts and archaeological data and is indicative of a promising future for such research in southern Africa.

The Archaeological Survey of Swaziland and
The Mfecane/Difagane Problem

This section describes my fieldwork and how I collected and organized archaeological data from southern Africa and the methods I employed to investigate the Mfecane/Difagane problem. The data from the Swaziland survey was complemented by the addition of other known post-fifteenth-century settlements mentioned in the ethnographic and historic literature, and oral texts, plus other archaeological sites with post-fifteenth-century components located in Swaziland. A broad survey of mostly published and some unpublished archaeological materials from this time period was conducted and combined with the Swaziland data to expand it and establish a more robust data base.

An archaeological survey is an economical way, in terms of time and financial costs, to provide a frame of reference for analyses and interpretation. The underlying assumption is that the spatial organization and distribution of archaeological materials including settlements, landscapes and sites of varying size and function are related to economic and political organization. It is in the investigation of the archaeological data on variability,

configuration, structure and content of historical sites that the documentary story of the Mfecane/Difagane with archaeological data will be confronted.

Swaziland Research: Archaeological Investigations

Swaziland is a small, nominally independent African kingdom which has a dual monarchy and a dual capital system described in Chapter III. Swaziland is 18,000 square km in area, almost completely circumscribed geographically and dominated economically by South Africa (see figure 3). My field research in Swaziland involved three seasons, 1984, 1985, and 1987, conducting preliminary archaeological, archival and oral historical research.

Almost all of the archaeological research conducted in Swaziland has been concerned with the "Stone Age" (e.g., Beaumont 1973, 1978, n.d.; Masson 1981; Price-Williams 1980; Price-Williams and Barham 1982). During the course of this research some "Iron Age" sites had been located and excavated (see Goudie and Price-Williams [1983, 4] for a map of these sites), but no post-fifteenth-century sites had been systematically surveyed or excavated. Many royal settlements of this period were well known to the local populace and some of those were already protected as

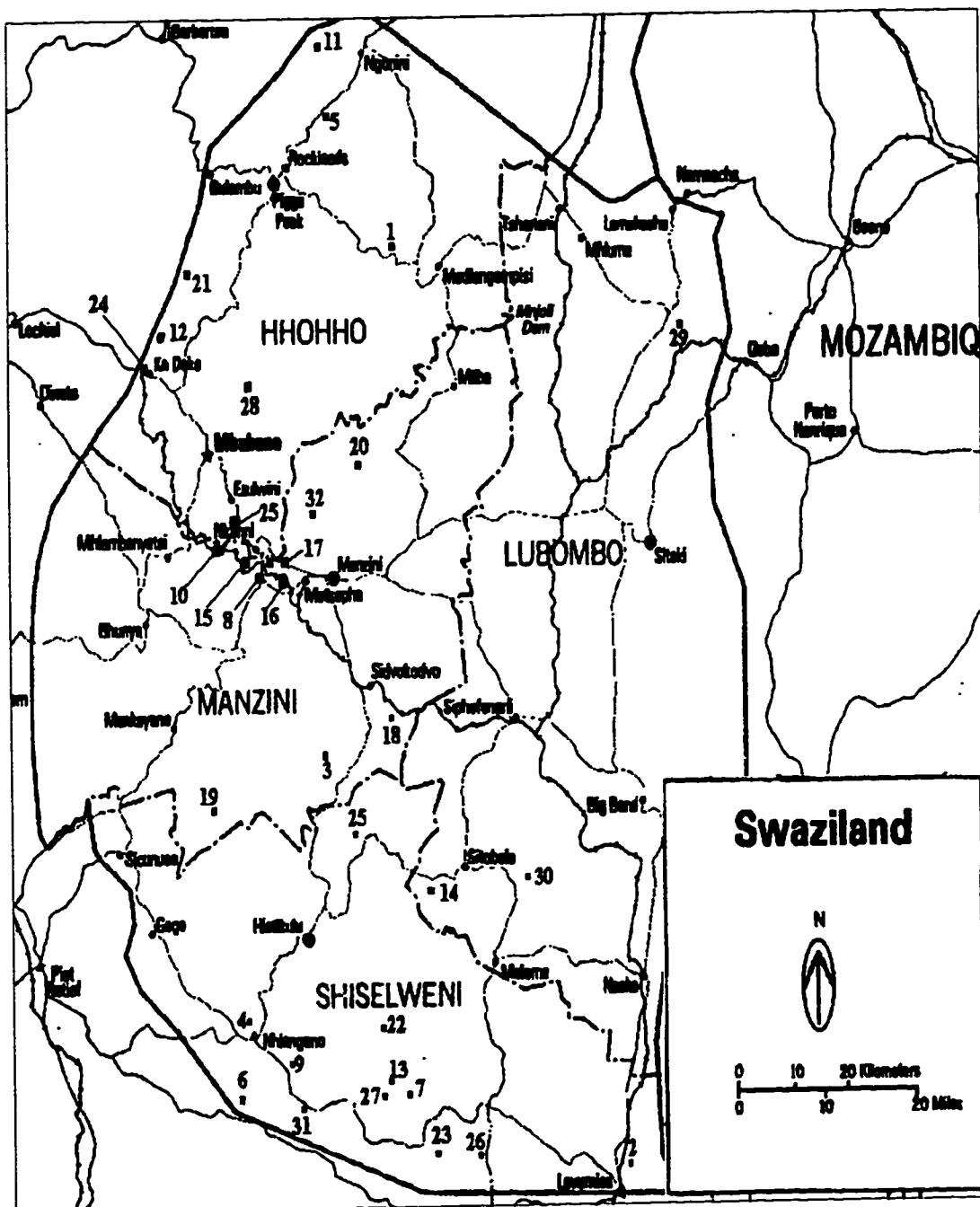


Fig 3. Map of Swaziland with sites used in the analyses

historical monuments by the National Trust Commission. My research was to focus on the south since this is where the early Swazi nation began and consequently where many of the earlier royal settlements and burials are located (Perry 1991).

Research Tools: Aerial Photos

In Swaziland I employed a multi-stage approach integrating environmental and settlement information with aerial photography and archaeological surveys. This was to be combined with ethnohistorical data to generate a controlled mosaic map of historically significant areas in Swaziland.

Aerial photography in southern Africa has been somewhat restricted to detecting stone-walled settlements in areas of open country, but Denbow (1979) was able to locate hundreds of non-walled sites in eastern Botswana because the animal enclosures and corresponding circular middens of both ancient and recently abandoned settlements were covered by a specific grass (Cenchrus ciliaris) which could be more easily recognized on summer aerial photos as bare or "white spots". Denbow, however, notes that both boreholes and erosion dongas (erosion gullies) also appeared as "white

spots" in valley areas. Thus, all available stereo pairs at the scale of 1:30,000 and enlargements at the scale of 1:5,000 or less were screened, the winter photos for stone-walled settlements and the summer ones for "white spots". The aerial photos did not show "white spots" nor river valley dongas. Those disclosing stone-walled settlements were enlarged and areas were marked for later ground investigation.

Field Methods: Sampling and Recording

A stratified sampling procedure was employed in defining the survey areas. It was based on historically well described, but archaeologically little known, areas of past interaction and preferred settlement location rather than on environmental variables alone. Such "informed stratification" (Wood 1955, in Ebert 1984, 343) formed the basis of ethnohistorical data used to survey key elite site samples.

The initial areas targeted for investigation contained transect samples straddling two river valleys across different veld types located approximately 25 km from royal political centers, and were selected to see how the development of the state affected organizational dynamics of

more peripheral non-elite homesteads. Data from the transects was to be used to evaluate site preference characteristics and range of settlement diversity and site location with respect to royal centers, different veld types, and ecological zones.

Historical and ethnographic sources (Bonner 1983, 14; Kuper 1947, 36, 1986; Marwick 1940) and preliminary archaeological field observations of "favored" locational characteristics suggest that post-fifteenth-century settlements tend to cluster in specific ecological zones. For instance, post-fifteenth-century sites are usually found in the grasslands of the highveld (inkangala) and the middle veld (live) river valleys, between 600-1000 m. a.s.l. on hills and mountain slopes with their gardens on the lower slopes and on the open plains (Price-Williams 1979). There are also settlements in the bushveld (liblanze) where gardens are in clearings.

Royal settlements are centered on the best agricultural soils within 10 km of major drainage basins and alluvium and within 15 km of other veld types. These transitional zones between middle and lowveld are ideal locations for agropastoralism by providing easy access to

other veld types for pasturage throughout the year. The middle veld contains the best agricultural land and areas with superior grazing potential but its high relief leads to sharp variations in temperature and rainfall over short distances (Bonner 1983; Bowen 1978).

Finally, Goudie and Price-Williams (1983;40) present a map of early-twentieth-century Swazi homesteads immediately following British colonization. Although they do not differentiate between classes of settlements, their distributions reveal general trends in settlement location. Visual inspection suggests that the major cluster is approximately 2,500 square km, and lies in the southwestern highveld near historically known refuge sites (Goudie and Price-Williams 1983, 39). Site elevation is between 1,000-1,300 m. a.s.l. in the Lusutfu river drainage basin in areas of generally poor soil types but with good soils for slope cultivation.

Using their map I calculated approximately 343 total homesteads of which 141 or 41% were concentrated in this area. There are no large European centers in this immediate area, although this does not preclude smaller European settlements (farmsteads, missions etc.) from being

there. Of the eight European centers listed on their map, three are on the periphery of this densely African occupied area and 6 of the 8 are located in the high and middle veld.

Subsequent to the initial remote sensing analysis, areas suggested by these data were scheduled for examination by ground survey. Knowledge of the probable range of the archaeological population to be sampled determined quadrat size, orientation and shape. Studies of the archival and ethnographic and ethnohistorical data suggest that homesteads surround both animal enclosures and administrative courts whose sizes range between 50 m and 500 m in diameter for "Iron Age" settlements (e.g., Denbow 1979; Denbow and Wilmsen 1983; Huffman 1982, 1984, 1986; Parkington and Cronin 1979), thus quadrats at least 50 m per side were chosen to sample such sites. Furthermore, since most activity takes place along the peripheries of homestead circles, the identification of site boundaries is made a bit less difficult than it is in some other areas. It was acknowledged that a settlement can consist of one site or a cluster of sites. Following Hall (1981), sites were defined by a scatter of greater than 10 sherds, evidence for

ironworking, stone walling, one or more grindstones, remnants of features, or a combination of these.

A table was used to select quadrats for an entire area walk-over and surface collection pick-up. Sites were located on topographic maps superimposed onto aerial photos, with acetate overlays that were carried in the field to maintain accurate current settlement records. Sites were photographed in detail, using a variety of film, to record vegetational diversity, site topography, features and orientation.

We did not collect all artifacts, but instead only picked up datable items. Relatively undeveloped ceramic typologies for post-fifteenth-century sherds and comparatively high standard deviations for carbon-14 dates add to the problem of establishing chronological parameters. Nevertheless, the general convention that the relevant time periods can be defined on typological grounds was accepted. Earlier pottery is more elaborately decorated, thicker, and consistently red or buff colored, while post-fifteenth-century ceramics are more often undecorated, thinner, black, and burnished (Hall 1981).

Botanical specimens and soil samples were analyzed and identified at the Ministry of Agriculture and Cooperatives, Malkerns Research Station Herbarium and Chemistry Section. To better inform on site function, botanical specimens from within and outside of the animal enclosures were collected. This was done to see if any particular species consistently appeared at archaeological sites and if any species known to colonize abandoned animal enclosures or known to favor disturbed soils occurred on sites. Ethnobotanical information on all collected species was collected. Swazi were asked to give names and describe uses of the samples and the information was recorded onto the site botanical survey sheets. The areas around the National Museum and the Swaziland Archaeological Research Association base camp were sampled for floral materials as examples of "negative" sites, where no known sites exist for comparison.

Since surface collections do not necessarily yield a comprehensive picture of a site, systematic soil samples were taken to detect possible chemical traces of discarded refuse, identify decaying internal structures, and to aid in locating site boundaries. Soil core samples were taken to

sample site variability, and to compare stratigraphy with the levels in sub-surface features. Samples were obtained by coring 25 cm depth from several different non-excavated units as control samples as well as from excavated units. Soil analyses are also important for discriminating animal enclosures at non-stone-walled settlements. For example, phosphate testing can clearly demonstrate the use of an area as a livestock enclosure (Huffman pers. comm. 1987). Excavation has shown that in southern Africa enclosure floors were lowered as a result of removing animal dung used for fuel. In addition animal enclosures leave few artifacts and often contain peripheral ash middens. Thus, sites were tested for nitrite and phosphate concentrations characteristic of animal enclosure soils and reflective of human and animal waste, bones and refuse resulting from human occupational activity.

The burnt cattle dung from the five sites shows very high phosphate levels (greater than 140.00 ppm) in samples from central enclosures. These samples could indicate ash from elite families and village council fires, supporting oral texts that these were royal residences. While at S152, the iron working site and S149 the stone-

walled BaSotho settlements the phosphate counts were more intermediate.

Other artifact classes (lithics, bones, slag/bloom, etc.) were collected to get at the full range of activities performed at sites. Enclosures were measured to estimate livestock capacity using the formula devised by Hall (1981, 135) where possible.

Lastly, a total of 30 grams of charcoal samples was recovered from different levels and test squares at all excavated sites for dating. Those from S151 were sent to the C14 laboratory at Witwatersrand University to be dated. I have not yet received information regarding these dates.

Swazi Oral Histories

One part of my research was the correlating of historical-archaeological data to establish broad distribution patterns for histories and origin traditions of Swazi royal and commoner clans and to collect, analyze, and link these to archaeological sites. One goal was to use ethnohistorical data to survey some key elite site samples by locating Royal Swazi settlements as described in the oral histories and to record the key attributes of such sites and their locations (Perry 1991).

Swazi oral traditions provide several kinds of useful information for historians and archaeologists alike. Royal genealogies, passed down by genealogical specialists, supply considerable time depth and detail despite their royal bias and a tendency for "telescoping" (only important ancestors are remembered). They remain important because, for the Swazi, genealogical distance from the throne is key for legitimizing social status and political power.

Royal bias is especially pervasive in the reconstruction of royal genealogies and origin myths in oral-dominant societies, where appeals to the past play a significant role in sanctioning the present order (Hamilton and Wright 1984; Wright and Hamilton 1985). In cases where state formation is at issue, the cultural symbols and meanings become an ideological battlefield in which rituals associated with the dominant class and justifying their rule threaten to replace or absorb and subordinate local practices (Gailey 1987).

In Swaziland there are generally prohibitive royal sanctions, both overt and covert, against differing versions of genealogical origins. Thus some commoners were often reluctant to discuss their clan genealogies and origin myths

openly without reassurance of anonymity. This suggest that the class position of the cultural expert or other sources relative to the state or ruling group can create very different and even opposed interpretations of history (Gailey 1987; Sorenson 1992).

Collection

Over 30 hours of audiotaped oral history interviews concerning post-fifteenth-century Swaziland were collected from 31 individuals representing different ethnic groups, classes and geographic regions. Although analysis of the data from this research is incomplete, preliminary observations suggest some patterned variations based on class, clan, and ethnic affiliation (pers. comm. Hamilton 1987; Perry 1991).

Swazi Royal Genealogical Origins

As the Swazi state emerged so too did classes defined in ethnic, linguistic and cultural terms. Kinship was used by the Bomdzabuko ("true" Swazi) as a means of differential incorporation expressed by tributary relations or forced dispersal of conquered groups Emakhandzambili ("those found ahead"). "True" Swazi along with the elite clans of those found ahead lived in the heartland, while the

emaLabafikemuva ("those coming after") lived on the periphery, with representatives from the royal house administering local affairs (Bonner 1980, 1983, see Gluckman 1967; Hamilton and Wright 1984; Wright and Hamilton 1985 for a similar situation among the Zulu).

This is the historical context within which subordinate clans sought to link themselves with the aristocratic groups by restructuring their traditions of genesis and genealogies to claim a common origin with the higher status groups. Such links were encouraged by dominant clans to legitimize their own political power drawn from their ritual authority now exercised over related clans.

Interview Procedures

The interview schedule was organized around the convenience of the individual cultural experts and conducted in the company of his/her choice. Interviews were usually informal, generally lasting between two and three hours, sometimes longer. Questionnaires were not utilized because of their specific and rigidly structured format. Furthermore, in this case, they would eliminate valuable proxemic and kinesic information as well as the older

illiterate informants, precisely the ones essential to the data collection process.

Particular cultural experts were selected by lineage and clan heads and chosen because they were recognized specialists in oral traditions and genealogical knowledge. In an effort to gather a fairly representative sample, specific information was requested of each informant (name, occupation, age, residence, marital status, birth place, clan and institutional affiliation). Other information believed to be germane and not easily obtainable from direct questioning during an interview, was sought by observing socioeconomic indicators such as homestead size and style, clothing, behavior of others toward informant, differential roles in important ritual/religious or military ceremonies and the like.

There was a core set of questions that generally followed the "verification approach", which guided the research. On the whole the questions were spontaneously generated by the context of the discussion. For example, I began by asking where the location of royal settlements or any sacred, venerated amanxiwa (old cattle enclosures) were, where important individuals were buried, or "old" commoner

settlements that might be known. When a site was located I would ask questions like: where was the location of the Sibaya (central enclosure) and the amakhanda (military barracks)? Was it the King's or the Queen Mother's residence? How long was the site occupied?

At the museum, a large detailed topographic map of Swaziland composed of sheets at the scale of 1:50,000 was erected on the wall. The oral historical information was checked systematically against all references to areas of origin and then indicated on the map. These locations were then checked against our field visits to the sites themselves.

Archaeological Data and Oral Texts

In theory, correlations can be established from geographical movements or locations where sites can be correlated with significant places mentioned in the oral history or with chronological events that occurred in the reign of a particular ruler, age regiment, or battle. Catastrophic events (disease, epidemics, famines, droughts) or mythical evidence (the name of a particular clan) may also be correlated with archaeological/geographical locations. Many of the above are often expressed in praise

songs and panegyric epics whose rhythmic fixed texts serve as mnemonic devices. These symbolic histories, especially for the later periods of Swazi history, can overlap and may be reasonably correlated by cross-referencing social structural changes and events in written sources with persons on certain pedigrees and/or specific locations within Swazi space.

Problems were encountered in getting cultural experts to identify non-elite settlements because they claimed that these sites were not important. This reluctance and often total unwillingness to visit non-elite settlements became a major problem for accomplishing the original sampling procedure. Other logistical, personnel and equipment problems (see Perry 1992, 1995) were coupled with time and budget constraints to severely limit our ability to investigate all areas designated for survey in the lowveld and the Lusutfu drainage basin, although a few sites were discovered and recorded. Obtaining permission to excavate certain sites was difficult and the excavation of grave sites was positively prohibited, but I was allowed to visit some. Consequently, a non-representative sample of sites were recorded with a bias toward royal settlements.

A total of 19 post-fifteenth-century sites were located, 10 of which were royal capitals, bringing the total number of "Iron Age" sites then known in Swaziland to 29 (see Fig. 3). All of the elite residences were located in the middle veld and fit settlement characteristics and preferred locations alluded to above for post-fifteenth-century sites in Zululand (e.g., Daniel 1973; Guy 1982; Hall 1980a, 1981; Hall and Mack 1983; Maggs 1984; Parkington and Cronin 1979) but different from Sotho sites of the same time period known from the Transvaal (e.g., Delius 1983; Evers 1975; Lye and Murray 1980; Mason, et al. 1981; Maggs 1971, 1974, 1976a, 1980; Marker and Evers 1976).

Although several industrial sites were located during the survey, we have thus far at least, found no linkages between these and oral traditions held in royal genealogical form. This could result from a combination of the inverted role of iron producers and/or an attempt by these clans to incorporate themselves into the ruling genealogy. More extensive surveys and intensive excavations are necessary of course, to provide more concrete evidence of Swazi state formation processes and to better evaluate

the relation between oral texts and archaeology in Swaziland.

Excavations

Two complementary survey procedures were employed; one to sample materials at or near the present ground surface, the other to sample more deeply for the presence of cultural material. The precise localities for excavation were chosen based upon indications from aerial photos, discussions with oral historians, and density of surface materials.

After identifying the location of the site it was generally given a minimum confirmed size. A fixed grid was then surveyed over the site consisting of a number of squares measured in meters. The exact size depended on the site size. These squares were then subdivided into 1 m squares, which comprised the actual excavation units. The site was then mapped and walked over, flagging different artifact class concentrations by different colored flags (red for iron related materials, white for ceramics, yellow for stone tools etc.). Only some kinds of artifact samples, such as all rim sherds, were collected from the surface.

The density of surface materials generally determined excavation locations. The underlying assumption is that surface artifact densities are proportional to subsurface concentrations. Royal site excavations, however, concentrated on the middens at the upper end of the sites where the homestead head resides, because ethnohistory and the excavations at uMgungundlovu have confirmed that such middens are more likely to yield richer archaeological materials (Hall and Mack 1983, 174). Thus the approximate loci of the central enclosures were sought from the oral historians.

Three sites were excavated in 1 X 1 m square shovel tests by natural levels. The archaeological excavation procedures involved establishing a grid for each site excavated. Features and test units were then mapped in relation to fixed survey datum points. To control vertical measurements, temporary datum points were arbitrarily established near each excavation unit, with permanent structures (Somhlolo's rock at Lobamba Lomdzala; a tree at Shishelweni Nkundla etc.) selected as convenient reference points. Numbered east-west lines and alphabetically marked north-south lines were placed 10 m apart and each

intersection was marked by a wooden stake. All measurements for plan views, profiles and stratigraphy were taken from hand-held, leveled lines attached to the temporary datum point. The coordinates and elevations of all temporary datum points were later surveyed in relation to the previously established site datum.

Excavation units were numbered consecutively with Roman numerals within each sample square. Stratigraphic level designations marked by Arabic numerals were given to each stratum of each excavation unit and all measurements were metric. A total of four minimum and maximum opening and closing depths were recorded in the field catalog for each unit. Soil samples were collected and each labeled with the appropriate catalog number. Our technique for collecting excavated soil samples was to trowel 500 g samples into plastic bags from various levels.

Stratigraphic profiles and plan views were consistently drawn of all excavation units. Photographic documentation of the field work included 35-mm black and white print, color and infrared slide film. All formal photographic records of archaeological deposits included a metric scale and north arrow.

All soil deposits were first screened through 13 mm ($\frac{1}{2}$ inch) mesh and again through 7 mm ($\frac{1}{4}$ inch) screen mesh to secure the recovery of small items such as botanical remains, beads and bones too small for the larger mesh. Our excavation deposits did not exceed 70 cm and had a mean of 49.5 cm depth of deposits which is more or less typical for post-fifteenth-century sites in southern Africa (Mason 1975). All cultural material retained in the field was placed in labeled paper and plastic bags and transported to the National Museum's laboratory for sorting, washing, labeling, storage and analysis. Bag labels included provenience information as recorded in the project catalog.

Excavation was done by two teams of two people each when possible, each composed of the permanent members, myself, Dunsani Sethebe and whomever we could recruit. After the first month Musi Khumalo, some Swazi students as well as U.S. students were also involved. Dr. T. N. Huffman of the Department of Archaeology at the Witwatersrand University also took part and provided much valued and appreciated assistance in terms of time, labor, companionship, and expertise as well as access to

collections at his archaeology lab at Witwatersrand University in Johannesburg. Archaeological collections were obtained from the 19 sites located along with other available "Iron Age" sites sampled earlier for comparison. Initial excavations revealed general locations of high artifact density and others where little or nothing was found. Further site survey and more extensive excavation is required for these sites to be studied to their full potential.

The Sites

Many Swazi sites, and all Swazi royal residences (umuti wenkosi) have more than one name, not unlike Swazi king's names. They are often alluded to by an official designation and by another term locally. Royal capital names are repeated, in an irregular rotation serving to symbolically link them to the past (Kuper 1986, 9). Each new royal residence is inaugurated by a new king and is correlated with his name(s) (Kuper 1947, 72). After the king's death the ancient royal capitals are "kept awake" by successors who send royal wives to rule under the care of the Ndovulakazi until the new heir and his mother take control.

S151

S151 eShishelweni Nkhundla (the old scene or field of action [Rycroft 1982, 51]), Esikoteni (a branch of the Ndwandwe clan) or Emlotheni (at the ashes) is a late-eighteenth/early-nineteenth-century royal capital and the ancestral home of the Swazi nation. It is located in the middle veld in an area with fertile land, a low incidence of drought and access to year-round grazing. Bonner (1983, 14) suggests that this represents a greater concern with grazing and hence the importance of cattle in the early Ngwane/Swazi economy.

Oral accounts suggest that this royal residence was first occupied by King Ndvungunye (1790=r) who established his first Lilawu at Shishelweni (Matsebula 1980, 13). King Sobhuza I (1815=r) also lived there before he and the "true Swazi" fled northward from the Ndwandwe who are said to have sacked the site (ca. 1817). Most of the Ngwane/Swazi population remained behind as subjects of the Ndwandwe while still others under Maitawane moved into the western Transvaal. Thus, Shishelweni was probably occupied by "true Swazi" between (1790-1815) a period of 25 years, its later occupation coincident with the so-called Mfecane/Difaqane.

H. Kuper (1947, 12; 1986, 12) notes that her cultural experts informed her that huge quantities of ash were seen at the site when the Swazi arrived, suggesting previous inhabitants or sacking. Kuper fails to indicate the reigning king at the time of the Swazi arrival. This could have profound implications for Swazi historical accounts, and for the position offered here, for if Shishelweni was sacked before the arrival of the Ngwane /Swazi then who had been occupying the area? Were the attackers Ndwandwe, Boer or even Griqua slave raiders from the Cape periphery or perhaps British "frontier ruffians" from Natal? Both Griqua and "frontier ruffians" are known to have been operating at that time (Cobbing 1988).

Test square I was located approximately 30 meters upslope northeast of the central enclosure at the location of the heaviest concentration of pottery encountered during the surface survey and was opened to a depth of 48 cm. This area contained a tree which is not uncommon ethnographically, for it was here that important meetings, and courts were held.

There were three animal burrows in the west wall and one in the north wall of test square I indicating

disturbance by ant-bear (Orycteropus afer). Despite this, test square I deposits were treated as a single component because the site probably represents a single occupation by one group for less than a generation.

The excavations recovered a lot of typical post-fifteenth-century ceramics, one piece of which had applied bosses like those found in Zululand at Elangeni (1750s) a KwaButhelezi settlement (Hall and Mack 1983, 180) and Ngabeni (1700s) a KwaKhumalo "type B" stone-walled settlement which had three such pots (Hall and Maggs 1979, 168).

Many diagnostic bovid (cattle) bones 35% of which were burnt, were recovered in all levels with heavier concentrations in the upper levels (42 cm). Caprines (sheep/goat), some of which was burnt, was recovered from level 3. Dense burnt dung occurred throughout level 2 ranging between 3-5 cm on all walls. There were 3 red glass beads ranging between 2.5-5 mm diameter, 2 hematite nodules, a tubular bone bead (ear plug?), and a round shale object, in the top 42 cm as well.

Test square II was opened about 30 meters downslope southeast of the enclosure and about 80 meters southeast of

test square I. It revealed some post-fifteenth-century pottery in levels 1 and 3. The rim to body sherd ratio was .20 with 38 rims to 187 body sherds. Some diagnostic cattle bone, about 85% burnt, came from level 1 while level 3 contained diagnostic goat/sheep bone, about 40% of which was burnt. One green chalky ochre piece from level 2, two quartz cylindrical points from level 1 and 2 respectively, and one quartz object from level 3 were also found. What appears to be a daga (hardened manure) floor lens was detected running for about 40 cm along the east wall in level 2.

Botanical specimens associated with disturbed soils were retrieved from several locations (Chippindall 1954, 604). Sporobolus pyramidalis (umSingizane) from inside the central enclosure and Graminae cynodon dactylon (isiFulwane) from the furrow where test square I was opened and from outside the furrow Fabanae rotalaria (catstail grass) and S. pyramidalis.

SI48

Lobamba Lomdzala (old Lobamba), Kalangabane or Entshakabili (burnt twice by Shaka) was a Lilawu built by Sobhuza I (1800=b, 1815=r-1838, 1839=d) circa 1820 after

leaving eShishelweni (Matsebula 1980, 17; Perry 1987). Bonner (1983, 24-34) argues that Sobhuza I's flight from eShishelweni and resettlement at S148 was more like a military occupation in Sotho territory than a settled administration. It was still functioning during the reign of Mswati II in 1852 under the name of Ekufiyeni (Bonner 1983, 118; Honey 1915, 32; Matsebula 1980, 38). Thus Lobamba Lomdzala was probably occupied between 1820-to at least 1852, a total of 32 years.

S148 is located near Nokwane hill in the Lusushwana river valley in the transitional zone of the middle veld with access to excellent cattle grazing land, as well as fertile agricultural soils. Oral accounts attest to its location as an excellent vantage point from which to view the surrounding valley and hence enemy advances.

Test square I was placed at the northern limits of the site survey area at the approximate position of the central enclosure which also contained a tree. Because the modern inhabitants along the road that now divides the old enclosure from the more southerly upslope dwellings were reluctant to grant us permission, we only surveyed the areas

north of the road neglecting upslope locations. Excavations went to a depth of 46 cm but were sterile.

Test square II was placed at the locus of a heavy concentration of surface ceramics approximately seven meters north-west of test square I further upslope of the enclosure. A trench was sunk between plowed contours to minimize any disturbances, to a depth of 60 cm. This square contained an abundance of post-fifteenth-century ceramics in all levels. The square contained a rim to body ratio of .36, with 43 rims to 121 body sherds. Two distinct pottery concentrations were found in level 2, one in the square's center and another in the northwest corner. The northwest corner collection contained a larger pot with an upside down smaller pot inside⁵ and was overlaid by a 3 cm thick lense

⁵ At S134 Siphiso Cave in Swaziland at a depth of 35 cm two brewing pots (eMadziwi) were recovered upside down, one inside the other, the outer pot resembles U-shaped bowls from Mabhija (1690-1885) in Zululand (Maggs 1982). The measurements of the Swaziland pots fit into the range of Hall's (1981) Zulu pot rim diameters for open mouth bowls. This is a common occurrence in west Africa according to A. Stahl (pers. comm. 1992). Huffman (1972, 68) in describing Shona ceramic production notes that.. "A small hole is dug about 60 to 90 cm deep and the pots placed on top of each other, mouth down". Klapwijk (1989) describes Transvaal royal pot-burials in which a large pot containing human remains is sealed by a smaller one placed inside of the larger one but these pots are not inverted. S. Azizi (pers.

of burnt cattle dung. This concentration was not treated as a feature because an undetermined portion of it remained inside the wall rendering the boundaries indistinct. The finds however, were bagged separately with the general limits sketched onto the plan view.

Some rodent bones were recovered from all levels along with many diagnostic cattle remains, some of which were burnt. Diagnostic sheep/goat bones none of which were burnt, were restricted to level 4 suggesting that they could have been part of a pit fill.

Lithics found at the site included: hammer stones, pottery rubbing/smoothing stones, circular grinding stones, one stone scraper, some quartz fragments, and a scratching stone underneath the silicified dung concentrations in the northwest corner. Glass beads in a variety of colors were found at all levels with diameters between 2.5-5 mm. Level 1 contained two (green and aqua); level 2 had two white/ivory; level 3 had eleven beads (red, ivory, gray,

comm. 1989) has suggested to me that pots inside each other may reflect the potters use of old bases in the production process and bases may be in the spot where pots are being manufactured accounting for the lack of bases in archaeological assemblages in southern Africa.

white, blue/green, brown, and yellowish with red edges and black spots) while level 4 had one white bead. There were several iron objects: a nail 6.4 cm long and 4 mm wide that closely resembles heavy duty square-cut nails used in heavy construction recovered from historical archaeological sites in the United States (Schuyler and Mills 1976, 74)⁶; an iron ring (3.5 cm diameter) or perhaps a child's bangle or band, and another iron object in level 1; and a long (17.5 cm) pointed implement (an iron awl?) that resembles a photograph of a spike spearhead from the Dargle hoard (Maggs 1991, 133 fig.5 #11) and a spike from Rongpoort (Maggs 1991, 133 fig. 6 #5) in Zululand in level 3 along with a possible bone ring. Ostrich egg shell pieces were also found in levels 3 and 4. We also uncovered what appeared to be another daga dwelling floor lense, approximately 12 x 8 cm in the south-east portion of the square coming out of the south wall at

⁶ There are many ethnohistorical accounts describing the procurement and use of nails from European vessels. For example, historic sources allude to the fact that Cape Nguni would burn ship wrecks to obtain nails "... the Mpondo take masts and remove the iron to make assaygies and lances" (Carter 1782, 6 in Shaw and Van Warmelo 1974, 107). In addition, iron nails were sometimes used in local exchange networks and were often reworked into objects with new functional uses.

the base of stratum two that began a "clean" interface at level 3.

There were some botanical specimens reflective of human disturbance at the site: Rhynchelytrum repens in the ploughed fields and Sporobolus pyramidalis (umSingizane) outside of the cattle enclosure.

S149/S22

The last site excavated was S149, Kadake stone-walled BaSotho ruins (Londozi site [Price-Williams 1979]) occupied around the eighteenth and nineteenth centuries in the highveld just west of the Londozi river. This excavation is important because it is not a royal Swazi residence, but rather, a Emakhandzambili (those found ahead) settlement.

Cultural experts and oral historians from the Magagula clan, one of the major Sotho clans in the area of S149, were interviewed and consulted regarding the ruins. Their direct ancestors were in north-western Swaziland when the Ngwane/Swazi arrived. Oral traditions suggest the Kadake settlements were occupied during the reigns of Mswati (1839=r) and Mbandzeni (1875=r) and thus occupied for at least 36 years (Perry 1987). With the rise of the Swazi

state the Swazi King displaced the Sotho ritual power to become the supreme rain-maker for the nation.

Swaziland's north-western highveld contains literally hundreds of stone-walled settlements located on the slopes of V-shaped valleys. These sites extend into the southeastern Transvaal and are clearly visible on 1:30,000 winter aerial photographs. From such photographs an area was selected for survey and excavation near to the Mzima homestead where excavation materials could be stored since the site was 10 km from the road and in very mountainous terrain.

The survey area contained a series of stone-walled circular, structures constructed from locally available talc schists, linked with more stone walling to form curvilinear enclosures and horizontal terraces with livestock tracts similar to those found throughout the eastern Transvaal highveld (Evers 1975; Mason 1968). Many of the sites contained stone mounds, probably from field clearance (Price-Williams 1979).

I found three basic types and dimensions of stone-walled settlements at Kadake all with downslope-facing entrances:

- A. Primary enclosures linked with secondary walling to another enclosure, ranging in size between 2-3 meters in diameter.
- B. Individual enclosures between 5-6 meters in diameter.
- C. Primary enclosures sharing walling. This type was the most abundant and showed the most variability in size and pattern. The central enclosures range from 8-10 m in diameter and the adjoining enclosures range from 1-4 m diameters. The largest type relatively near the Nzima homestead was chosen for clearance and excavation. In addition, nearby were some early twentieth-century European industrial structures we were also investigating. This steep hill slope had three other type C structures and some type A and B structures as well. The type C structures' walls were generally one meter high and one meter across at their top. This is similar to stone wall dimensions at Ngabeni in Zululand (Hall and Maggs 1979; Hall 1984c, 70).

Two test squares were selected based upon Sotho archaeology in the Transvaal and the suggestions of the Sotho cultural experts. Test square II was a "garbage dump" area at northern end of the site that was virtually sterile and filled with rubble up to a depth of 60 cm.

Test square I was a "kitchen" area at the southern portion of the site about 50 meters downslope south-east of test square II that also contained a lot of stone rubble. It was opened to 86 cm and produced three plain black body sherds typical of post-fifteenth-century ceramics and only sheep/goat remains from level 1, some of which were burnt. Also retrieved from level 1 were lithics, including a hammerstone, a cylindrical quartz tool point, a soapstone object with a circular central depression and several soapstone cobbles in levels 1 and 2. Several pieces of red ochre, and ostrich egg shell pieces were found in level 1. Burnt wood fragments were recovered in both levels and were probably used for cooking and heat during the cold nights in the highveld. Samples of the wood were collected and taken to the National Herbarium to be identified as to genus and species as well as to be dated by C14 techniques. These results must await future funding.

According to Feely (1985) some Acacia species are associated with early village sites in the Transvaal but he does not specify which species these are. There were several Acacia species present at Kadake. Acacia divinorum (umGwali), and Acacia karroo (isinga) were located outside the stone walls. Rutaceae Zanthoxylum capense (umNungwane), a citrus tree thought to be associated with iron smelting when found in atypical locations (Feely 1985, 10) was found outside of the stone walls as well.

S158

S158 KaHhohho I or Ezibondeni (wall/dip/valley in mountains) or Hlobane was the Lilawu of either Ngwane II (1695-1755) or III (1750-80) (1780=d) (Bonner 1983, 14; Matsebula 1980, 12; Perry 1987) or Ndvungunye (1790=r), Dlamini III (1680-1730) and Sobhuza I (1815=r; 1839=d) (Perry 1987). It is located in the southern middleveld and it too has access to different veld types on the Ngwede river near Mlosheni in a valley surrounded by several mountains.

The oral histories and the surface collection indicated the site's importance and it was scheduled for

excavation, but auger test showed bedrock at 25-35 cm depths coupled with a less than enthusiastic response to excavation by the local populace whose homesteads were sitting on the site itself. This forced cancellation of the excavations. The site was surveyed and mapped and an intensive surface survey was conducted.

The surface survey revealed a massive area of burnt cattle dung exposed by erosion that did not appear to be continuous along the truck road that runs directly through the site. Surface ceramics consisted of one rim and thirty body sherds, all undecorated, a rim to body ratio of .03. Various lithics including a large (17 cm) scratching stone, several hammerstones and some quartz pieces were collected from the surface. A remarkable iron hoe 23 cm long and an iron leg from a pot, along with diagnostic cattle bones were also retrieved. Botanical specimens collected were from none of the known types that suggest human activity or disturbed soil.

Artifact Processing and Analysis

All recovered specimens from the 19 surveyed sites including the three excavated sites were processed, analyzed

and curated at the National Museum laboratory, Lobamba, Swaziland, in 1987 and in the CUNY Graduate Center archaeology laboratory in New York City from 1988-1992. All artifacts were cleaned, catalogued, labeled, and inventoried to be eventually placed in a computer data base before returning them to the National Museum in Swaziland.

Materials were sorted into the following classes:

Ostrich Egg Shell

Ostrich egg shell is a fairly common occurrence on African archaeological sites, where it is usually taken as evidence of Ju/'hoansi pastroforagers. One piece was found at S148.

Pigments

Hematite ironstone specularite has been exploited in Swaziland for body decoration since AD 400 at Ngwenya. Among southern Africans, pigments have special ritual, spiritual and medicinal significance especially when used by both Swazi (iZangoma "blood of the earth") and Zulu (Inyanga) healers who use pigments on dead bodies and bones (Mbatha 1960, 92). Pigments also serve a variety of other functions such as decorative material for making cosmetics,

decorating ceramics and clothing, to color and close the pores of blankets to maintain warmth, to repel vermin, and to color and dye other objects (Shaw and Van Warmelo 1974, 202).

Hematite nodules were present only at the excavated sites S151, a royal residence, and S149, a commoner residence. They were not encountered in any of the surface surveys.

Burnt Dung

Burnt dung, sometimes referred to as vitrified or silicified dung, is cattle manure that was burned as fuel. It can be identified by fired soil nodules in a midden with a more granulated texture than "regular" ash (Huffman 1987 pers. comm.). Denbow and Wilmsen(1983) have used dung deposit depths to inform on herd and site size and site duration, and to classify settlements in Botswana.

In Swaziland we found several such burnt dung concentrations but none as deep or wide as those found in Botswana. This suggests smaller sites with shorter occupations in Swaziland which supports the oral texts. For example, the largest area of burnt dung is found at S158, and is 30-40 m wide and extends to a depth of 25-35 cm.

These dimensions fall within the small site size and short duration for Botswana sites.

Ceramics

Although, some Swazi cooking and drinking vessels had geometric designs during the nineteen-forties and even today, (Kuper 1986, 49) in post-fifteenth-century archaeological collections throughout southeast Africa, undecorated, utilitarian ceramics predominate (Hall 1981; Hall and Mack 1983; Hall and Maggs 1979; Maggs 1971). Post-fifteenth-century Swaziland ceramics are generally thin, undecorated, graphite wares. They are usually black, grey, dark red, or buff with black mottling. When present, surface decoration consists of incising, burnishing, some applied bosses (small pieces of clay in a sequence) and the application of red hematite painting and black graphite coloring (Sonkayane 1987 pers. comm.; Khumalo 1987 pers. comm.).

In Swazi society women potters produce coiled ceramic vessels. The clay is collected from stream bed deposits, sun dried, and crushed to remove impurities. The walls of the pots are smoothed with a stone and they are

then placed outside to dry. Pots are then fired in a grass covered pit along with slow burning wood.

The most common ceramic vessels in modern Swaziland are the U-shaped open bowls and pots for cooking, water/beer serving and group drinking and the smaller pots and larger beer fermenting and brewing pots.

Few post-fifteenth-century sherds from the Swaziland excavations have been large enough to permit the reconstruction of vessel size and shape profiles or formal metric analysis based upon different characteristics of technology, and vessel form and function. Furthermore, since the overwhelming majority are undecorated, stylistic analysis is largely precluded. Those sherds that are large enough, along with some almost complete vessels, tentatively indicate that utilitarian wares for personal household cooking/serving/eating vessels dominate the Swaziland assemblages.

The sites containing pottery had a combined rim to body sherd ratio of .25 with 109 rims to 431 body pieces. Most sherds are plain, thin (less than 7 mm), smooth in texture and temper, burnished with red ochre or graphite,

and well fired. There are only two decorated sherds, one from S151 which contained applied bosses below the rim and a surface rim sherd collected from S156 Mbekelweni, a late-nineteenth-century royal residence of Mbandzeni (1875=r). This sherd is buff with an impressed single horizontal groove parallel to the rim with oblique hatching or comb stamping on the rim similar to a motif found on pottery from Eiland salt factory, a pre-fifteenth-century site in the Transvaal (Evers 1979, 98).

Metal Objects

Both oral and written texts claim a long prestigious tradition in the eastern Transvaal, Natal, and in Swaziland for iron specialists until their subordinate incorporation into military polities during the Mfecane/Difaqane.

In Swaziland certain hereditary clans, Inyanga yokukhandza insimbi (skilled iron workers), had ritual power and were held in high esteem and exchanged iron goods for cattle. Oral texts suggest that some of Shaka's iron blades were made in southern Swaziland by the Gwebu ("scum/froth of beer"), the Shiba ("add condiments to food") and the Mkhonta

("those who seek asylum") (Induna Khumalo in Perry Tape B2 1987, 50; Price-Williams (1985, pers. comm.).

With the consolidation of the Swazi state during the mid-nineteenth century these clans were now held in low esteem and not allowed to accumulate wealth or prestige, forced to live on the periphery of the kingdom and took on low-status ethnic designations (Bonner 1983; Perry 1991, 4).

Archaeological excavations in Zululand indicate that some of these specialists did live at military capitals (Parkington and Cronin 1979; Plug and Roodt 1990).

Kuper (1947, 143) notes that iron is not buried with individuals in Swaziland but is curated and that the forge is located away from the homestead and agricultural fields as is also the case among the eastern Transvaal Sotho (Evers 1975, 76), the Cape Nguni (Shaw and Van Warmelo 1974) and the Zulu (Maggs 1980). The abundance of iron smelting sites throughout the northern Mkhondvo valley, in the Komati valley and in the Nottingham Hill areas above the Mkhomozane river attest to the importance of iron production in Swaziland. These sites are generally located near the lowveld where iron ore deposits and ample slow-burning tree species occur (Sithebe 1987 in Perry). The few dated

furnace sites are all pre-fifteenth-century (Price-Williams 1979; Beaumont 1973).

The iron production process in Swaziland utilizes either subterranean bowl furnaces or elliptical furnaces with goatskin bellows that direct air through the tuyeres (fired clay blow pipes modeled onto the sides of the furnace) into the furnace, while the smelted iron runs into clay receptacles (Kuper 1947). Iron hammers and large anvil stones were used to complete the shaping of implements.

There are several botanical species associated with iron smelting sites in southern Africa: Combretum imberbe at Phalaborwa (van der Merwe and Scully 1971); Euclea divinorum at Hluhluwe (Hall 1980b); Combretum apiculatum, C. imberbe and Terminalia sericea at Square (van der Merwe and Killick (1979, 63); and Accacia caffra, A. ataxacantha, A. burkei at Mahbija (Maggs 1982, 140).

Many of the Swaziland sites investigated contained metal objects, and an iron working site and three iron furnaces were located during survey. S160 site located near Inhlanhle mountain just east of the Kahhohho I site contained an elliptical furnace eroding onto the road surface and another furnace in very poor condition on the

western edge of road. Both were flattened considerably by motor vehicle traffic. The most complete one was 40 cm wide by 76 cm long and resemble furnaces from the east unit at Hluhlwe (1680-1850) in form and dimensions (see Hall 1980b). S161 Sitobela is a badly preserved furnace eroding out of a donga located near Mhlayhuzane river.

The Maghebukeleni site (S152) is located about 5 km southwest of Mashila, a pre-fifteenth-century iron furnace in the Mkhondvo river valley, an area inhabited by the KwaGwebu who are renowned iron workers in Swaziland. This site consists of a circular clearing with a diameter of 24 m with an opening facing eastward about 50 m downward into a large donga gully. This donga contained large amounts of surface iron cinder slag (a waste product of iron working) with visible charcoal nodules and bloom (a spongy iron semisolid mixed with slag, charcoal and other debris) piles, post-fifteenth-century body sherds, stone tools and a few dimple-faced hammerstones presumably for crushing ore and iron slag.

None of the botanical specimens collected from these sites were known species associated with iron

smelting, or atypical of the environment, or slow burning species, nor diagnostic of human activity.

Faunal Material

The faunal material from the excavations was tentatively identified by Dr. T.N. Huffman, myself and Musi Khumalo. It was classified by animal species, diagnostic and undiagnostic bone, and burnt and unburnt bone. Animal bone was present at all excavated sites and most of it was burnt. Most surveyed sites turned up faunal remains but none of it was burnt.

There did not appear to be any wild animals suggestive of local hunting or trapping. Excavated assemblages seem to be dominated by bovids (cattle) about 35% of which was burnt, at all levels except for the faunal remains from S149 the BaSotho site which yielded only ovicaprids (sheep/goat) 40% of which are charred.

Assuming this pattern to be a general one, it could support oral histories which suggest that only the aristocrats possessed cattle and that sheep were taboo to all members of the royal Dlamini clan (Kuper 1947, 45). This pattern may also indicate environmental constraints because the highveld is not conducive to cattle herding but

is good for sheep and goats. It could also mean that elite Sotho could have lived elsewhere closer to the middleveld with their cattle. The Sotho oral historian proudly informed me that "many imfukwana (the sacred royal herd of the Swazi king) were taken by the Swazi king from the Sotho of Kadake" (Magagula 1987 in Perry 1987, tape B3).

Beads

The primary use of beads and beadwork is ornamentation and decoration of men, women, and material objects. Beadwork and bead production is a female craft in southeast African society (Mbatha 1960, 99).

By the early nineteenth century beads figured prominently in African social relations: cattle could be purchased with them (Shaw and Van Warmelo 1974, 199); they formed part of marriage payments and regulated the love life of unmarried men and women; they indicated specific social, ritual and gender statuses; and functioned in the installation ceremonies of political personnel.

Beads have played an important part in both inter-African and African-European trade. Southeast African sites yield beads produced from a variety of materials such as

brass, iron, copper, clay, bone, and glass. Beads are also produced from more perishable materials like seeds, leaves, wood and other plant material with aromatic properties.

Archaeological evidence of bead manufacturing in southeast Africa comes from the sites of Harmony (1680-1820s) in the eastern Transvaal which mass-produced beads of copper, bone, clay and glass, and uMgungunglovu (1828) in Zululand which produced copper, clay, and brass beads made from brass wire imported from Delagoa Bay (Parkington and Cronin 1979).

Glass beads are by far the most numerous type recovered and since they are imported, have aided archaeologists by providing a relative dating technique (Davidson and Clark 1976). For example, royal blue translucent hexagonal and round beads are the most common and well-known nineteenth-century beads recovered in southern African sites (Evers 1974, 35). Their popularity and value, however, has resulted in their curation by many African groups. These prized heirloom beads complicate the chronology somewhat and result in greater diversity in archaeological collections (Evers 1979).

Glass beads themselves have been remanufactured in an African context. For instance, neutron activation analyses of garden roller beads and certain other blue-green beads from Bambandyanalo (K2) and Mapungubwe in Zimbabwe indicates that garden roller beads were made by re-working the blue-green beads (Davidson and Clark 1976, 17). They were transported on large strings to regional elites for dissemination to local elite for regional networks (Fagan 1969, 11; Shaw and Van Warmelo 1974).

Imported glass beads, especially the large dark blue cane beads, came into southeast Africa from India up until 1660 after which they came from Europe (Shaw and Van Warmelo 1974, 198). The Portuguese plunder of the east African coast devalued copper, destroying the local copper industry in the eastern Transvaal and glass beads replaced copper as the internal exchange medium in small transactions in the Delagoa Bay-Natal region (Slater 1976, 152).

Our Swaziland excavations turned up 3 small red glass beads from S151 and a tubular bone bead. Red beads were highly coveted and used in local exchange networks by sixteenth-and seventeenth-century southern Africans (Lee 1979, 78; Shaw and Van Warmelo 1974, 191; Wilmsen 1983).

There were also 12 small beads from S148, all with diameters between (2.5-5 mm x 1), smaller than Evers's (1982) beads from Lydenberg but within the range of those recovered by Evers (1979, 104) and Chatterton, Collett and Swan (1979, 117) at Harmony.

Lithics

Stonework was principally performed by men but lithics are used by both men and women for a variety of purposes in southeast Africa. The more general purposes might include grinding stones (muti) with an understone for grinding maize, pigments, snuff, and plant materials; hammerstones; bored stones with a central round hole used as digging-stick weights; stones for sharpening metal tools; stones axes for felling trees; house foundation stones and those used to construct houses, steps, cattle enclosures and stock tracts; hearthstones; fall-trap parts; anvils for iron working and flatstones used for grain-pit covers. The Swazi and eastern Transvaal Sotho also used rounded stones for burial markers for non-royal graves.

Our surface survey collections recovered many of the above type of more general lithics such as dimple-based

hammerstones, lower grinding stones with broader more circular hollows emblematic of the later periods (Maggs 1980, 11-12), and modified chipped stone pieces and fragments suggesting maize and pigment production indicating that these sites were used on a more permanent basis. Huffman (1985 pers. comm.) suggests that grindstones and multifractured handstones are reflective of specialized maize preparation in the highveld before 1750.

Our excavations revealed pottery rubbing stones, and "scratching" stones that were identified with the aid of Swazi cultural experts. At S149 there were soapstone cobbles and soapstone objects with circular central depressions that could have been unfinished or flawed soapstone bowls used in salt production (Evers 1979). S148 and S151, both royal residences, contained some cylindrical quartz points/objects whose function is unknown. Posnansky (in press) mentions "Ghana strike-a-lights" which are produced from unmodified chunks of quartz and are part of the west African tradition of recycling raw materials. Unfortunately, no illustrations or measurements are given for comparison with the Swazi quartz objects.

S150 Nsalitje cave in the southeastern lowveld was brought to my attention by some local Swazi who informed me that it was an ancient coal mine in use since the 1880s and still used by Swazi to mine coal. The Swaziland department of mines identified the coal samples as anthracite which Swazi prefer because it is smokeless and leaves little ash behind (Bowen 1978, 78). There were undecorated body sherds, stone tools and many quartz pieces collected on the site surface. On the other side of the hill from S150 we located an area about 100 m² that appeared to be a modern quartz production center with approximately 7-10 huge piles of quartz nodules (Perry 1987).

Summary

The Swaziland research suggest that events and place names associated with the later sequences from the oral traditions and the genealogical lists reveal important detail about Swazi society in general and the rise of the Swazi state in particular. Discrepancies in the various accounts would seem to suggest that disputes over succession had earlier precedents that continue today (Perry 1991). There were some sites with historical referents which may,

at least tentatively be corroborated by some archaeological evidence. The oral texts suggest that enshakabili (burnt twice by Shaka) and Eshishelweni (the place of burning/the hot country) were sacked. Test excavations at these sites have yielded large quantities of burnt bone, soil, and dung. On the other hand, burnt materials in central enclosures likely indicate residue from elite families using the court (Huffman 1984, 4).

This evidence could also represent areas for pottery firing, court fires or samples of large ash middens, located between agricultural fields and the main entrance to the cattle enclosure, which cattle were herded through on their way to the enclosures so that ash adhering to their legs would reduce infestation of ticks and other pests (Hall 1981; Huffman 1984, 1986). There was no evidence at either site for dung removal evidenced by lowering of enclosure floors, and charcoal lenses were found suggesting that trees were available for fuel.

One major problem with my Swaziland research is the bias toward elite and politically powerful areas. More survey is needed away from political centers to better indicate how state formation affected the social

organization and dynamics of non-elite households. Such studies could also help better understand the history of modern political dynamics in Swaziland. Another limitation is the small number of sites excavated and the small-scale of the excavations themselves. On the other hand, given the virtual absence of any post-fifteenth-century archaeology in Swaziland itself, this research represents a beginning.

It is clear that archaeology is a valuable and necessary adjunct to oral and documentary research in establishing a diachronic framework to study historical processes. With the development of more sophisticated methodologies of interpretation of oral texts coupled with an archaeology informed by such traditions, expectable results can contribute to southern African archaeology by complementing and improving understandings based on the historical record.

To address the kinds of questions that I have proposed in this dissertation requires combining the Swaziland research with other post-fifteenth-century research in southern Africa. It is to this synthesis and analysis that we now turn.

Combining the Swazi and Other Surveys: Archaeological
Results

Chronological Limitations

Historical archaeology in southern Africa is fraught with problems when seeking to fine tune chronometric dating of historical periods. Fluctuations in atmospheric radiocarbon during these periods coupled with broad ranges of standard deviations precludes precise dating of archaeological materials. Recent research on carbon-14 dating resulting in the Stuiver and Becker calibration curve, has shown that calibration works globally; region-specific calibration curves are not needed (Stuiver and Pearson 1986). Nonetheless, several C14 calibration curves for southern Africa have been devised and there exist a number of chronologies for southern African sites (Hall and Vogel 1980; Maggs 1977; Maggs and Whitelaw 1991; Parkington and Hall 1987). In the current absence of any other choice I have accepted these dates on face value and given the time range of the probability values of their standard deviations.

There are other useful methods of dating the later historical periods in southern Africa. For example,

archaeomagnetism has been successfully used by Henthorn, Parkington and Reid (1979) to date African iron furnaces at uMgungunlodvu. The analysis of datable imports such as European glass beads has been used (van der Merve and Scully 1971; Davidson and Clark 1976).

A number of useful chronological typologies developed for stone-walled enclosures and structures in southern Africa has been utilized (cf., Collett 1982a, 1982b; Hall 1981; Jones 1978; Maggs 1976a, 1976b; Mason 1972). For example, Type B settlement units which are assumed to date from the sixteenth through early nineteenth century in Zululand have been shown to have been characterized by "robbing". Robbing is a relative dating technique developed by Maggs (1976a) for southern highveld stone-walled sites which involves consideration of transport cost of new stone to build new settlement units. It assumes stone construction of any particular period to be in a fairly uniform state of preservation, with the amount of robbing increasing with age. Well-preserved settlement units are assumed to be those last abandoned.

Finally, oral traditions have proven invaluable for dating archaeological sites (e.g., Maggs 1976a, 1976b; Hall

and Mack 1983; van der Merwe and Scully 1971; Wright and Kus 1979). As adjuncts to archaeological investigations, oral accounts can help lend independent evidence and testing and consequently have been used to date many sites in this survey.

Often while reviewing the dating literature, different authors used different dates and failed to specify if they were referring to the entire site or a particular component of the same cultural landscape. In such cases I have taken the extreme dates to be ranges and I assume that earlier landscapes with post-fifteenth-century occupations represent a continuous historical process.

The resulting picture derived from the settlement descriptions and surface collection materials for the post-fifteenth-century obviously presents a problem for any tentative chronology based solely upon ceramic types. Therefore, more attention should be paid to their spatial significance. Consequently, in analyzing the data, an effort is made to interpret these data as a reconstruction of historical interaction affecting post-fifteenth-century spatial organization.

Summary and Conclusions

The southeast Africa survey area is bounded by the 22° parallel of southern latitude (south of the Limpopo) and the 24° meridian of southern longitude in the west. For purposes of analysis the eastern and western Transvaal were divided by the 29° meridian of southern longitude. The entire area considered for analysis consists of 800,400 km² (500,250 mi²). A total of 159 sites with known settlement sizes and/or calculable sizes was constructed for the settlement typology.

The data used in the analyses was obtained from two basic sources. The post-fifteenth-century materials and information resulting from the Swaziland ethnohistorical research and archaeological survey is one source. Nineteen sites located during the Swaziland survey are used in the analysis along with 17 others from the ethnohistorical and archaeological literature on Swaziland with post-fifteenth-century components located in Swaziland for a total of 36 sites representing 22% of the total sites.

The second data source is the published archaeological and ethnohistorical literature on post-fifteenth-century southern Africa outside of Swaziland. The

breakdown is as follows: 40 or 25% of the sites are from Zululand; 4 or .02% from southern Mozambique; 36 or 22% from the eastern Transvaal; 24 or 15% from the western Transvaal; 16 or 10% from the Free State; 2 or .01% from the Cape frontier; and 1 or .006% from the the eastern Cape (Transkei) for a total of 123 or 77% of the post-fifteenth-century sites. Together the Swaziland sites and the other southern African sites total 159 sites.

The following variables have been abstracted for each of these sites where available. The abstracted variables, sites and site information from the literature and from my Swaziland survey are available on tables in six appendices. Appendix 1 lists all sites plotted on maps and overlays and contains: time of occupation; minimum confirmed size in hectares and square meters; areal size in hectares and square kilometers; dietary information based on faunal and floral remains and the number of storage facilities; site type and artifacts; European goods present and depth of deposits.

Appendix 2 lists population estimates for various southern African groups and contains: archaeological and ethno-historical population estimation and density; number

of dwellings, structures and homesteads; source of population information.

Appendix 3 lists animal enclosure sizes and "animal unit" estimates and contains: minimum number of central enclosures present; central enclosure size ranges in square meters; largest central enclosure size; number of primary enclosures; number of secondary enclosures and the estimated minimum number of "animal units" housed in central enclosures and the minimum total at a site.

Appendix 4 lists the rank-size analysis work sheets and contains: observed site size; log observed size; the site rank; the log of the site's rank; the expected site size; and the log of the expected site size.

Appendix 5 lists southeast African sites with European goods and contains: geographical area and site name along with the total combined size of all sites for each period; the type of site; the kinds of European goods present, along with quoted quantitative descriptions; and the total number of sites with European goods for each area and period.

Appendix 6 lists the animal unit work sheets and contains: site; time period; largest central enclosure size

in square meters; estimated animal units penned at central enclosures; estimated total animal units kept at site; mean enclosure size; mean number of animal units in central enclosures; mean number of animal units in each area during each time period.

Appendix 7 lists descriptions of the Swaziland archaeological excavations and the materials recovered.

It remains to be considered how well the hypotheses generated in Chapter III fit or are discordant with the actual archaeological data. In the next chapter these archaeological projections are evaluated against the archaeological record for southern Africa.

CHAPTER V

USING ARCHAEOLOGY TO STUDY THE PROCESSES OF THE MFECANE/DIFAQANE

This chapter will see what archaeology has to contribute to the discussions of the Mfecane/Difagane. The main goal of this chapter is to answer the question "is the standard settler model of the Mfecane/Difagane factually accurate?" In order to answer this question I restate the archaeological correlates generated from Chapter III and compare them against the archaeological data from southeastern Africa.

The anthropological literature and the debates from historians suggests that pre-Mfecane/Difagane and Mfecane/Difagane models should have specific archaeological implications. These expectations derive from three fundamental assumptions of the settler model, namely: 1) the existence of isolated ethnic groups with distinct architecture, material culture and geographical locations; 2) little social interaction between these groups; 3) the idea that the Mfecane/Difagane originated in the region that

is today Zululand. Within the Zulucentric focus three factors have been proposed to account for the Mfecane/Difaqane: ecological change, external trade, and demographic change. I will investigate the data collected from archaeological contexts to see how they can contribute to these issues.

If the standard settler model of southeast African history is correct we can expect distinctive and different settlement pattern location and hierarchy characteristics between the pre and pos-Mfecane/Difaqane periods.

Contrasting the Settler Model with the Archaeological Record

The settler model predicts that certain sites in different geographic regions will have particular architectural features and kinds of artifacts at specified dates. In order to see whether the archaeological record supports these assumptions I used mostly published, and a few unpublished sources from the archaeological literature of southeastern Africa to generate an observed settlement typology.

Settlement Typology: Functional Classes Identified

Before discussing the settlement typology, a brief review of the expected settlement types developed in chapter three is in order. Settlements within a region were inhabited by members of the same ethnic group, with other ethnic groups occupying different regions. Regions and ethnic groups were distinguished by distinctive material culture traits and subsistence strategy.

Pre-Mfecane/Difaqane southern African agropastoral communities are thought to have lived in dispersed, "Central Cattle Pattern" settlements in areas that have been occupied for long periods of time.

Pastroforager communities lived in small, open foraging sites and scattered ephemeral cave and were restricted to environments inappropriate for plant or animal husbandry. The material culture and faunal assemblages should reflect the particular subsistence strategies and show little evidence of conflict. Finally, the earliest evidence of large military sites with elite artifacts and ecofacts should be in the Zulu heartland.

There is a common assumption lurking beneath all these models about the nature of ethnic groups, their

geography, and their history--in other words, the normative, bounded-group model of ethnicity assumed by the Mfecane/Difaqane scenario. A cursory look at the range of site types observed from my data suggests that the data do not seem to match the model.

Therefore, I will lay out a settlement typology that reflects the interaction of a number of processes not suggested in the standard settler model of the Mfecane/Difaqane.

Observed Settlement Typology

A settlement typology based upon 14 functional classes identified by the historical and archaeological data was generated for all sites. Appendix 1 lists the sites in the settlement typology. Unless there was evidence to the contrary, I assumed that the post-fifteenth-century occupations of a particular site covered the entire area of that site.

Several problems arose during the development of the settlement typology. One problem had to do with distinguishing categories. Some site types were not mutually exclusive; some sites served in a multifunctional

capacity. In tabulating the sites used in the typology, the following procedure was observed. Sites were listed under as many functional categories as the archaeological descriptions required, but were only counted as one site in the total site count. Thus, a fortified royal residence located on a hill top with one or more iron furnaces was listed as a royal residence, a military site and an iron producing site. Consequently, the total of sites per category for any particular area or time period was often greater than the number of actual sites.

There were also many multicomponent sites, that is sites containing occupations from different time periods. For multicomponent sites I used chronological site sizes when they were available, otherwise I assumed the overall site size applied to all periods of occupation. It should be noted that the site types listed refer to all sites plotted on survey maps and that not all mapped sites were used in every analysis. Furthermore, some sites used in the various analyses were not plotted because they lacked coordinates or other means by which they could be plotted. Nonetheless, all sites used for the analyses fit into one or more of the categories listed below. The numbers in

parentheses refer to the total number in that particular category plotted on the survey maps.

The classes of settlements and their numerical breakdown is as follows:

1. Royal residences or capitals (69)

These sites are the most frequently encountered in the Zululand (27) and Swaziland (19) samples. Although the inhabitants and the site functions may have differed slightly depending on the particular polity and time period, they were generally inhabited by the royal family, elite families, important military and ritual personnel and other political dignitaries and their retainers. The ethnohistorical sources suggest that these sites functioned as commercial sites where goods and services were exchanged and as ritual sites where religious and other ritual activities took place. After the Mfecane/Difaqane this class of settlement also served as military barracks for the army. The occupants of these sites were supported by the labor of the military units there and by extracting surplus food from national communities.

2. Primary Producer Villages (44)

The regions with the most primary producer settlements were the eastern Transvaal with 15 and the western Transvaal with 13. This category includes domestic sites generally occupied by food producers and perhaps some secondary elite along with their families and entourages. The presence of grass-tempered ceramics, ostrich egg-shell beads, abundant stone tools and other archaeological materials at some of these sites suggest the possibility that these were also pastroforager settlements.

3. Iron Producing Sites (44)

The western and eastern Transvaal are first and second, respectively. The western Transvaal has 13 sites and the eastern Transvaal has 11 sites. These sites were often both extractive sites, where people removed resources from the land, and industrial sites where the resources were turned into products. This site type includes locations where at least one iron producing furnace or slag mound was present. The ethnohistorical literature suggests that iron working communities were most often located away from the iron producing sites.

4. African Military Sites (27)

There are 6 such type sites in the western Transvaal and in Zululand. This category includes sites with palisading, and non-livestock enclosing stone-walling, "abundant" weapons (iron production sites with abundant weapons were excluded because I assumed these sites produced weapons for distribution to military sites), military barracks, earthwork ditches and difficult to reach hill-top locations. These characteristics were combined because I assumed that they reflect conflictual relations involving warfare. The ethnohistorical records indicate that some royal residences were fortified in Zululand, elsewhere these military sites were probably permanently occupied by secondary military elite along with soldiers drawn from the primary producer communities.

Also included in this category were sites with other functions like villages with archaeological evidence of conflict, such as burnt dwellings, skeletal remains with indications of wounds inflicted during conflict and the like.

5. Production sites (18)

The eastern and western Transvaal contain the most production sites with 8 and 4 respectively. This type includes extractive and industrial sites where products like salt, gold, copper, beads, soapstone, quartz, pigments and other minerals and raw materials were exploited. For purposes of analysis, they have been distinguished from iron production sites since one of my major concerns is the warfare that characterized the Mfecane/Difagane and most weapons were made from iron.

6. Royal Graves (11)

This aristocratic site category was primarily identified by location rather than grave goods, and occurs most often in the western Transvaal which has 4 pot burial sites and in the eastern Transvaal which has 3. Most elite burials in Zululand and Swaziland are mountain/hill or cave locations away from the settlements. Ethnohistorical sources indicate that only royalty are entombed at such locations.

7. Non-Elite Burial sites (6)

The western Transvaal has 4 such burial sites while there are two other regions with 1 each. Although burials

in the central enclosure often contained exotic grave goods indicating a higher status individual, they were considered part of this category.

8. Battlefields (6)

Zululand contained the only battlefield sites with 6. This site type is usually defined by a location where only one activity, warfare, occurred. Battlefields are ethnohistorically documented locations where battles took place. As far as I know none of these sites have been investigated archaeologically, although many are historical landmarks. They were included because their location is known precisely and their archaeological potential is tremendous.

9. Ritual Sites (8)

These were characterized by ethnographic references to their specialized ritual function, and/or material culture such as pit fields, miniature clay shields and cattle figurines, and rock-engraved settlement plans. These items are believed to be associated with initiation or other ceremonial activity. The eastern and western Transvaal contained 4 and 3 examples each of this site type respectively.

10. Rock Shelters (6)

Swaziland with 4 and the eastern Transvaal and Zululand with 1 each were the leading regions for this site type. This site class includes landscapes that were used temporarily and in special circumstances by hunting or herding parties for observing game, herding livestock and/or other non-permanent occupations. Some rock shelters may have been utilized seasonally or periodically over a number of years.

11. Refuge Sites (7)

The criterion of size was used in differentiating refuge sites from rock shelters. These sites were mostly cave locations or large rock shelters used as places of refuge where people fled during periods of political unrest. There are 4 refuge sites in the Free State, 2 in Swaziland and 1 in Zululand.

12. Shell Middens (6)

These are coastal sites marked by marine resource exploitation. Southern Mozambique, the eastern Cape (Transkei) and Zululand all contained 2 examples of this site class.

13. Pit Fall Traps (1)

There is only 1 example from Zululand. This site type was constructed for local and regional hunting parties.

14. European Sites (18)

This is a general-purpose category running the gamut from missionary stations and trading posts, to forts to farming homesteads and towns, including factories. There were many inland European forts, especially in Zululand and in the eastern Transvaal. Although many of these forts are shown on various maps indicating their approximate location, especially during later periods, few or none of these maps have information on their size. Since most of these sites were post-Mfecane/Difaqane, represented full-blown colonization and were European, they are not included in generating the settlement size hierarchy, although they were plotted on the maps.

In the next section I review the pre-Mfecane/Difaqane and post-Mfecane/Difaqane archaeological expectations for each region with regards to the different predictions of the settler model.

Site Types and Locations Predicted by the Settler Model

My survey of the archaeological literature of southeastern Africa revealed that differential archaeological research forced me to limit the number of areas used in testing the settler model. For instance, there has been little archaeological research conducted in several areas crucial to understanding Mfecane/Difaqane processes beyond the region. For example, there are a total of only 4 sites in southern Mozambique, 2 sites in the western Cape Frontier, 1 site in the eastern Cape frontier and no sites in Lesotho (see Appendix 1). Therefore, sites from these areas are not included in the subsequent analyses.

Several general observations emerge from this preliminary examination of the site types discussed in the ethno-historical and archaeological literature (see Appendix 1). One observation has to do with the number and types of categories themselves. There seem to be more site types (14) and sites of greater complexity than the ethnohistorical literature suggests.

Archaeological Expectations and Analyses

Zululand

In pre-Mfecane/Difaqane Zululand, we should expect large Nguni agropastoral sites dispersed near good agropastoral land. Sites should be characterized by the Central Cattle pattern, along with many animal enclosures, and numerous cattle remains. Since the earliest evidence of the Mfecane/Difaqane should appear in Zululand, through time sites should exhibit evidence for environmental destruction, population increase, external trade, and/or conflict.

Post-Mfecane/Difaqane landscapes should be characterized by large capitals, with large cattle enclosures/central courts, with military and ritual objects, and large deposits of cattle bones. Smaller agropastoral sites with large granaries and smaller livestock enclosures should surround the capitals. Both site types should be near prime agricultural land. There should also be more coastal iron production sites.

Swaziland

There should be pre-Mfecane/Difaqane Sotho agropastoral sites with longer-term occupations, and different architecture and material culture than Nguni

agropastoral sites. The Sotho sites should be in ecological settings and should have archaeological characteristics similar to sites in Zululand.

Post-Mfecane/Difagane Nguni and Sotho agropastoral sites should show evidence of defensive considerations, site relocation or abandonment, and conflict. Medium-size Nguni captitals located near good agropastoral land should have elite objects, numerous cattle bones, and larger stock enclosures than at Sotho sites yet smaller than those in Zululand. Sotho sites now located in the less desirable areas should have fewer, and smaller grain stores and animal enclosures with sheep/goat remains. Increasing numbers of grinding stones and floral remains indicative of "starvation" foods should also be expected. Nguni and Sotho refuge sites should be present in depopulated or in previously unoccupied areas.

Eastern Transvaal

Small pre-Mfecane/Difagane Ju/'hoansi pastroforager sites with wild game, stone tools, ostrich-eggshell beads, and grass-tempered pots should predominate and be dispersed throughout the landscape. The few Sotho agropastoral sites should be located in river valleys near arable land and have

large grain stores and small-to moderate-size animal enclosures and some cattle remains.

Post-Mfecane/Difaqane pastroforager sites should now be refuge sites like caves and caverns and Nguni agropastoral sites should now appear. There should be fewer Sotho-Tswana agropastoral sites near arable land with small livestock enclosures and sheep/goat remains.

Western Transvaal

We should expect large, long-term, pre-Mfecane/Difaqane Sotho-Tswana agropastoral sites near water and fertile land with evidence of an emphasis on agriculture expressed by: more and larger storage facilities; fewer and smaller animal enclosures; and fewer cattle remains than in Zululand.

Post-Mfecane/Difaqane Sotho-Tswana sites should be medium to large, fortified sites, with small stock pens.

Free State

There should be many pre-Mfecane/Difaqane Sotho agropastoral sites near arable land with moderate-size stock enclosures and evidence for cultivation. There should also be isolated European farmsteads in the south with European material culture and architectural forms.

We should expect post-Mfecane/Difagane Sotho agropastoral sites to be large, fortified sites with small stock pens and protected grain stores. Nguni agropastoral sites should now appear as well. European sites should remain along the frontier near arable land and be joined now by racially mixed settlements.

In the analyses I first describe the data regarding site types, time periods and geographic locations, and then summarize and interpret them within the context of the settler model of the Mfecane/Difagane.

There are a total of 69 royal capitals in the sample, 36 pre-Mfecane/Difagane sites representing 52% and 37 post-Mfecane/ Difagane sites representing 48% of the total. Zululand had the most pre-Mfecane/Difagane royal capitals with 19 representing 53% of this sample. Free State had 5 representing 14% of this sample. The western and eastern Transvaal and Swaziland each had 4 royal capitals each representing 11% of this sample.

Of the 33 post-Mfaqane/Difagane royal capitals Swaziland had the most with 15 representing 45% of this sample. Zululand was second with 8 representing 24% of this sample. Eastern Transvaal had 5 representing 15% of this

sample. Free State and western Transvaal had 3 representing .09% and 2 representing .06% of this sample.

Of the 44 primary producer sites, there are 29 pre-Mfaqane/Difaqane sites representing 66% of the total and 15 post-Mfaqane/Difaqane sites representing 34% of total sites in the sample. The eastern Transvaal had the most pre-Mfaqane/Difaqane sites with 12 representing 41% of the total. The western Transvaal had 8 sites representing 28% of the total. The Free State had 5 pre-Mfaqane/Difaqane sites representing 17% of the total. Zululand had 1 pre-Mfaqane/Difaqane site representing .03% of the total and Swaziland had none.

Of the 15 post-Mfecane/Difaqane primary producer sites, eastern Transvaal had 7 sites representing 47% of the total. Western Transvaal had 5 sites each representing 33% of the total. Free State had 4 post-Mfecane/Difaqane sites representing 27% of the total. Swaziland had 3 post-Mfecane/Difaqane sites representing 20% of the total while Zululand had none.

Of the 44 iron production sites 30 representing 68% of total are pre-Mfecane/Difaqane sites. Western and eastern Transvaal had the most pre-Mfecane/Difaqane iron

production sites with 10 representing 33% of the total and 7 representing 23% of the total respectively. Zululand had 5 representing 17% of the total. Free State had 3 representing 10% of the total and Swaziland had 2 representing .06% of the total.

Of the 14 post-Mfecane/Difaqane iron producing sites eastern Transvaal and Zululand had the most with 4 each representing 29% of the total. Western Transvaal and Swaziland had 3 each representing 21% of the total and Free State had none.

Of the 27 total African military sites in the sample, there are 13 pre-Mfecane/Difaqane sites representing 48% of the total and 14 post-Mfecane/Difaqane sites representing 52% of the total. Free State had the most pre-Mfecane/Difaqane sites with 6 representing 22% of the total. Zululand had 3 pre-Mfecane/Difaqane sites representing 11% of the total and the eastern and western Transvaal had 2 each representing 15% of the total. Swaziland had none.

Zululand had the most post-Mfecane/Difaqane sites with 5 representing 36% of the total. The Free State and eastern Transvaal are tied for second with 3 each representing 21% of the total post-Mfecane/Difaqane military

sites. Western Transvaal had 2 sites representing 14% of the total and Swaziland had 1 representing .07% of the total.

Of the 18 production sites, 11 were pre-Mfecane/Difaqane sites representing 61% of total and 7 were post-Mfecane/Difaqane sites representing 38% of total. Eastern and western Transvaal had the most pre-Mfecane/Difaqane production sites with 6 representing 46% of total and 3 representing 27% of total respectively. Zululand and Swaziland had 1 each representing .09% of the total while Free State had none.

Of the 11 royal grave sites 7 representing 64% were pre-Mfecane/Difaqane sites, and 4 representing 36% were pre-Mfecane/Difaqane sites. Western Transvaal and Free State had 3 representing 43% and 2 representing 29% of the total pre-Mfecane/Difaqane sites respectively. Swaziland and eastern Transvaal had 1 each representing 14% of the total. Zululand had no pre-Mfecane/Difaqane royal grave sites.

The post-Mfecane/Difaqane royal grave sites were evenly distributed with every area, except Zululand having 1 each, representing 25% of the total.

Of the 6 non-elite burial sites 4 representing 67% of the total were pre-Mfecane/Difaqane sites and 2 representing 33% of the total were post-Mfecane/Difaqane sites. Western Transvaal had the most pre-Mfecane/Difaqane sites with 3 representing 75% of the total, and Swaziland had 1 representing 25% of the total. Zululand, eastern Transvaal and Free State had no pre-Mfecane/Difaqane non-elite burials.

Western Transvaal and Swaziland had 1 post-Mfecane/Difaqane non-elite burial site each representing 50% of the total while Zululand, eastern Transvaal and Free State had none.

All 6 battlefield sites were from post-Mfecane/Difaqane Zululand. Eastern and western Transvaal, Free State, and Swaziland had none.

Of the 8 ritual sites in the southeast African sample 4 representing 50% were pre-Mfecane/Difaqane sites and 4 representing 50% were post-Mfecane/Difaqane sites. Eastern Transvaal had the most pre-Mfecane/Difaqane ritual sites with 2 representing 50% of the total. Western Transvaal and Free State had 1 each representing 25% of the total. Zululand and Swaziland had none.

Eastern and Western Transvaal had the most post-Mfecane/Difagane ritual sites with 2 each representing 50% of the total. Zululand, Swaziland and Free State had none.

Of the 6 rock shelter sites 4 representing 67% of the total were pre-Mfecane/Difagane sites and 2 representing 50% of the total were post-Mfecane/Difagane sites.

Swaziland had the most pre-Mfecane/Difagane sites with 2 representing 50% of the total. Eastern Transvaal and Zululand had 1 each representing 25% of the total. Western Transvaal and Free State had no pre-Mfecane/Difagane rock shelter sites.

The 2 pre-Mfecane/Difagane rock shelters in Swaziland continued to be used in post-Mfecane/Difagane times.

Of the 7 refuge sites 2 representing 29% of the total are pre-Mfecane/Difagane sites and 5 representing 71% of the total are post-Mfecane/Difagane sites. Free State had the only 2 pre-Mfecane/Difagane refuge sites. No other area had any.

Free State and Swaziland had the most post-Mfecane/Difagane refuge sites with 2 each representing 40% of the

total. Zululand had 1 representing 20% of the total, while eastern and western Transvaal had none.

The 1 pre-and 1 post-Mfecane/Difagane shell midden site and the 1 post-Mfecane/Difagane pitfall trap site are in Zululand. The 18 European sites are all post-Mfecane/Difagane sites. Zululand has 11 representing 61% of the total, eastern Transvaal has 5 representing 28% of the total and western Transvaal has 2 representing 11% of the total.

In sum, Zululand had significantly more royal sites than any other area before the Mfecane/Difagane. Of the 27 total Zululand royal capitals 19 representing 70% of the total were pre-Mfecane/Difagane but such sites decreased over 50% through time. Swaziland royal capitals on the other hand, not only increased almost 400%, but went from being tied for third place, during the pre-Mfecane/Difagane to first place during the post-Mfecane/ Difagane with an overall increase of 11 sites. Of the 19 Swaziland royal capitals 4 representing 21% of these were pre-Mfaqane/Difagane and 15 representing 79% of these were post-Mfaqane/Difagane. Thus Swaziland seems to have replaced Zululand with almost twice as many royal sites as Zululand, after the Mfecane/Difagane, although Zululand was second. Besides

Swaziland, Eastern Transvaal was the only other area that showed an increase in royal sites.

Primary producer sites which include the categories of agropastoral and pastroforager sites show a 52% decrease through time from 29 to 15. Zululand and Swaziland which had the most royal sites had only 1 pre-Mfecane/Difagane primary producer site and no post-Mfecane/Difagane primary producer sites for the former and 3 for the latter.

Through time iron producing sites drop dramatically from 30 to 14 representing more than a 50% reduction in this site type. Western and eastern Transvaal sites show the most dramatic decrease. Zululand's increase from 4 to 5 now gives them the most post-Mfecane/ Difagane iron producing sites.

Through time African military sites increase only slightly. Free State sites which were the most numerous during the pre-Mfecane/Difagane lose 50% of their sites during the post-Mfecane/Difagane, and Zululand's military sites increase by 60%.

Production sites decreased from 11 representing 61% of total pre-Mfecane/Difagane sites to 7 representing 38% of total post-Mfecane/Difagane sites.

Royal graves, non-elite burial sites, and rock shelters decreased by 50% through time while refuge sites more than doubled through time.

The battlefield distribution is skewed toward post-Mfecane/Difaqane Zululand. Since these battlefields were the scene of African/European battles, they most likely represents the importance of Zululand in the Zulucentric settler version of African history.

The number of ritual sites remained the same during both periods (4), eastern Transvaal had the most pre-Mfecane/Difaqane sites with 2 and was tied with western Transvaal for the post-Mfecane/Difaqane lead with 2. Zululand had no such site type at any time.

Observations and Discussion

The standard model predicts that sites in specific geographic and environmental regions will have specified architectural layouts and specified kinds of artifacts at specified dates. What do the observations from the site typology show?

The settler model

Zululand

Pre-Mfecane/Difagane Zululand, had only 1 primary producer site which contained microliths, hunted game, iron slag and a nearby rock shelter site. Zululand had 3 pre-Mfecane/Difagane African military sites. The most abundant site type in pre-Mfecane/Difagane Zululand is royal residences (19) representing 56% of total sites. Yet Zululand was the only area with no elite burials and had no ritual sites at any time. This apparent contradiction can be explained by the secrecy surrounding elite burials along with the "taboo" on excavating such burials in Zululand. Furthermore, of the 5 excavated pre-Mfecane/Difagane Zululand royal capitals all were pre-Mfecane/Difagane settlements without typical central cattle enclosure patterns (Hall and Mack 1983; Hall 1984c).

Post-Mfecane/Difagane Zululand shows a decrease in royal residences, and iron production sites rather than an increase as predicted by the settler model. Although Zululand does have the most post-Mfecane/Difagane iron production sites (4) and African military sites (5) suggesting that Zululand became more militarily active after

the Mfecane/Difaqane. There is evidence of military objects, and cattle bones at some royal residences but no ritual objects and no evidence of smaller agropastoral sites.

Swaziland

In pre-Mfecane/Difaqane Swaziland there were no agropastoral sites, 1 African military site and 2 rock shelters which continued to be utilized during the post-Mfecane/Difaqane. The types of artifacts found at these sites suggest agropastoral rather than pastroforager occupation. Like Zululand, the most numerous site type is royal residences (4) representing 36% of the total. Swaziland's post-Mfecane/Difaqane increase in royal sites suggests an increase in social hierarchy and perhaps political power.

The 3 post-Mfecane/Difaqane primary producer sites from Swaziland are stone-walled sites believed to have been inhabited by Sotho. Accepting the settler model assumptions of architecture and ethnicity, this suggests that while Nguni groups in Swaziland were undergoing political transformation, expressed by increasing royal sites, some Sotho communities were affected differently. Moreover, this

also suggests that ethnically defined architecture in Swaziland does not seem to have occurred until after the Mfecane/Difaqane. Thus the architectural distinction between Nguni and Sotho is supported in Swaziland.

There is some evidence of defensive considerations, elite objects, grinding stones, and stock enclosures at post-Mfecane/Difaqane non-stone-walled Nguni sites.

This is not the case at stone-walled Sotho agropastoral sites which are located in areas less desirable to agropastoralists and have only sheep/goat remains as predicted. The number of refuge sites does increase after the Mfecane/Difaqane as predicted by the settler model.

Eastern Transvaal

The eastern Transvaal had 2 pre-Mfecane/Difaqane African military sites, had the most ritual sites with 2, which continued to be occupied later, and the most primary producer sites with 12. As predicted 3 of the 12 primary producer sites representing 25% of total have wild game, and pastroforager artifacts. All of these sites are stone-walled (said to be characteristic of the Sotho) and contain non-pastroforager ceramics, iron furnaces, and evidence of productive activity. There are 5 primary producer sites

representing 42% of the total with cattle and sheep/goat remains. The 1 agropastoral site in the River valley where we expect Sotho had diseased cattle, and an abundance of wild game and marine resources.

Although there are no refuge sites, material culture from pre-Mfecane/Difaqane rock shelters suggests pastroforager occupations and these sites were abandoned in the later periods. This suggests that pastroforagers abandoned their rock shelters after the Mfecane/Difaqane while agropastoralists continued to occupy their sites. The mixture of architecture, artifacts and faunal remains indicates that ethnic distinctions based upon criteria generated by the settler model are difficult in the case of the eastern Transvaal.

Unexpectedly, eastern Transvaal had the most pre-Mfecane/Difaqane production sites (11). This suggests that eastern Transvaal was an area where most pre-Mfecane/Difaqane raw material production was taking place. Also contrary to the settler model predictions there are no post-Mfecane/Difaqane pastroforager refuge sites, although they appear in every area except eastern and western Transvaal,

but cave sites used before the Mfecane/Difaqane seem to have been abandoned after the Mfecane/Difaqane.

The reduction in post-Mfecane/Difaqane primary producer sites, and production sites to (7) indicates that eastern Transvaal production was drastically curtailed after the Mfecane/Difaqane. Eastern Transvaal was tied for the most post-Mfecane/Difaqane iron producing sites with 4, and tied for second with 3 African military sites.

Western Transvaal

The western Transvaal had 8 pre-Mfecane/Difaqane primary producer sites with artifacts and faunal remains similar to those from the eastern Transvaal, like non-elite burials, furnaces and cattle, sheep/goat and wild game. Two of these sites have evidence of agriculture as predicted by the settler model. The most abundant site type was iron production sites (10). The remaining western Transvaal pre-Mfecane/Difaqane sites were 4 royal residences, 3 royal grave sites, 3 production sites, 2 military sites, and 1 ritual site.

This array of pre-Mfecane/Difaqane western Transvaal site types suggest that iron production was a major activity at this time. Furthermore, social hierarchy,

ritual and military activity, and raw material production were present earlier than predicted in the western Transvaal.

African military sites which are predicted for post-Mfecane/Difaqane western Transvaal remain at 2. The only site type that increases is ritual sites which increase from 1 to 2. The predominant western Transvaal pattern is decrease. Decreases occur in non-elite burial sites, which remain concentrated in western transvaal, primary producer sites, iron producing sites and production sites. This indicates that western Transvaal production sites, not unlike eastern Transvaal sites also decreased significantly after the Mfecane/Difaqane. This pattern is intriguing because it suggests a general decrease in post-Mfecane/Difaqane iron production sites at a time when demand for iron should be increasing. Finally, post-Mfecane/Difaqane refuge sites appear in every area except in the eastern and western Transvaal. This suggest that the kind of activity that was generating refuge sites elsewhere was absent in the western Transvaal.

Free State

There are 5 pre-Mfecane/Difaqane primary producer sites, all stone-walled and with artifacts and faunal remains similar to those from the eastern and western Transvaal, cattle, wild game, and some with grass-tempered ceramics but no evidence of cultivation. There is no evidence of pre-Mfecane/Difaqane European farmsteads.

Free State had the most pre-Mfecane/Difaqane African military sites with 6. These sites were all multicomponent sites with evidence for agriculture, cattle and sheep/goat, marine resources, ostrich egg-shell beads, European goods, and ritual objects. There are 5 royal capitals with a wide range of iron work, iron tool stores, evidence of various productive activities, cattle, sheep/goat, marine resources and wild game and evidence of cultivation and military activity. Here too there is evidence of pastroforagers, like grass-tempered pottery, and red ochre-stained bored stones along with cattle, furnaces and elite burials. These pre-Mfecane/Difaqane archaeological patterns strongly suggest some very complex activities including, iron and other production, ritual activities, social hierarchy and warfare. And finally, Free

State has the only 2 pre-Mfecane/Difaqane refuge sites in the entire sample which continued to be used after the Mfecane/ Difaqane. This suggests that some kind of activity was generating refuge sites in the Free State before the Mfecane/Difaqane. Furthermore, the need for these sites arose in most other areas following the Mfecane/Difaqane except in eastern and western Transvaal.

Free State had the most post-Mfecane/Difaqane refuge sites with 2. There are 4 primary producer sites with cattle and lots of wild game, and the 3 military/elite sites continued to be occupied. Iron production sites disappear and there is no evidence of European or racially mixed sites.

The archaeological evidence regarding site types suggest that the kinds of sites, their locations and dates are much more complex than the standard settler model would imply. Areas like the eastern and western Transvaal, argued to be peripheral in the settler model seem to have been very important early on. For instance, contrary to the settler model's predictions, western and eastern Transvaal had more pre-Mfecane/Difaqane primary producer sites, iron production sites, ritual sites, production sites and elite and non-

elite burials than Zululand. Free State had the most pre-Mfecane/Difaqane African military sites and refuge sites. Even after the Mfecane/Difaqane when Zululand assumes the lead in some of these site types it lacks the significant numbers that these other areas had earlier. Only in numbers of pre-Mfecane/Difaqane royal sites did Zululand have disproportionate numbers.

Demography Predictions

Another prediction of the standard model is that population sizes in specific regions will have a certain pattern pre-Mfecane/Difaqane, and that these population sizes will change in specified ways after the Mfecane/Difaqane. Is that what the archaeological record shows?

This population pressure and stress argument is also an internal explanation of the Mfecane/Difaqane. The basic proposition suggests that a population explosion in the Zulu heartland led to increased competition for land, generating overgrazing, environmental degradation and intra-African warfare. If this argument were correct, then we might expect a dramatic increase in population in the area of Zululand during pre-Mfecane/Difaqane times resulting in the Zulu state.

Population and Area Size Estimates

There are several references to population size estimates and site sizes in the ethnographic, historic and archaeological literature on southern Africa for various polities and groups. These estimates range from the general to the specific. I compiled a listing of some of these citations in table form (see Appendix 2) to use in estimating pre-and post-Mfecane/Difaqane demography.

Taylor (1975, Appendix 1) for example, suggests that for pre-colonial Africa there was a tendency for populations to concentrate into large villages on the order of 3,000 people. Taylor's (1975) investigation of African agropastoral societies from east and southern Africa, suggests a general correlation between political organization and settlement hierarchies, but she found that some tributary polities had larger and denser populations than some states.

The most comprehensive discussions of population in Zululand are presented by Stevenson (1968) and Huffman (1984, 1986). Stevenson's basic premise is that earlier scholars in examining the Zulu case had confused population size with population density. He calculates the Zulu

population size by determining the age-groups that belong to the military regiments, the proportion of men to women, and the total number of regiments in Zululand. His results suggest that the population density of Zululand, especially in the Zulu core area was substantially more than proposed by Gluckman and others.

Huffman (1984, 6-7) argues that for southern African polities there is a close association between population size, territory size, wealth, and political power, and these relations are expressed in terms of hierarchical settlement levels. For instance, polities with 2-4 hierarchical tiers represent populations between 200-1,000 people; and larger 4-6 level chiefdoms are populated by 1,000-15,000 people while senior chiefs and above have populations around 2,450. He also gives a figure of approximately 15-20 dwellings in villages of "weak petty chiefdoms", with more complex chiefdoms having between 50-250 dwellings (Huffman 1984, 19). In addition, the number and size of court levels is related to the size of the population at the capital and the area under its control (Huffman 1984, 1986).

Much of the settlement size data from the archaeological, but especially the ethnographic and historical sources consists of descriptive, order-of-magnitude information rather than quantified data such as actual population sizes or number of dwellings. Despite Huffman's examples cited above, the number of dwellings is rarely given. I did find that some scholars, especially archaeologists, give precise numbers of dwellings excavated (see Appendix 2). Nonetheless, it is possible to obtain some data on the population size of settlements and the distances between settlements, but rarely on the size of a polity's territory nor on population density within them. Thus, I can use territorial size and the combined total of all site sizes in the territory to obtain an index of population density.

The general consensus seems to be that some kind of correlation exists between site size and population size. Therefore, for this analysis, I shall assume territorial size and site size to be reasonable indicators of population size.

Territorial size estimates were calculated from illustrations, pictures, drawings and written references in

the historical and archaeological literature that contained a measurement scale by which area could be determined. In other cases authors gave specific estimations of territorial size sizes. For example, Huffman's citation that the Zulu kingdom at its height was approximately 31,000 km² along with Gluckman's listing of the size of the Zulu kingdom as 156,000 km² would be added to all other estimates and the mean would then be calculated to derive a general figure (Gluckman 1960; Huffman 1986).

Although reliable estimates of absolute population sizes in early historical documents are rare, the figures compiled by Stevenson, Huffman and others for Zululand, along with population estimates for other southern African polities (see Appendix 2) were calculated to derive hypothetical population estimates for pre-and post-Mfecane/Difaqane sites and times based upon mean population densities and mean territorial sizes. This was done by adding all the population estimates and deriving means. The resulting information was then used in estimating population sizes for pre-and post-Mfecane/Difaqane time periods.

Results of the Demographic Analyses

The results of the ethnohistorical analysis are as follows: pre-Mfecane/Difaqane Zululand had a mean population estimate of 5,166 people, well within the hypothesized estimates for tributary modes of production (Flannery 1972, 403-412; Sanders and Price 1968, 74-86) but more than twice the size estimated for southeastern African tributary societies noted above (Huffman 1984, 19). After the Mfecane/Difaqane Zululand had a mean estimated population of 262,665, within the range of population estimates for states (Flannery 1972; Sanders and Price 1968). The post-Mfecane/Difaqane figure is just under 51 times larger than the earlier one.

A second analysis was performed on the population data. This consisted of using the population density figures for pre-and post-Mfecane/Difaqane sites calculated by Stevenson (1968), to derive other population estimates. These results indicate that the hypothetical pre-Mfecane/Difaqane population was 2,600 people while post-Mfecane/Difaqane Zululand had 907,460 people. The density figures indicate that there were 349 times more people after Zulu state formation than before.

The most obvious bias that affected these results is that more information exists for post-Mfecane/Difagane Zulu populations (19 citations) than for pre-Mfecane/Difagane times (7 citations). This, at least partially results from the need to levy taxes following European colonization and indeed, many of the figures come from colonial census data.

Regional Demography and Population Movements
Predicted by the Settler Model

Zululand

Pre-Mfecane/Difagane agropastoral sites should be getting larger and more densely populated through time and reach their zenith before the Mfecane/Difagane.

Overall post-Mfecane/Difagane population size and density should remain about the same as earlier.

Populations at the royal capitals should increase while populations in the surrounding sites should decrease as young male adults are housed at the royal sites.

Swaziland

There should be more Pre-Mfecane/Difagane Sotho people at large agropastoral sites and less Nguni (Swazi) at smaller agropastoral sites.

We expect fewer Sotho populations and more Nguni communities during the post-Mfecane/Difaqane as some Sotho populations fled the encroaching Nguni.

Eastern Transvaal

Pre-Mfecane/Difaqane Ju'hoansi pastroforager sites should be numerous. There should also be a few sparsely populated Sotho agropastoral sites.

Post-Mfecane/Difaqane agropastoral sites should be more densely populated than earlier as Sotho fleeing the Mfecane/Difaqane move into these communities. There should be, however, no change in pastroforager population densities.

Western Transvaal

There should be many densely populated pre-Mfecane/Difaqane Sotho-Tswana agropastoral sites.

Post-Mfecane/Difaqane Sotho-Tswana sites should now be nucleated and more densely occupied than earlier.

Free State

There should be moderately populated pre-Mfecane/Difaqane Sotho agropastoral communities, and sparsely populated European communities.

Neither agropastoral sites on the interior plateau or European settlements should show any post-Mfecane/Difaqane increase in number of sites or density. There should be an increase, however, in mixed communities and sites.

Archaeological Analysis

The goal of the archaeological analysis was to provide another way to contrast and compare pre-and post-Mfecane/Difaqane demographic differences. It involved generating population estimates for both pre-and post-Mfecane/Difaqane southeast Africa by constructing histograms of site sizes, for each area with sufficient data, derived from information in Appendix 1. Besides southeast Africa combined these include, Zululand, Swaziland, the eastern and western Transvaal and Free State, (see figures 4-9).

The numbers of sites in each size class were defined in 1 hectare intervals from 1-100 hectares. Then possible discontinuities were noted in the distribution and were used to define the site/population size classes.

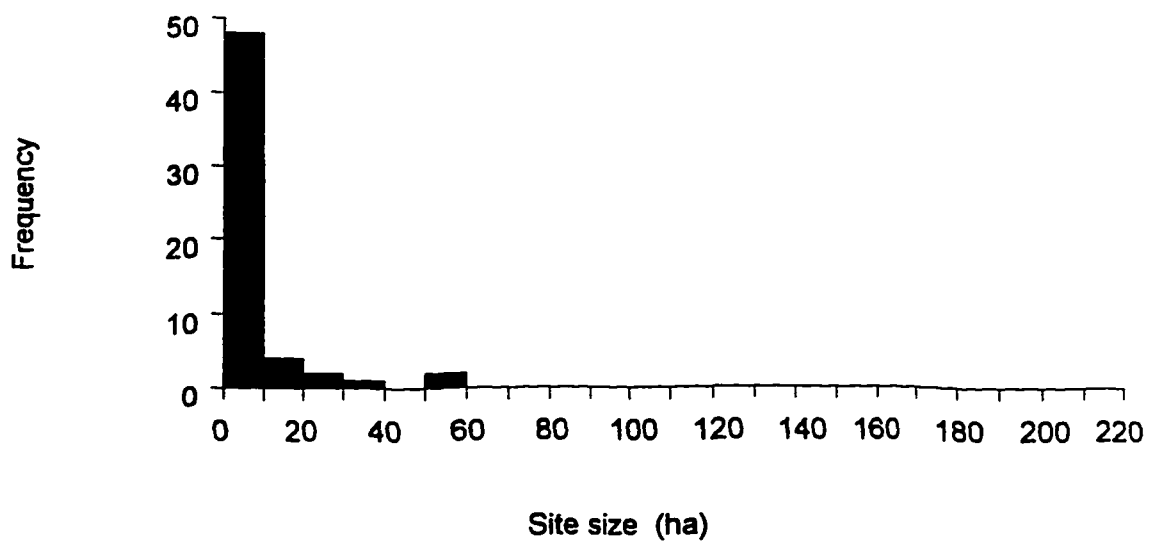
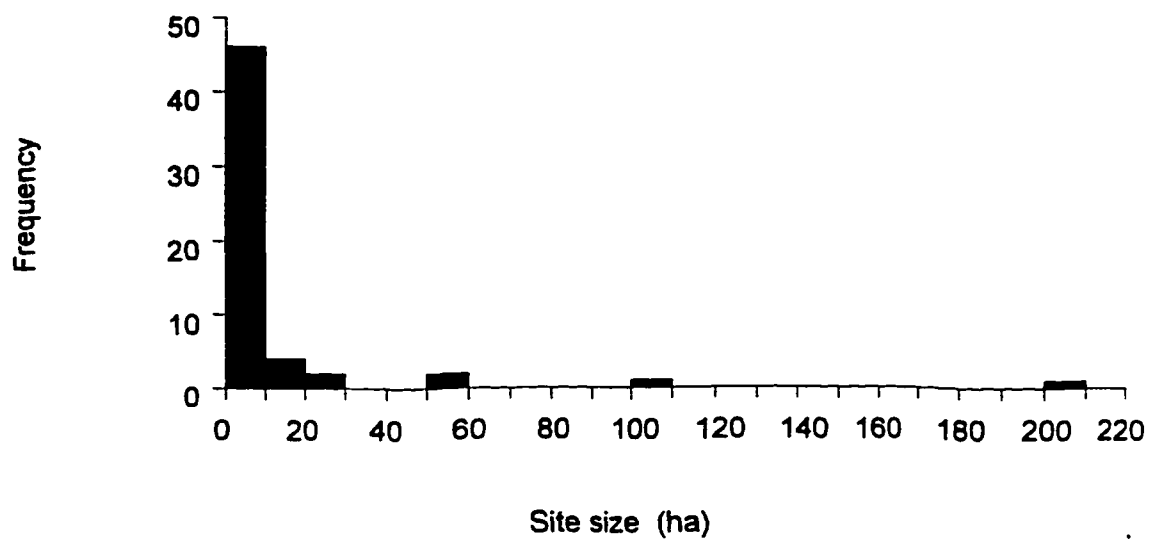


Figure 4: Population/settlement size histograms of pre- and post-Mfecane/Dfaqane combined

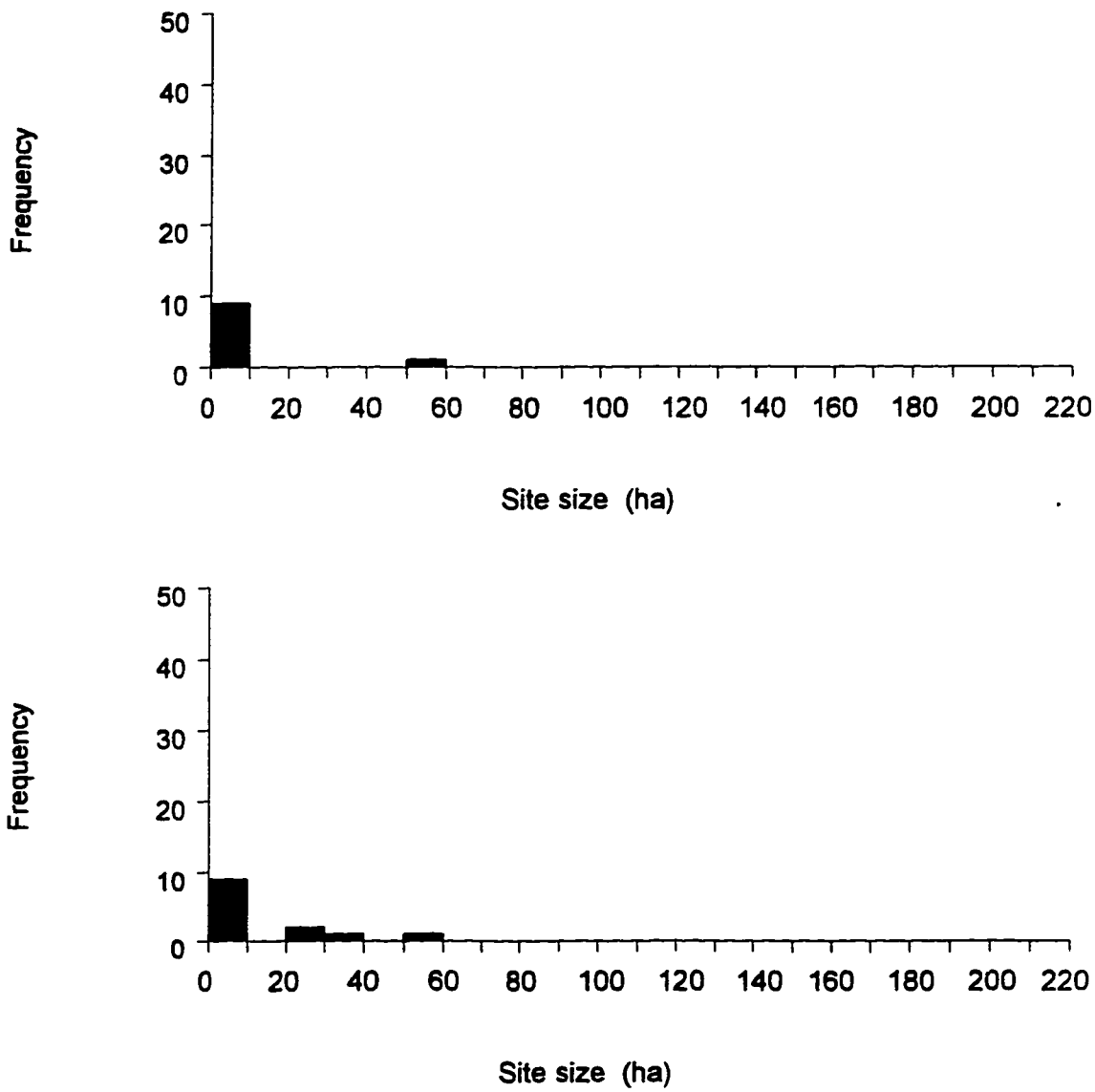


Figure 5: Population/settlement size histograms of pre- and post-Mfecane/Dfaqane Zululand

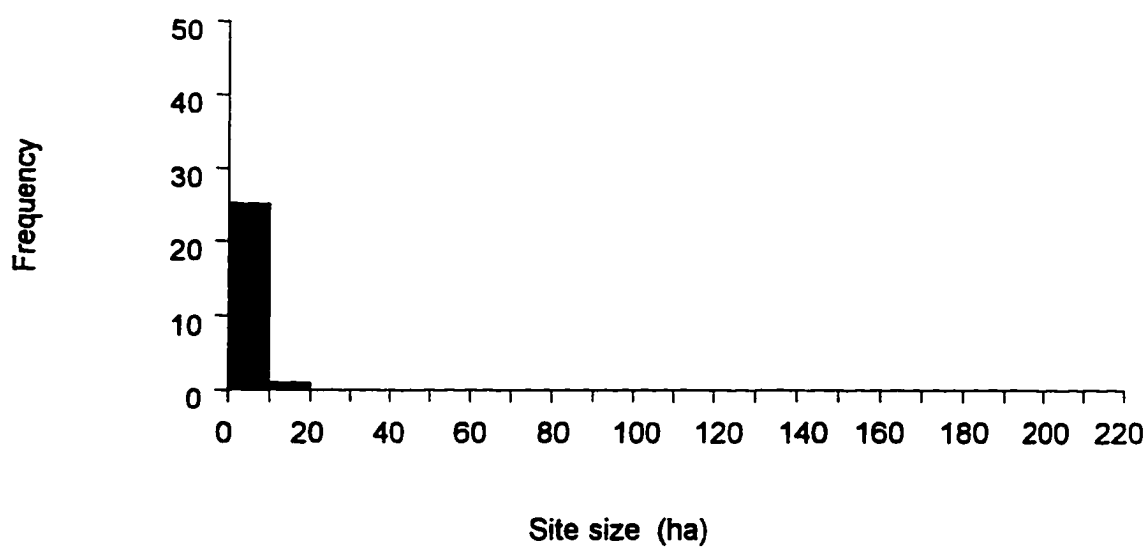
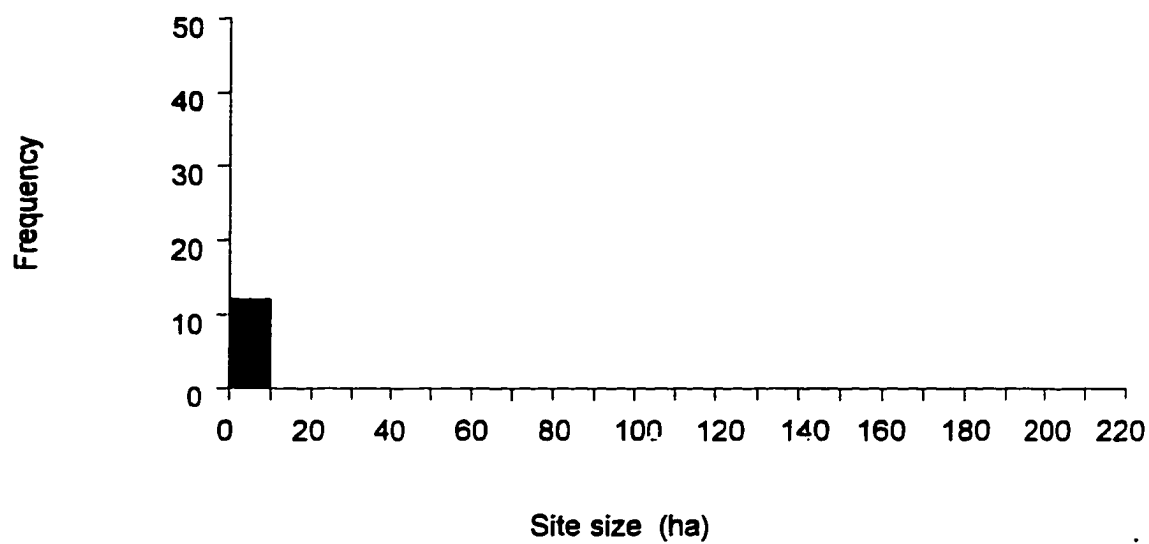


Figure 6: Population/settlement size histograms of pre- and post-Mfecane/Dfaqane Swaziland

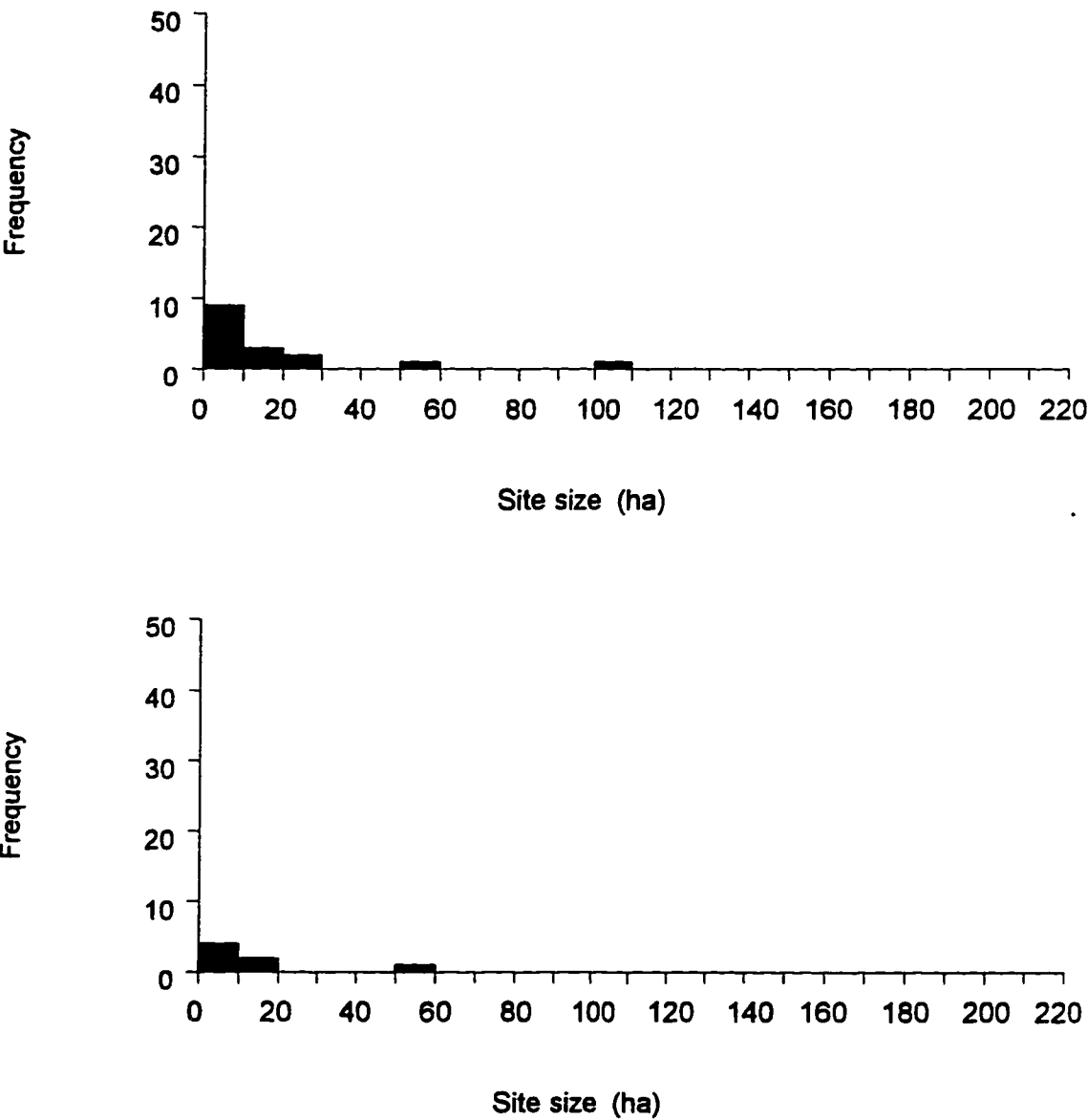


Figure 7: Population/settlement size histograms of pre- and post-Mfecane/Dfaqane eastern Transvaal

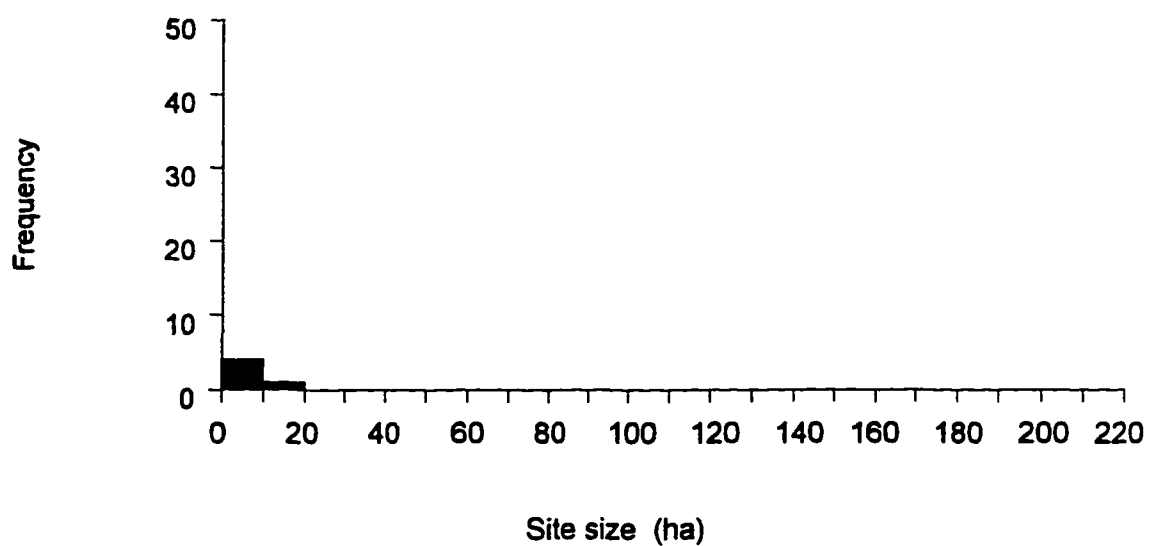
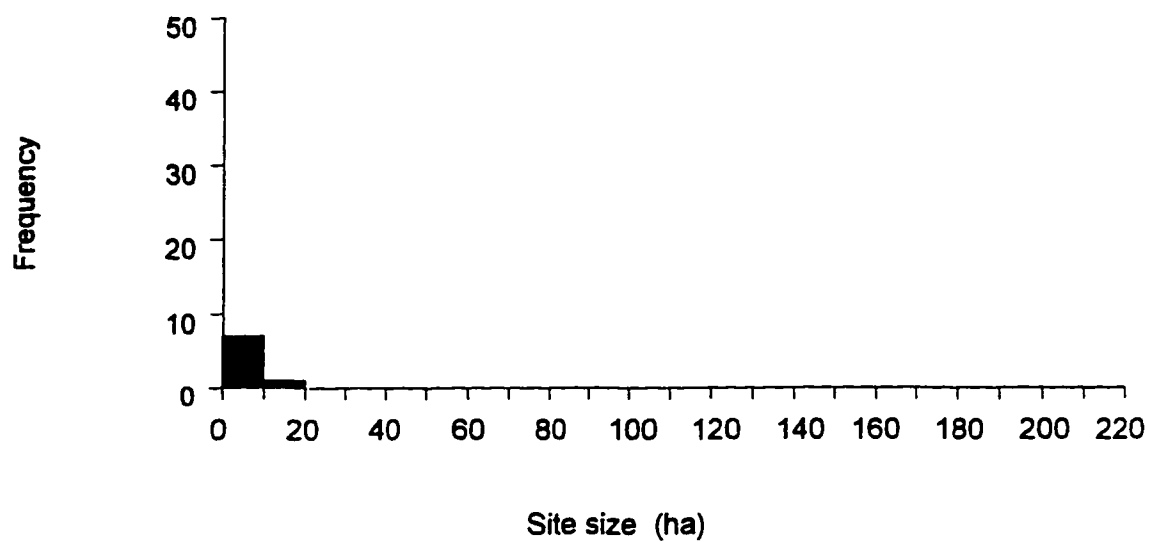


Figure 8: Population/settlement size histograms of pre- and post-Mfecane/Dfaqane western Transvaal

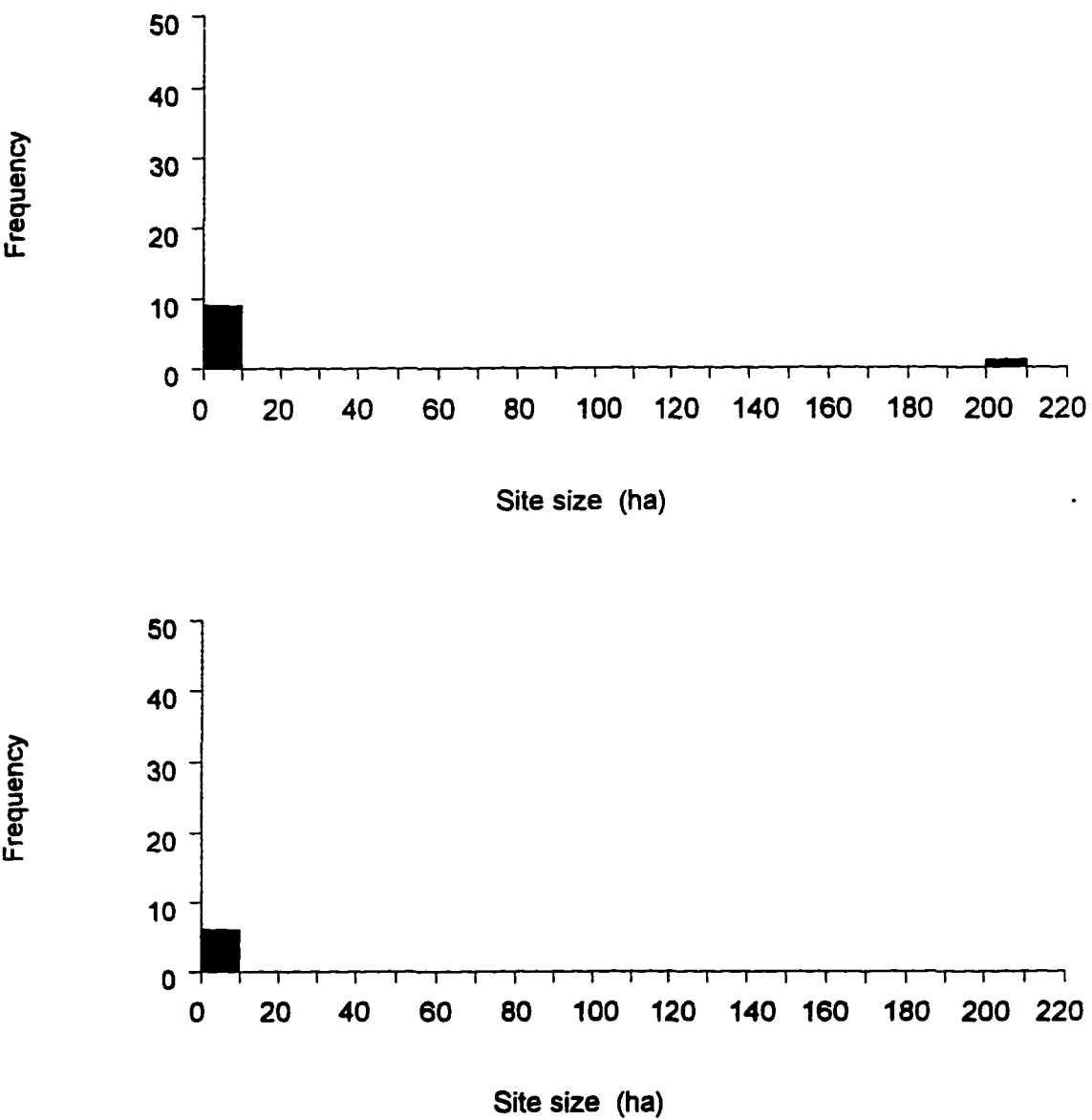


Figure 9: Population/settlement size histograms of pre- and post-Mfecane/Dfaqane Free State

Histogram Interpretations

Zululand

The pre-Mfecane/Difaqane site size histograms for Zululand exhibits a bimodal distribution and the post-Mfecane/Difaqane distribution is trimodal (see figure 5). In the earlier period, there are a total of 10 sites: 9 small sites with a range of variation between .1-7.5 hectares and a mean size of 3.9 hectares representing 90% of total; and 1 very large 50 hectare iron production site representing 10% of total.

The later period has 13 sites, an increase of 3 sites: 9 small sites with a range of variation between .1-7.2 hectares and a mean size of 2.7 hectares representing 70% of total; 3 medium size sites with a range of variation between 22.5-30 hectares and a mean size of 26.6 hectares representing 23% of total; and 1 large site of 50 hectares representing .07% of total.

There are a total of 6 sites that did not appear earlier; 4 large royal residences, 1 small animal trap site and 1 small refuge site. Of the new 5 later sites 2 are small sites, and 3 are large sites. Sites less than 1 ha increase from 1 pre-Mfecane/Difaqane to 3 post-Mfecane/

Difaqane. Finally, the only large pre-Mfecane/Difaqane site of 50 ha, an iron production site continued to be occupied and remained the largest post-Mfecane Difaqane site. But the 3 additional large sites between 22 and 35 ha are all royal residences. Thus the pre-to post-Mfecane/Difaqane transition in Zululand shows the formation of a middle tier of larger royal residences that probably housed a significant portion of the young male population. This combined with the increase in total sites suggest that in Zululand population increased only after the Mfecane/Difaqane.

The site typology suggests that the largest sites were iron production sites, and only later were royal residences among the larger sites. Thus, the population pressure hypothesis is not supported by these results because it appears that population increased after Zulu state emergence rather than before. I suspect that the post Zulu state population numbers may actually reflect increasing demographic densities resulting from population relocation. Therefore, I attempted to assess regional population densities from different areas of southeast

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Africa with archaeological data by analyzing regional site size transformations through time.

The pre-Mfecane/Difagane site size histograms for Swaziland exhibit a unimodal distribution with all "small" sites. In the earlier period, there are a total of 12 small sites with a range of variation between .004-6 hectares and a mean size of .76 hectares.

The later site size histograms show a bimodal distribution with small and medium sites. The later period has 26 sites: 25 small sites representing 96% of the total with a range of variation between .003-6 hectares and a mean size of 1 hectare; and 1 medium size site 12.5 hectare royal residence representing 4% of the total. Through time the total number of sites more than doubles going from 12 to 26. Eleven of the 12 pre-Mfecane/Difagane sites continued to be occupied after the Mfecane/Difagane. The 1 exception is a royal burial site. Of the 15 sites that emerged after the Mfecane/Difagane; 8 representing 54% of total are royal residences, 3 representing 22% of total are primary producer sites. There is also 1 fort, 1 refuge site, 1 royal grave site and 1 production site each representing 6% of total.

The transition from pre-to post-Mfecane/Difaqane Swaziland shows an increase of 14 small sites. This increase represents almost a doubling of small sites suggesting a significant population increase at these sites. Through time only 1 medium size site emerges and that is an early twentieth-century royal residence. This analysis suggests that population size in Swaziland increased even more dramatically after the Mfecane/Difaqane than that in Zululand and is concentrated in the small site size class.

The eastern Transvaal earlier period has a trimodal settlement hierarchy with a total of 16 sites: 14 small sites with a range of variation of between .01-26 hectares and a mean size of 6.3 hectares representing 88% of total; 2 medium sized sites ranging between 51.2-100 hectares and a mean size of 76 hectares representing 10% of total. The largest site of 100 hectares is part of a specialized complex of manufacturing sites which extended a minimum of 37 km².

The later site size histograms show a bimodal distribution with small and large sites and a total decrease of 9 sites. This period has 6 sites: 5 small sites with a range of variation between .01-16.5 hectares and a mean size

of 5.7 hectares representing 83% of total; and 1 large site of 51.2 hectares representing 17% of total. This large royal residence associated with iron production and other productive activities and primary producer homesteads remained occupied from the earlier period.

Through time population size appears to have decreased dramatically in the eastern Transvaal and is expressed in all size classes.

The histograms for the 8 pre-Mfecane/Difagane western Transvaal sites show a bimodal distribution of small and medium sized sites. The 6 small sites range between .03-3.24 hectares with a mean site size of 1.3 hectares. The largest site, is an 11.25 hectare royal residence.

The 5 later sites also exhibited a bimodal distribution of small and medium sized sites. Small sites range between .03-1.2 with a mean site size of .6 hectares. The largest site remains the 11.2 hectare royal residence from the earlier time period.

The site size ranges in the western Transvaal are very similar to those found in post-Mfecane/Difagane Swaziland. In both cases the largest sites are royal residences. What is different is that there are so many

small sites in Swaziland. Finally, the 3 small site decrease through time, suggests that population size in the western Transvaal decreased.

Histograms for the 10 early sites in the Free State sample yielded a bimodal distribution. The 9 small sites ranged between .02-1 hectare with a mean site size of .48 hectares representing 90% of total. The remaining large site at 200 hectares, probably a royal residence, was substantially larger than any in the entire southern Africa sample. This one site represents 10% of the total.

The 5 later sites show a unimodal distribution and are all small sites having a range of variation between .1-1 hectare with a mean size of .57 hectares.

The 4 small site decrease through time, coupled with the disappearance of the very large 200 hectare site suggest that population size in the western Transvaal decreased.

Combined site/population size histograms for southeast Africa (see figure 4) were constructed using samples from Zululand, Swaziland, Southern Mozambique, the Free State, the eastern and western Transvaal, the Cape Frontier and the Eastern Cape (Transkei).

The combined site/population size histograms for southeast Africa yielded a multi-modal distribution for the pre-Mfecane/Diqane period and a bimodal distribution for the later periods (see figure 4). In the earlier period, there are a total of 56 sites: 52 small sites with a range of variation between .01-23 hectares and a mean size of 2.9 hectares representing 92% of total; 3 medium size sites with a range of variation between 50-100 hectares and a mean size of 67 hectares representing 5% of total; 1 large site of 200 hectares representing 3% of total. The later period has 57 sites: 56 small sites with a range of variation between .1--35 hectares and a mean size of 3.4 hectares representing 98% of total; and 1 medium size site of 51.2 hectares representing 2% of total.

The results of the combined regional site size analysis suggest that through time overall population in southeast Africa increased slightly, going from 56 earlier sites to 57 later ones. It is important to note that through time all large sites are abandoned and there is a slight increase in small sites expressed by an increase in their mean size which increases from 2.9 hectares to 3.4 hectares.

The most glaring result of these analyses is that the transition from earlier to later periods was accompanied by a 34% decrease in total sites (and by implication people), for all areas except for Swaziland and Zululand which showed a 33% increase in total sites and we assume an increase in population.

Assuming a correlation between settlement and population sizes has several limitations. First, there are the difficulties of defining site size, establishing site boundaries, distinguishing permanent from temporary occupations, distinguishing site contemporaneity, and accounting for differential fieldwork intensity. Secondly, in seeking to estimate populations, there are several caveats that must be recognized and adhered to. Combining population figures for different polities from different times will undoubtedly bias data. Furthermore, it may be that the organizational scale and not the population size is the important variable for understanding the population-resource relation. This variable is measured by the number of basal organizational units like the number of extended families rather than simply the number of individuals (Johnson 1982).

In this regard, more extensive information on the number of dwellings, structures, and settlement units would have provided a means to estimate figures for basal organizational unit size. Such information is rarely available.

The population estimates from the literature for later periods showed an increase in population 51 times greater than earlier, and population estimates based upon population densities indicate an even greater increase 349 times larger than before the Zulu state. Such drastic increases in Zululand most likely reflect increasing population density, resulting from population agglomeration rather than general population increase.

In order to address questions of regional population density I utilized the data from Appendix 1 and 2 for other areas of pre-and post-Mfecane/Difaqane southern Africa using both ethnohistorical and archaeological analyses like those used in examining Zululand. These regions include samples from Zululand, Swaziland, the Free State, and the eastern and western Transvaal.

The ethnohistorical analysis used data from Appendix 2 which lists population estimates for various

southern African groups. The use of this data, however, presented particular difficulties. First of all, population estimates for post-Mfecane/Difaqane groups far outnumbered pre-Mfecane/Difaqane estimates. For instance, there are 7 citations giving population estimates for pre-Mfecane /Difaqane Sotho-Tswana and 29 for post-Mfecane/Difaqane Sotho-Tswana. An extreme example is the Swazi with no pre-Mfecane/Difaqane demographic information and only 2 population estimates for the post-Mfecane/Difaqane. This bias towards the later periods probably reflects a differential emphasis on post-Mfecane/Difaqane population estimates.

Furthermore, population estimates were given for particular "ethnic" groups (e.g., Tlokwa, Pedi etc.) while the larger classification of Sotho-Tswana was often presented as either Sotho-Tswana, Sotho, or Tswana. Since different groups of Sotho-Tswana inhabited different areas at different times, it is not always clear from the literature which Sotho-Tswana at what time is being referred to. Consequently, the Sotho-Tswana were the only other people with enough information on population size with which to perform an ethnohistorical population analysis. Although

there were some statements of territorial sizes, there were no population density figures for pre-Mfecane/Difagane Sotho-Tswana.

The results of the ethnohistorical analysis on general demography show a mean population for pre-Mfecane/Difagane Sotho-Tswana as 13,416, while post-Mfecane/Difagane Sotho-Tswana have a mean population of 183,433. Based on these figures, population among the Sotho-Tswana after Zulu state formation was about 14 times greater than before the Zulu state.

Site size data in Appendix 1 were used to produce population estimates for Zululand, Swaziland, the eastern Transvaal, the western Transvaal and the Free State. Local population in Zululand, as indicated by total site size, increased substantially, going from 78 ha to 155 ha in settlement, an increase of 77 ha. Local Swaziland population, as indicated by total site size, increased 18 ha going from 21 ha to 39 ha in settlement. Eastern Transvaal's local pre-Mfecane/Difagane population decreased dramatically, going from 214 ha in settlement to 80 ha after the Mfecane/Difagane, a decrease of 134 ha. Local population in western Transvaal decreased only slightly.

Hectares in settlement went from 17 pre-Mfecane/Difaqane ha to 13 post-Mfecane/Difaqane ha, a decrease of 4 ha. Free State population suffered the most precipitous decrease, falling from 204 pre-Mfecane/Difaqane ha in settlement to only 13 post-Mfecane/Difaqane ha, a decrease of 191 ha.

Based on the total number of sites per time period, overall population in southeast Africa seems to have increased slightly. At the same time the total number of hectares in the southeast African sample in settlement dropped 441 ha, going from 637 ha during the pre-Mfecane/Difaqane period to 196 ha for the post-Mfecane/Difaqane period. Thus although site number appears to have remained somewhat stable despite increases and decreases in certain areas, overall area in settlement was reduced by about 31 %.

These results suggest that populations abandoned certain areas and clustered in others after the Mfecane/Difaqane. Furthermore, the transition from pre-Mfecane/Difaqane to post-Mfecane/Difaqane in southeast Africa was accompanied by a 34% decrease in total sites for all areas except for Swaziland and Zululand which showed a 33% increase in total sites.

The demographic situations in eastern Transvaal and Free State are perhaps the most interesting. In terms of regional demographics, it seems that during the earlier periods the eastern Transvaal and Free State populations were significantly larger than that of Zululand, but during the later periods as the Zululand population increased, the eastern Transvaal and Free State populations underwent an overall reduction suggesting a population shift from these areas into Zululand and Swaziland.

The regional evidence then does not support a hypothesis of population increase prior to the Zulu state formation. I would interpret the increases in the later numbers as supporting increasing demographic relocation resulting from warfare combined with captive and cattle raiding by colonial agents. The raiding for African captives and cattle, probably lessened regional population although increases in demographic densities resulting from relocation probably did occur and might well account for increasing population densities following the Mfecane/Difaqane. This explanation might better account for the slightly smaller regional population accompanied by greater

population densities in Zululand, and the decrease in hectares of settlement following the Mfecane/Difaqane.

What seems to be going on is massive shifts in population from one region to another and a shift from more uniform to more clustered distributions of sites across the landscape, such as would be expected if warfare was the stimulus for this population movement. Thus the Mfecane/Difaqane is associated with an unprecedented increase in the amount of movement induced by violence. In other words peace has a centrifugal tendency, spreading primary producer sites across the landscape and war is a centripetal force, pulling primary producer populations into centers.

Social Hierarchy Predicted by the Settler Model

The settler model predicts what kinds of political organizations existed in specified regions before the Mfecane/Difaqane, and what kinds existed in those regions afterwards. Does the archaeological record support these predictions? There are two major sources of information used to investigate these assumptions: settlement hierarchy, as seen in the site-size histograms, and differential control over cattle, as seen in stock enclosure sizes. In

addition, more traditional archaeological evidence of social differentiation discussed below is also used in evaluating the settler model. Using Appendix 1 I calculated the percentage of pre-and post-Mfecane/Difaqane sites with evidence of social hierarchy. Some of these sites do not have sizes and were therefore not included in the site size analysis. I included all sites with oral historic claims to have been royal residences, sites with elite culling patterns, and the traditional evidence described below.

Several anthropological scholars concerned with political evolution have sought ways to distinguish states from other forms of political organizations archaeologically. Studies investigating archaeological correlates for "chiefdoms" in southern Africa (Evers and Hammond-Tooke 1986; Huffman 1984; Taylor 1975) and "middle range hierarchical societies" (Taylor 1975) have argued for a systematic relationship between settlement hierarchies and political organization in these societies (Huffman 1984; Taylor 1975). Wright (1977, 381), Johnson (1977, 1978), and Wright and Johnson (1975), using Near Eastern data, argue that the decision-making organization (not necessarily levels of stratification or "symbolized hierarchy") of

states results in a minimum of three hierarchical levels of settlement size above that of the primary producers.

Other types of archaeological expectations have also been suggested, such as: (1) large deposits of cattle bones characterized by an elite cattle culling pattern and when both elite and nonelite culling patterns occur at capitals, they should exhibit differential midden distributions; (2) many large central enclosures and/or courts accompanied by deep midden deposits; (3) larger and more complex, decorated settlement units with greater number of wives represented by more dwellings; (4) a greater variety, number and concentration of high status foreign commodities and or specialized goods and resources and/or insignia or staffs of office; (5) superstructural archaeological evidence for centralized control of initiation schools to indoctrinate warriors expressed by clay shields, and miniature, abstract human and animal (cattle) figurines associated with elite courts and enclosures; and (6) differential burial practices, locations, and contents (Evers and Hammond-Tooke 1986; Evers 1984; Huffman 1986).

Huffman (1984, 1986) argues that class and state formation in southern Africa are expressed archaeologically by a "Zimbabwe cultural pattern" as distinct from the "Bantu culture pattern" described above. The "Zimbabwe culture pattern" sites house elites and are represented by much larger "acropolis" sites. These sites are far larger than any other in the region and are situated on ground higher than the surrounding area which contains smaller sites inhabited by subordinate classes. Elite sites had "prestige" stone walling, elite burials, a huge court with various elite symbols, a ritual headquarters, and faunal remains exhibiting an elite cattle pattern.

Zululand

According to the standard Mfecane/Difaqane model we should expect minimally tiered settlement hierarchies in pre-Mfecane/Difaqane Zululand along with minimal evidence of social differentiation. Cattle enclosure sizes should be small to moderate with faunal remains characterized by primary producer cattle culling patterns.

State and class formation should only be evident after the Mfecane/Difaqane. Kinds of artifactual evidence diagnostic of state formation cited above should be present

along with a multi-tiered regional settlement hierarchy. We should also expect large stock enclosures/courts with extensive deposits of cattle bones characterized by an elite cattle culling pattern.

Swaziland

Similarly, pre-Mfecane/Difaqane sites should have little architectural, artifactual or faunal evidence of social hierarchy, and should have fewer than three tiers in their settlement hierarchy.

Post-Mfecane/Difaqane Nguni sites should be multi-tiered, contain elite objects, large enclosures, and cattle bones with elite culling patterns. Sotho sites should maintain settlement hierarchies of three tiers or less, and have small enclosures, yield sheep/goat remains and contain no elite artifacts.

Eastern Transvaal

There should be little or no archaeological evidence of social hierarchies at either pre-or post-Mfecane/Difaqane agropastoral sites and certainly none at pre-or post-Mfecane/Difaqane pastroforager sites.

Western Transvaal

Archaeological evidence for social hierarchy should be minimal at pre-and post-Mfecane/Difaqane agropastoral sites. Faunal remains should be dominated numerically by sheep/goat bones and when cattle are present, they should display a primary producer culling pattern.

Free State

There should be little or no archaeological evidence for pre-or post-Mfecane/Difaqane social hierarchy at Sotho-Tswana sites. European homesteads located on the frontier should show little evidence of social hierarchy until after the Mfecane/Difaqane when Africans begin to seek refuge at these and other European sites. Only post-Mfecane/Difaqane racially mixed Griqua and Kora sites should exhibit social hierarchy.

Archaeological Analysis

Settlement Size Hierarchies

A settlement hierarchy analysis was run on both earlier and later sites in Zululand to investigate the hierarchical relations of the study area that might inform on the Mfecane/Difaqane explanations. I assumed that all

settlements in Zululand were involved in one political economic system. For comparative purposes, a second set of settlement hierarchy analyses was run on the settlement data samples from Zululand, Swaziland, eastern and western Transvaal and the Free State. I was particularly interested in the Eastern Transvaal and the Free State because earlier analyses suggest an inverse relationship between these areas and Zululand.

Settlement unit sizes were tabulated for each time period, calculated in hectares and stated as minimum confirmed sizes. Site/population size histograms of settlement sizes for all areas in southeast Africa and each time period were constructed and the frequency distributions interpreted to see how many size types exist (see figures 4-9). These histograms have been described in detail earlier. Each site type was defined in terms of: 1) mean size, 2) range of variation, 3) number of sites belonging to that type.

Some tripartite schemes have been developed for southern African settlements like that used by Wright and Kus (1979) for sites in central Imerina, Madagascar: small = 01-.49 ha; medium = .50-3.0 ha; and large = > 3.0 ha. For

Botswana, Denbow and Wilmsen (1986) also defined three categories: hamlets = .1 ha; middle range (hinterland secondary villages) = 1 ha; and capitals or large towns = 10 ha.

Huffman (1984, 1986) has proposed a positive correlation between the degree of political stratification and the number of site size modes for southern African agropastoral polities. He argues that the levels of the political hierarchy have a corresponding site size hierarchy of anywhere from two to six levels with most populations having two-tier political and settlement hierarchies (Huffman 1984, 19). His hierarchies include: "petty chiefs" who have three tiers with all small settlements about the same size; "senior chiefs" and above who have four levels; and "paramount chiefs" with five-plus level hierarchies. Furthermore, the larger size level is sometimes 3 or 4 times the size of the small base of settlements near agricultural fields which typically accommodates more than half of the population (Huffman 1984, 2, 1986, 292). It is within this five-tier hierarchy that he places the Zulu, Swazi, and Sotho.

Furthermore, Huffman argues that this correlation between settlement size and political stratification also includes the number and size of courts, cattle, agricultural fields, wives, population and territory controlled (Huffman 1984, 3-6, Huffman 1986, 293). He suggests that these relations increase and are most clearly evident at the upper levels of a hierarchy when comparing capitals whose absolute size and relative differences from subordinate settlements is most marked due to the large number of activities and elite individuals and their retainers located there (Huffman 1984, 4-6, 1986, 294).

I examined the site size histograms to see whether either Huffman's or Denbow and Wilmsen's models fit the southeast African data and to see what kinds of political organizations existed in southeast Africa before and after the Mfecane/Difaqane. The point of the settlement/population size hierarchy discussion is that the complexity of political organization after the Mfecane/Difaqane is expected to be greater than it was before, according to the settler model. Therefore, the issue for me is not whether hierarchy was absent before Mfecane/Difaqane times, but rather whether there was less hierarchy.

Interpretations of Social Hierarchy based upon Histograms,
Oral Traditions and Artifacts

Zululand

Pre-Mfecane/Difagane Zululand sites exhibit a two-tier settlement hierarchy. Although, 19 sites were classified as royal residences there was no artifactual or mortuary evidence of social differentiation at these sites (see Appendix 1). Of the 27 pre-Mfecane/Difagane sites in Appendix 1, 19 representing 70% of total have artifactual evidence of social hierarchy including oral history accounts claiming them as royal residences (see Appendix 1, Table 1).

Post-Mfecane/Difagane Zululand had a trimodal settlement hierarchy with 11 fewer royal residences than earlier and no artifactual or mortuary evidence of social differentiation. However, of the 22 post-Mfecane/Difagane sites in Appendix 1, 9 representing 41% of total have artifactual evidence of social hierarchy (see Appendix 1, Table 1).

The pre-and post-Mfecane/Difagane Zululand patterns do not correspond to Huffman's five and six-tier political level predicted for the Zulu. The greatest increase in sites through time is in medium size sites. Furthermore,

the largest site for both periods is not a royal residences, as expected but rather an iron production site, significantly larger than all others in the earlier period and continuing to be occupied. Only during the post-Mfecane/Difaqane did royal residences become larger, and even then they remained smaller than the largest iron production site.

The evidence from oral traditions and artifacts indicate a 30% decrease in the percentage of sites with elite material culture.

Thus, the archaeological evidence suggests that the socio-political situation in Zululand is quite complex. The argument for increasing social hierarchy after the Mfecane/Difaqane in Zululand is only partially supported. Although elite site sizes increase through time, their total number decreases. Furthermore, none of the pre-Mfecane/Difaqane sites contain elite material culture, and the percentage of sites with such goods decreases. Yet, it appears that not only were there many elite sites before the Mfecane/Difaqane, but there were also fewer elite sites after the Mfecane/Difaqane. Finally, the largest earlier and later site is an iron production site.

Thus it appears that state formation outside of Zululand results in the many competitors in the pre-Mfecane/Difaqane who have not monopolized access to surplus. This is followed by the emergence of a single Zulu state that has the ability to control surplus and so you get "elite" looking sites.

Swaziland

Pre-Mfecane/Difaqane sites have a unimodal settlement hierarchy with the largest site being a 6-hectare royal residence. Of the 12 pre-Mfecane/Difaqane sites in Appendix 1, 5 representing 42% of total have artifactual evidence of social hierarchy (see Appendix 1, Table 2).

Despite the fact that the the largest post-Mfecane/Difaqane site is a 12.5 hectare royal residence, the settlement size hierarchy indicates a continuation of minimal social hierarchies in post-Mfecane/Difaqane Swaziland.

Of the 30 post-Mfecane/Difaqane Swaziland sites in Appendix 1, 16 representing 53% of total have artifactual evidence of social hierarchy (see Appendix 1, Table 2).

The archaeological evidence for socio-political organization in Swaziland, not unlike that for Zululand is

complex. For instance, the settlement hierarchy shows the maintenance of a unimodal distribution of small sites. Yet this is combined with a slight increase in the percentage of sites with elite items.

Eastern Transvaal

Contrary to the settler model predictions for pre-Mfecane/Difaqane eastern Transvaal the largest site observed is twice as large as the largest site in Zululand (an iron production site) during any time period. A second royal residence, the same size as the largest Zululand site shows evidence of involvement in large scale mineral production. The material culture, faunal remains, and burials from many sites including the very large site suggest pastroforager occupation and social hierarchy.

Of the 22 pre-Mfecane/Difaqane sites in Appendix 1, 7 representing 32% of total have artifactual evidence of social hierarchy (see Appendix 1, Table 4). Furthermore, sites with agropastoral material objects are far smaller than those with pastroforager artifacts.

The decrease from an early 3 tier settlement hierarchy to a later 2 tier site size hierarchy suggests a decrease in social hierarchy. Of the 15 post-Mfecane/

Difaqane sites in Appendix 1, 8 representing 53% of total have artifactual evidence of social hierarchy (see Appendix 1, Table 4). The archaeological evidence is once again ambiguous on the issue of increasing social hierarchy. The decrease in settlement tiers suggests a decrease in social hierarchy, while there is an increase in the percentage of sites with elite material culture. Finally, there is other provocative archaeological evidence such as the abandonment of the largest earlier specialized production site; "pastorforager" sites with evidence of social hierarchy; and the continued occupation of the largest royal residence that demonstrate the complexity of social hierarchy in eastern Transvaal.

Western Transvaal

The pre- and post-Mfecane/Difaqane site size distributions are unimodal for western Transvaal suggesting no increase in social hierarchy. Of the 19 pre-Mfecane/Difaqane sites 5 in Appendix 1, representing 26% of total have artifactual evidence of social hierarchy. Of the 8 post-Mfecane/Difaqane sites in Appendix 1, 2 representing 25% of total have other kinds of evidence of social hierarchy (see Appendix 1, Table 5).

In the western Transvaal both the site size analysis and the artifactual analysis suggest that social hierarchy remained the same. This conclusion is also supported by the fact that the largest site in both periods is a 11.2 hectare royal residence. Furthermore, artifactual, architectural and faunal differences ascribed to ethnic and subsistence differences in the settler model seem to be less apparent here than in the eastern Transvaal.

Free State

The Free State pre-Mfecane/Difaqane site size distribution is bimodal. Yet, the 1 large site of 200 hectares, probably a royal residence, is the largest site in the entire southeast African sample. In addition, this huge site has evidence of social hierarchy and pastroforager occupation. Of the 14 pre-Mfecane/Difaqane sites in Appendix 1, 9 representing 64% of total have evidence of social hierarchy while 7 representing 50% of total, have archaeological evidence of social hierarchy and pastroforaging (see Appendix 1, Table 6).

The unimodal distribution of all small sites, 1 hectare or less, displayed by the later sites strongly suggests a decrease in social hierarchy. Yet, of the 10

post-Mfecane/Difagane sites in Appendix 1, 6 representing 60% of total have other kinds of evidence indicating social hierarchy, while 5 representing 50% of total, have archaeological evidence of social hierarchy and pastroforaging (see Appendix 1, Table 6).

The evidence from Free State settlement size hierarchies, and the decrease in the percentage of sites with material culture expressions of social hierarchy suggests a decrease in social hierarchy through time.

Site size histograms for southeast Africa suggest a transformation from a multimodal settlement hierarchy to a bimodal settlement hierarchy, indicating a decrease in social hierarchy through time.

The general results of the regional site size analysis and artifactual analysis are complex and varied. Only the settlement hierarchies from Zuland, show an increase in social hierarchy, with all other regional hierarchies decreasing. Similtaneously, there are other kinds of archaeological evidence in all regions, that indicate the opposite result for social hierarchy formation over time.

The most intriguing area is the Free State whose early bimodal distribution contained a very large site, OFD 1 which is 4 times larger than the largest in Zululand and is the largest site in the entire southeast African sample. This elite site is particularly interesting for other reasons besides its huge size. The faunal assemblage, although dominated by wild game and containing marine resources, is characterized by an elite cattle culling pattern along with sheep/goat. There is evidence of glass beads and bead production, copper, rock gongs and miniature pots suggesting initiation or other ritual significance. Also, there are burials with stone-lined tombs and many grave goods. Stone tools, red ochre chunks, bored stones and undecorated grass-tempered pottery typical of ethnographic pastroforagers is also present. Finally, there is evidence of at least one burnt dwelling and the site is no longer occupied during the later periods.

The most provocative regional relationship is seen in the transition from earlier to later periods accompanied by a 34% decrease in total sites for all areas except for Zululand and Swaziland which showed a 33% increase in total sites. This strongly suggests that Zululand and Swaziland

were experiencing similar transformations which were having the opposite affect upon the other regions. This core area containg Zululand and Swaziland may represent state formation processes. In addition, the increase and concentration of small sites in this could suggest that Swaziland is peripheral to the Zululand core area.

After the emergence of the Zulu state the Free State sites exhibit a unimodal distribution of all "small" sites less than 1 hectare. The largest site is Khartoum I, a 1 hectare primary producer site that was occupied in the earlier period as well, and is located about 50 km west of the now abandoned OFD 1. Khartoum I contains glass beads from the Atlantic coast and undecorated grass-tempered ceramics, and both cattle and wild game (Humphreys 1973; Maggs 1977).

These analyses suggest that earlier periods were perhaps more peaceful than later times since the smaller (primary producer) and large (production) sites, were more evenly distributed spatially across the region. Furthermore, since the largest early site in Zululand was an iron production site, this could suggest less stratified social relations and iron production for local markets.

Finally, the larger production sites were all outside of Zululand.

In sum, the structural evidence from settlement hierarchies alone is very misleading, the evidence for social hierarchy is quite complex and dependent on the number and kinds of evidence selected for analysis. Furthermore, different regions were experiencing social hierarchy differently at different times. Whatever the case, the settler model's prediction of increasing social hierarchy after the Mfecane/Difaqane is not supported. The evidence from these limited analyses indicates that the situation was far more complex.

Cattle Enclosure Sizes

In chapter three I discussed the political economy of cattle in southern Africa. Recall that differential possession of cattle and their accumulation are key indicators of social inequality among southern African polities. Consequently, cattle enclosure size can heuristically be used as a surrogate to inform on status, wealth and power, and hence class and state formation in southern African societies.

Hall has combined the concept of "animal unit" (AU) from Mentis and Duke (1976) with modern Zulu herders' estimates of possible cattle housed at Zululand archaeological sites to devise a formula to estimate "animal units" (AU) based upon cattle enclosure size. He estimates a requirement of 5 m² per adult animal within a herd enclosure. He then uses this number to estimate the total herd size of each region in his Zululand study area (Hall 1981, 135 and 158).

Other Africanist scholars have derived mean central enclosure sizes. For instance, Denbow and Wilmsen's (1986, 13) middle range sites in Botswana have central enclosure sizes 70 m in diameter (3,848 m² area). Maggs (1971, 42-44) measured cattle enclosures sizes of the Riet River settlement units in describing the structure of his Type R settlements. His histograms revealed two distinct size classes; many small enclosures between 2-14 m in diameter (3-154 m² area) and few large enclosures ranging between 21-70 m in diameter (346-3,848 m² area). He suggests functional differences in terms of adult and juvenile animals or cattle versus sheep/goat. Maggs also noticed that there was at least one large enclosure on every

settlement unit and that only small enclosures were isolated from settlement units. Huffman (1984) says that 50 m diameter (1,963 m² area) central enclosures are representative of small weak "petty chiefdoms" or a ward headperson.

The goal of my analysis was to gauge the wealth of the different sites through time in order to assess whether any changes resulted from Zulu state emergence. Since cattle, sheep, and goats all represent wealth in some form, a standardized faunal unit was felt to be appropriate. I used the formula for the area of a circle (πr^2) to calculate the enclosure size in m². Then following Hall (1981, 137) I divided the enclosure area by 5 m² /adult animal to obtain an estimate of "animal units" penned at each enclosure and at each settlement.

Early and later period central enclosure sizes were then tabulated in square meters for all areas with faunal data (see Appendix 3 and 6) by time period, and histograms for both were generated (see figures 10-14). An estimated number of AU's based upon Hall's formula were also calculated and all information was placed into Appendix 3 and 6.

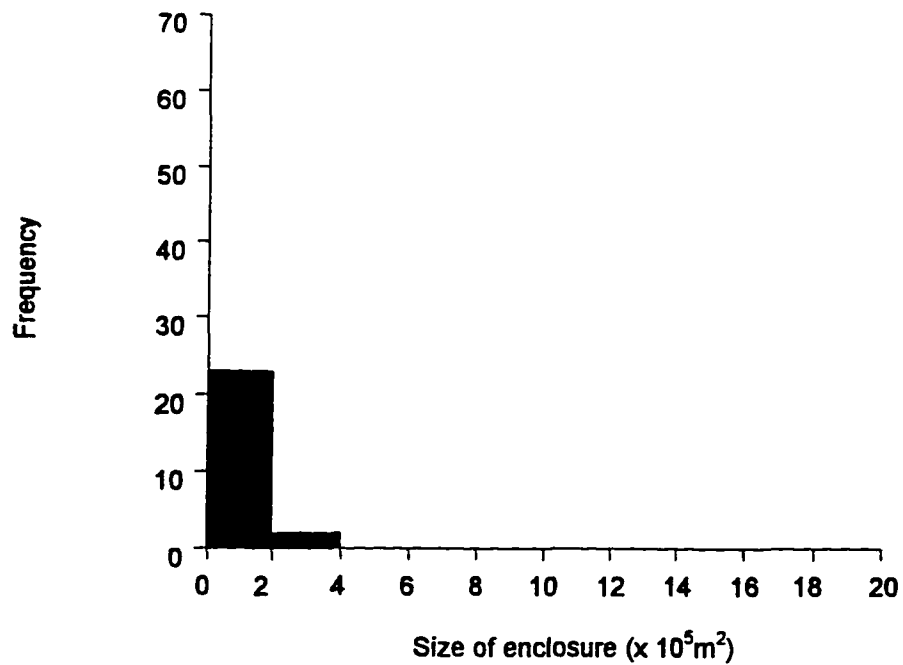
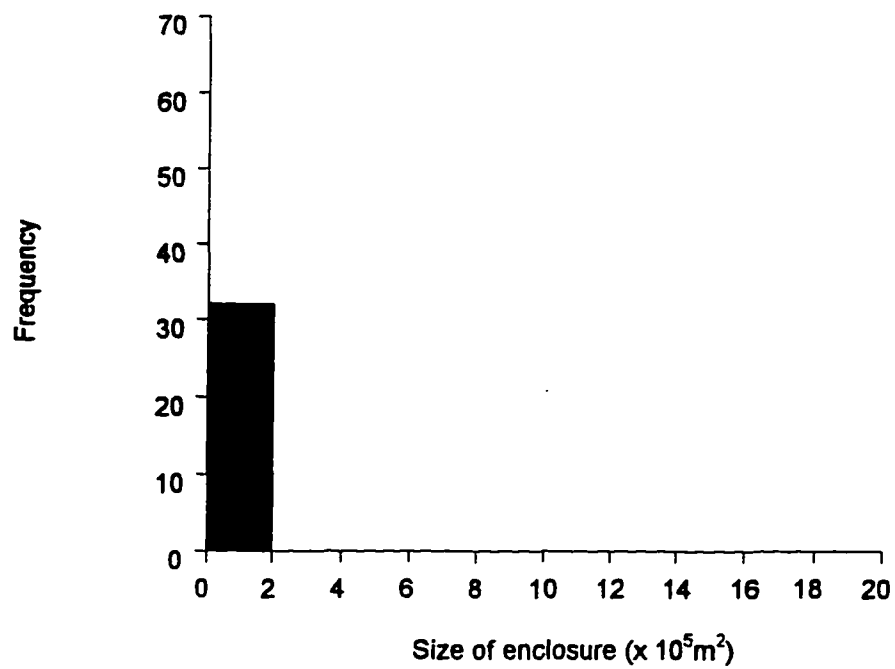


Figure 10: Enclosure size histograms of pre- and post-Mfecane/Difaqane Zululand

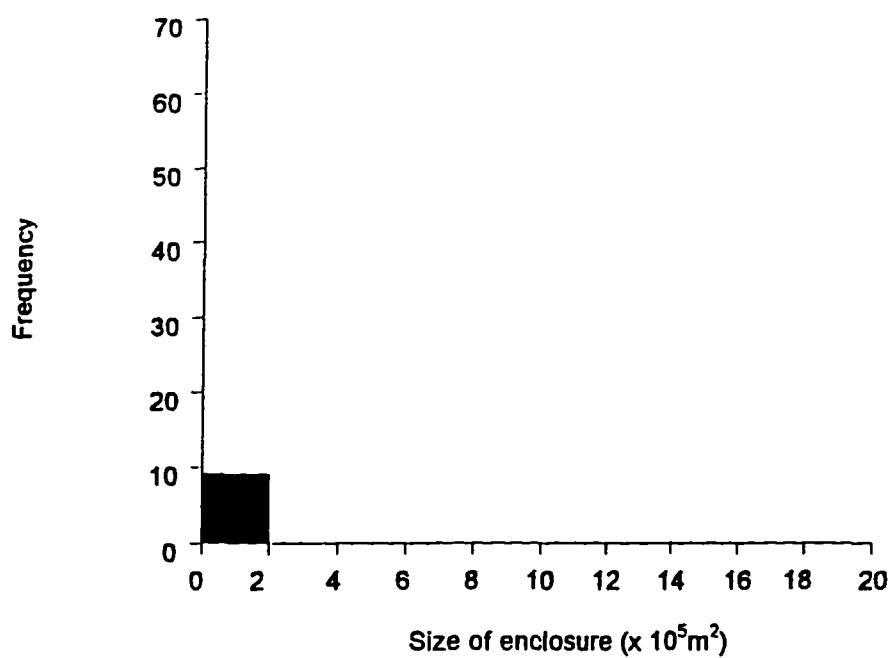
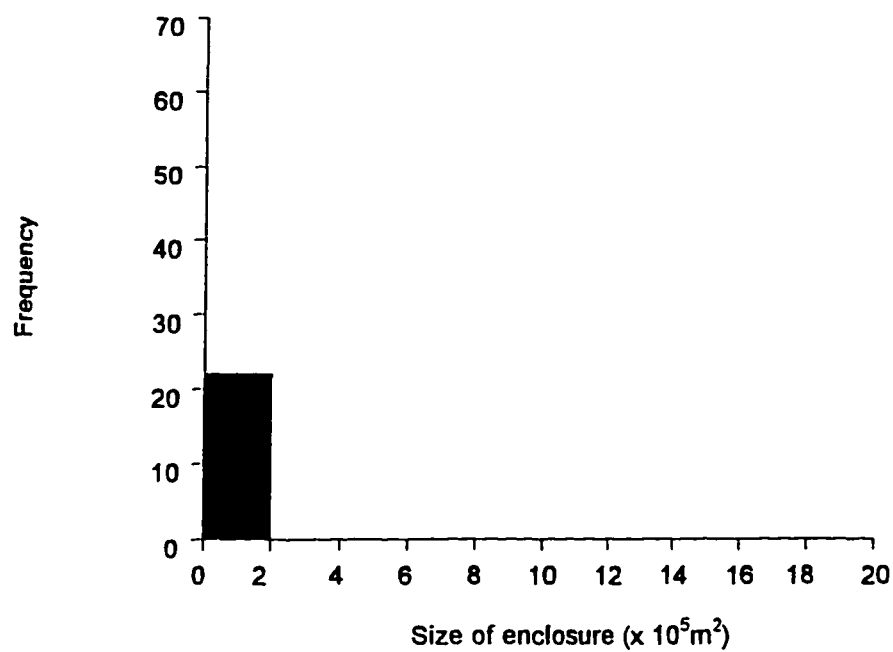


Figure 11: Enclosure size histograms of pre- and post-Mfecane/Difaqane Swaziland

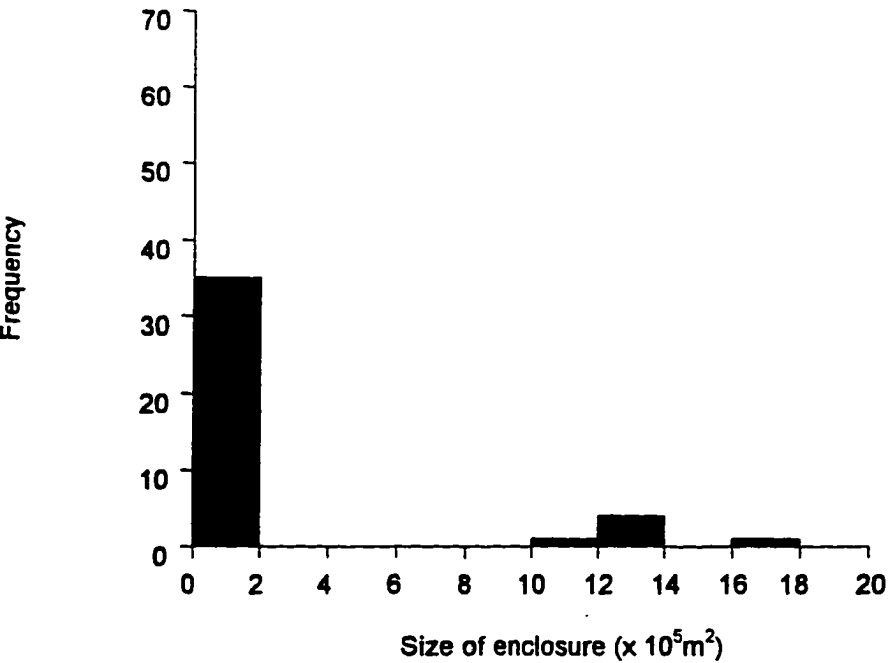
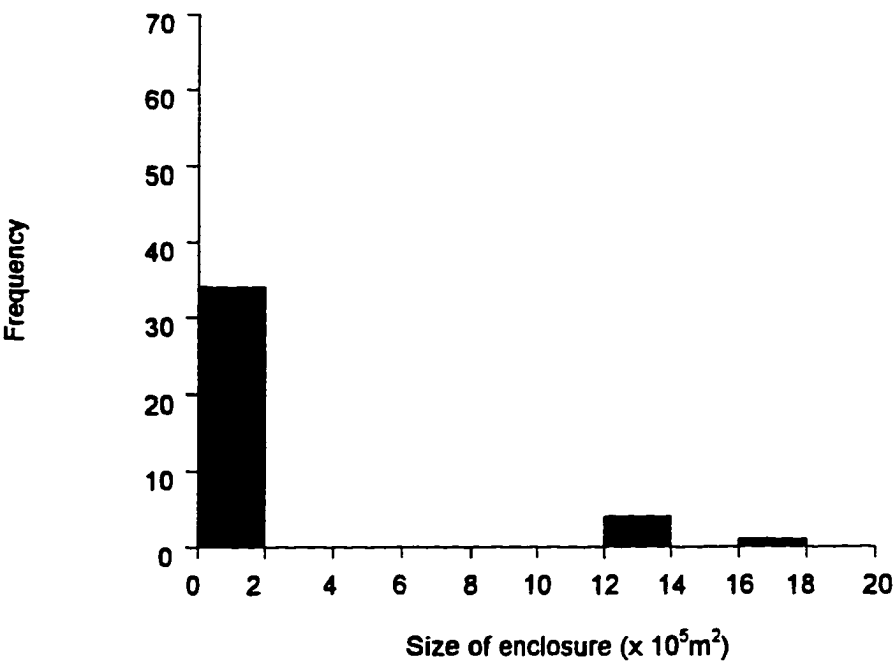


Figure 12: Enclosure size histograms of pre- and post-Mfecane/Difaqane Eastern Transvaal

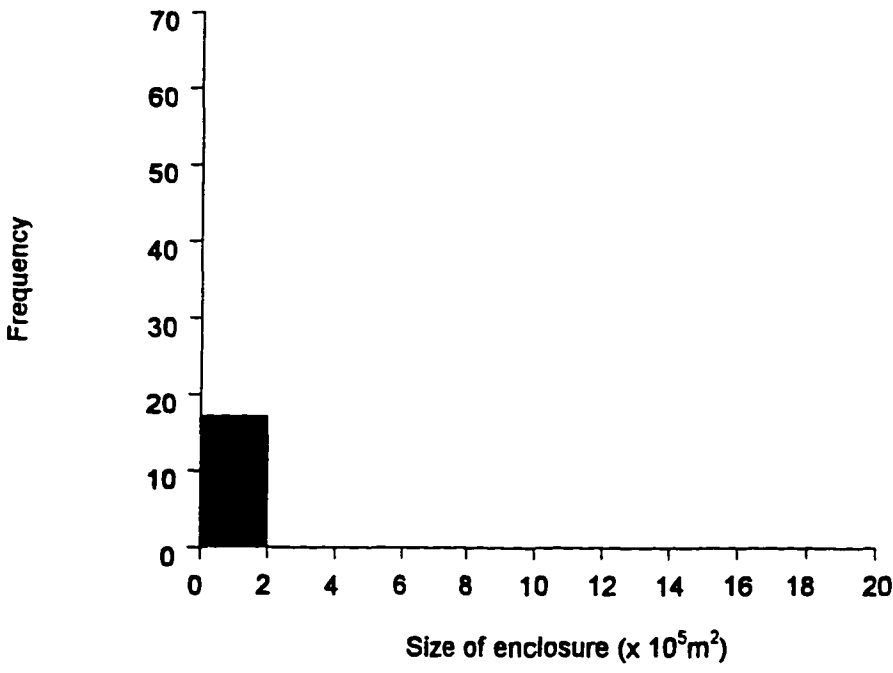
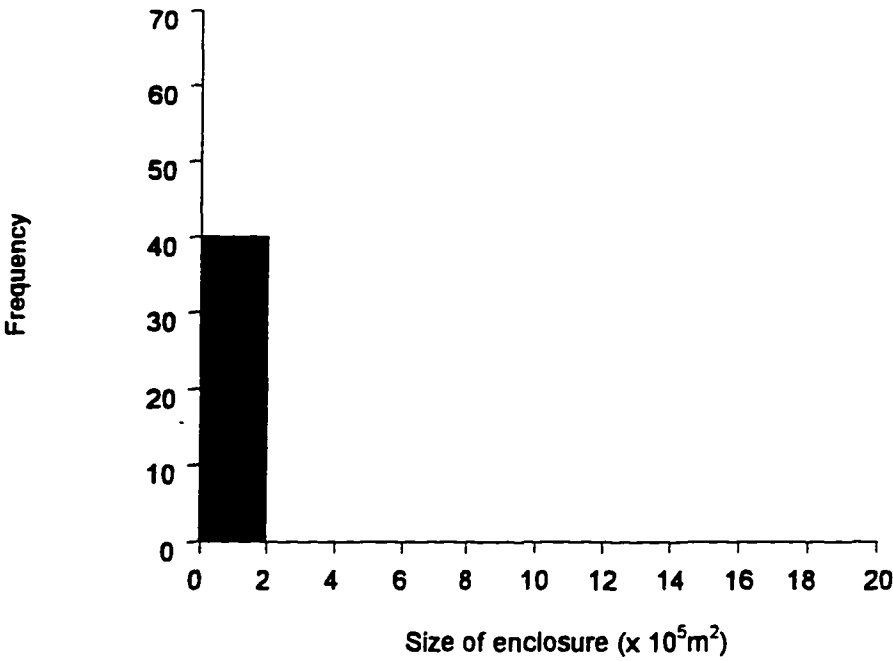


Figure 13: Enclosure size histograms of pre- and post-Mfecane/Difaqane Western Transvaal

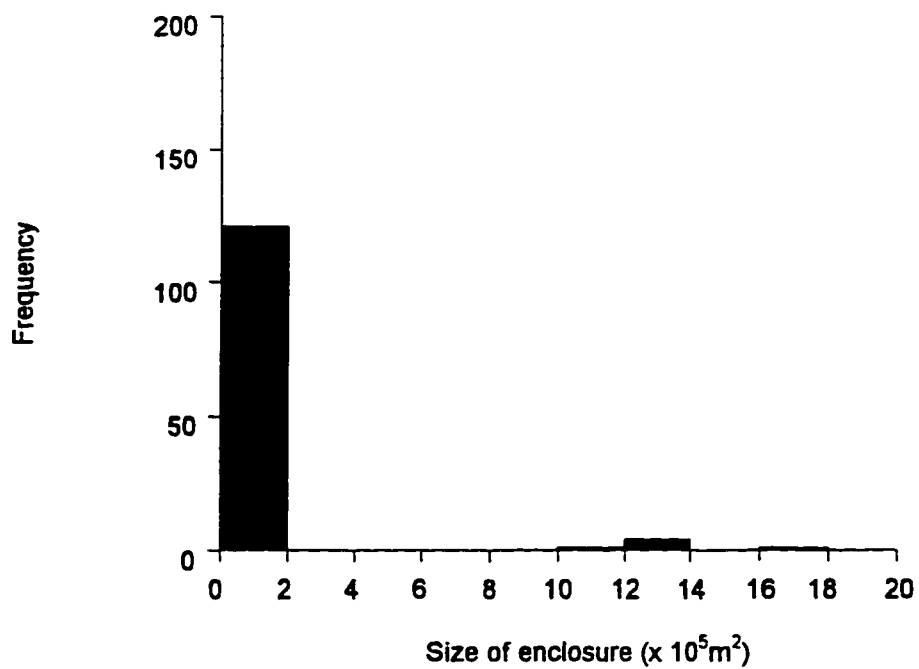
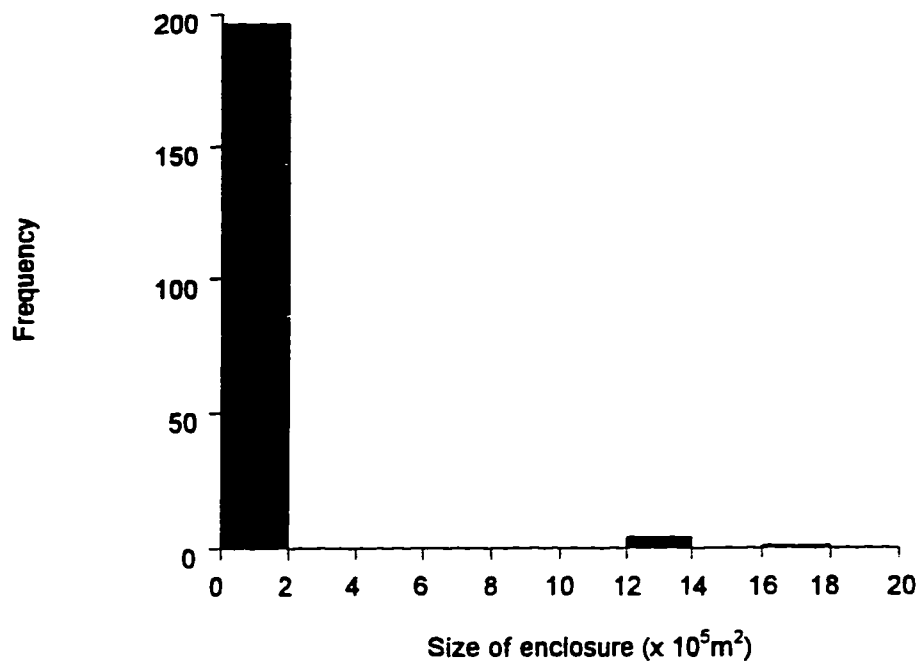


Figure 15: Enclosure size histograms of pre- and post-Mfecane/Difaqane combined

Archaeological Expectations

Zululand

Pre-Mfecane/Difaqane Zululand cattle enclosure sizes should be small to moderate with faunal remains characterized by primary producer cattle culling patterns.

Post-Mfecane/Difaqane Zululand should have large stock enclosures/courts with extensive deposits of cattle bones characterized by an elite cattle culling pattern.

Swaziland

Pre-Mfecane/Difaqane Nguni cattle enclosure sizes in Swaziland should be small to moderate with faunal remains characterized by primary producer cattle culling patterns. Sotho cattle enclosure sizes should be small and contain mostly seep/goat bones.

Post-Mfecane/Difaqane Nguni agropastoral sites should show evidence of numerous cattle bones, and larger stock enclosures than at Sotho sites yet smaller than those in Zululand. Sotho sites should have fewer, and smaller animal enclosures with sheep/goat remains.

Eastern Transvaal

Pre-Mfecane/Difaqane pastroforager sites should have small and very few livestock enclosures and cattle

bones, if any at all. The few Sotho agropastoral sites should have small-to moderate-size animal enclosures and some cattle remains.

Post-Mfecane/Difagane pastroforager sites should now have no livestock remains or enclosures. Nguni agropastoral sites should have few and small enclosures and livestock remains with primary producer patterns. Sotho-Tswana agropastoral sites should have small livestock enclosures dominated by sheep/goat remains.

Western Transvaal

Pre-Mfecane/Difagane Sotho-Tswana agropastoral sites should have few small to medium size animal enclosures with few cattle remains exhibiting primary producer patterns and some sheep/goat remains.

Post-Mfecane/Difagane Sotho-Tswana sites should have more small stock pens dominated by sheep/goat remains.

Free State

Pre-Mfecane/Difagane Sotho agropastoral sites should have moderate size stock enclosures with primary producer cattle patterns and some sheep/goat remains.

Post-Mfecane/Difaqane Sotho and Nguni agropastoral sites should have small protected stock pens with mostly sheep/goat remains.

Analysis and Results

Histogram Interpretations

In interpreting the enclosure size histograms I assumed that larger cattle enclosures represent more cattle and hence a greater degree of social hierarchy.

Zululand

The pre-Mfecane/Difaqane enclosure size histograms for Zululand exhibits a unimodal distribution and the post-Mfecane/Difaqane distribution is bimodal (see figure 10). In the earlier period, there are a total of 32 small enclosures with a range of variation between 7-1,257 m² and a mean size of 105 m².

The later period has 25 enclosures, a decrease of 7 enclosures. There are 24 enclosures with a range of variation between 7-331,830 m² and a mean size of 30,130 m² representing 96% of total; and 1 enclosure of 331,830 m² representing 4% of total. This suggests increasing social hierarchy in Zululand.

The evidence from cattle enclosure histograms in Zululand suggests that livestock was more evenly distributed during the earlier period, but became more concentrated into larger enclosures during the later period. Overall, livestock and/or royal courts, and consequently social hierarchy increased tremendously after the Mfecane/Difaqane as predicted by the settler model.

Swaziland

The pre- and post-Mfecane/Difaqane enclosure size histograms for Swaziland exhibit a unimodal distribution with all small sites for both periods (see figure 11).

In the earlier period, there are a total of 22 small enclosures with a range of variation between 3-7,854 m² and a mean size of 708 m².

The later period has a total of 9 enclosures, a decrease of 13 enclosures. These enclosures have a range of variation between 314-2,827 m² and a mean size of 1,130 m².

There appears to have been a dramatic decrease in the amount of small enclosures through time, accompanied by a significant increase in mean enclosure size from 708-1,130 m², yet none as large as the earlier 7,854 m² enclosure. The continuence of small enclosure sizes through time

suggests that no increase in social hierarchy. The increase in mean enclosure size indicates that through time fewer people had access to livestock and/or livestock were being aggregated into fewer, and larger enclosures.

Eastern Transvaal

The pre- and post-Mfecane/Difaqane enclosure size histograms for eastern Transvaal exhibit a trimodal distribution (see figure 12). In the earlier period, there are a total of 38 enclosures with a range of variation between 7-1,767,145 m² and a mean size of 886 m². Of the 38 earlier period enclosures 33 representing 87% of total, were between 7-9,503 m²; 4 enclosures representing 11% of total, were all 1,227,184 m²; and 1 enclosure representing 2% of total, was 1,767,145 m².

The later period has 41 enclosures, an increase of 3 enclosures, with a range of variation between 3-1,767,145 m² and a mean size of 192,190 m². There are 35 enclosures representing 85% of total, between 3-9,503 m² and a mean size of 2,028 m²; 5 enclosures representing 13% of total, between 1,130,973-1,227,184 m² and a mean size of 28,274; and 1 enclosure of 1,767,145 m² representing 2% of total.

This distribution suggests that there was little change in social hierarchy through time in eastern Transvaal.

There is a slight increase of 3 enclosures through time, 2 in the small size range and 1 in the medium size range. This evidence suggests that social hierarchy was present early, and continued during the later periods. The 200+ increase in mean enclosure size through time, from 886 to 192,190 m² seems to indicate an aggregation of livestock at larger enclosures.

Western Transvaal

The pre- and post-Mfecane/Difagane enclosure size histograms for eastern Transvaal exhibit a unimodal distribution of small enclosure sizes (see figure 13). In the earlier period, there are a total of 40 small enclosures with a range of variation between 1-104,635 m² and a mean size of 2,682 m².

The later period has 17 very small enclosures, a decrease of 23 enclosures, with a range of variation between 1-50 m² and a mean size of 24 m². The enclosure size histograms suggests that during the early period in the western Transvaal, livestock was fairly evenly distributed. The histograms also indicate that social hierarchy through

time in western Transvaal remained the same, minimal. Although the social hierarchy did not change, the drastic decrease in number of enclosures and mean enclosure size from 2,682 to 24 m², with the largest enclosure only 50 m² in area. Furthermore, 88% of all later sites were very small enclosure sizes of about 1 m². Using Hall's A.U. estimate of 5 m² /adult animal, would suggest that no adult animals were present these very small enclosures, and only 10 adult animals at the 50 m² enclosure.

These results strongly suggest a significant decrease in number of enclosures, and enclosure sizes and hence a loss of livestock through time, while social hierarchy remained the same during the later periods in the western transvaal.

Free State

The pre- and post-Mfecane/Difagane enclosure size histograms for Free State have unimodal distributions of small enclosure sizes (see figure 14). In the earlier period, there are a total of 68 small enclosures with a range of variation between 1-1,662 m² and a mean size of 162 m². The early period Free State enclosure size histograms suggests that livestock was fairly evenly distributed.

The later period has 40 small enclosures, a 59% decrease of 28 enclosures, with a range of variation between 1-3,848 m² and a mean size of 193 m². The dramatic decrease in number of enclosures, is most apparent in the smaller, less than 1,000 m² size ranges. Despite a decrease in enclosures greater than 1,000 m² from 4 to 2 the largest later period enclosure is slightly larger than 3,000 m².

Not unlike the western Transvaal, the Free State enclosure size histograms suggests that through time there was: a fairly even livestock distribution; a significant decrease in total enclosures, and a continuation of minimal social hierarchy.

The combined enclosure size histograms for southeast Africa yielded trimodal distributions for both periods (see figure 15). In the earlier period, there are a total of 200 enclosures with a range of variation between 1-1,767,145 m² and a mean size of 855 m².

The later period has 132 enclosures, a 66% decrease of 68 enclosures, with a range of variation between 1-1,767,145 m² and a mean size of 6,554 m².

The trimodal distribution combined southeast Africa enclosure size histogram patterns most closely resemble, the

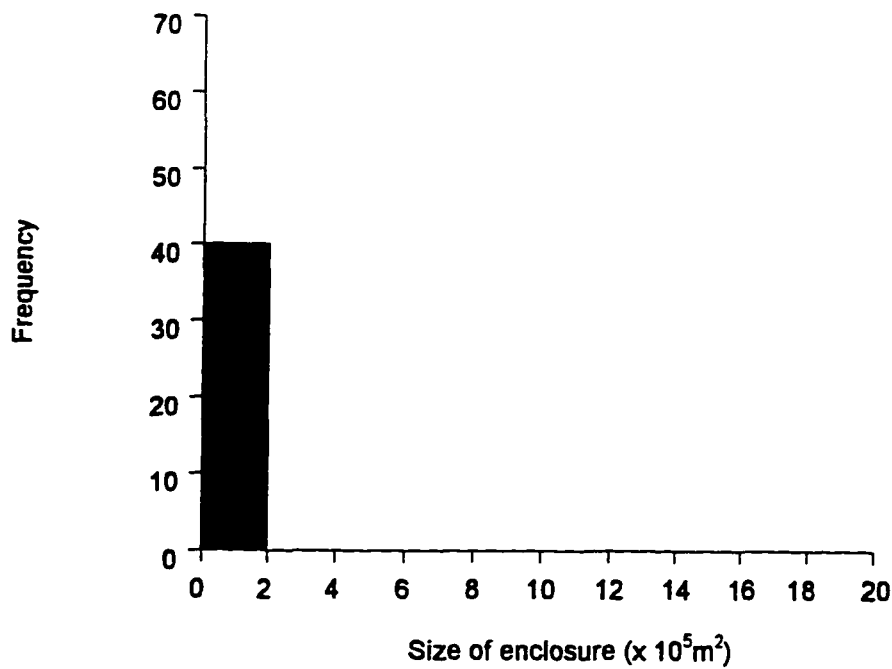
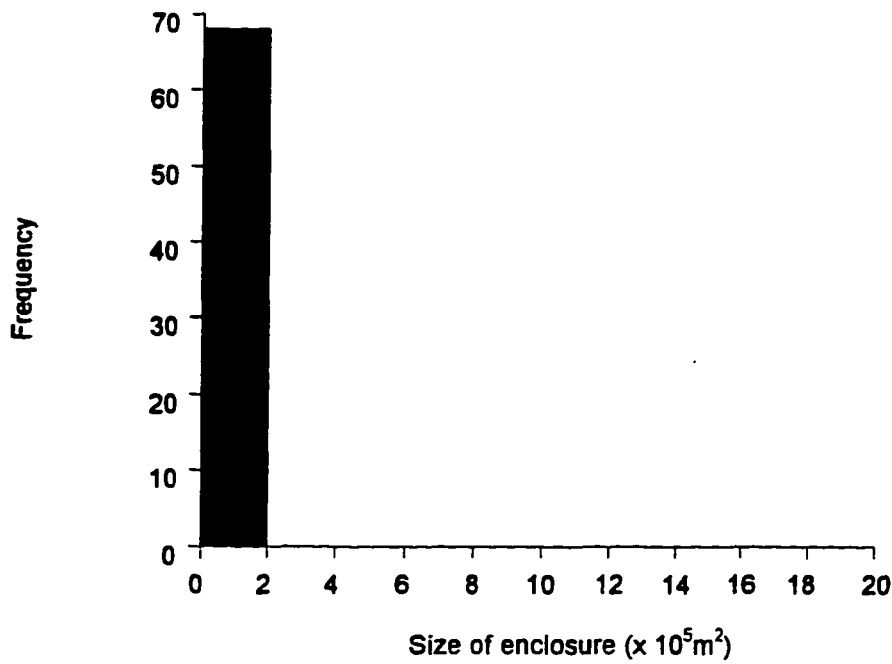


Figure 14: Enclosure size histograms of pre- and post-Mfecane/Difaqane Free State

patterns from the eastern Transvaal. These combined results for southeast Africa suggest that social hierarchy and livestock distribution remained essentially the same in southeast Africa through time.

In sum, the cattle enclosure analysis suggests that only in eastern Transvaal and southeast Africa was there a continuous social hierarchy. Every region, except eastern Transvaal (who gained 3 enclosures), showed a decrease in the number of cattle enclosures through time. This was also the trend for southeast Africa.

If we look at the each region in terms of total enclosure areas presumably housing livestock, and mean enclosure size, a different more complex pattern emerges. Zululand showed an increase in both areas enclosed and mean cattle enclosure size. Swaziland exhibits a decrease in areas enclosed and an increase in mean cattle enclosure size. Eastern Transvaal like Zululand increases in both categories while western Transvaal decreases in both categories. Free State like Swaziland increases in areas enclosed and decreases in mean enclosure size. Southeast Africa like Zululand and eastern Transvaal increases in both categories. Obviously, southeast Africa is very misleading

in terms of structure expressed by enclosure size histograms. Using the number of total areas enclosed and mean enclosure size by region and time periods reveals the complexities involved in understanding changing social hierarchy through time.

Worksheets

The results of the analyses on animal units by region and by time period are summarized as follows: the 4 early measurable enclosures from Zululand yield a mean number of A.U. per central enclosure of 90, and the mean A.U. for all enclosures is 134. Later central enclosures yield a mean of 30,082 A.U. in central enclosures and a mean of 30,130 A.U. for all enclosures. Furthermore, there was a total increase of 149,980 A.U. in Zululand.

These results suggest that the number of cattle penned increased dramatically during the later periods in Zululand. The 3 later period sites that had the most A.U. were all royal residences whose central enclosure was the only enclosure. The smallest of these enclosures has 32,555 more A.U. than the largest early site. This supports the argument for increasing social hierarchy after the Mfecane/Difaqane. Since all of these sites were royal

residences, it is highly probable that the extensive size of the central enclosures could reflect the court sizes rather than or in addition to cattle enclosures.

The 4 early measurable enclosures from Swaziland have a mean of 453 A.U. in central enclosures and 779 A.U. in all enclosures and a total of 3,114 A.U. The 3 later enclosures have a mean of 210 A.U. in central enclosures and a mean of 678 A.U. in all enclosures and a total of 2,034 A.U.

The evidence from the A.U. analysis show that livestock numbers decreased through time in Swaziland. The sites with the most A.U. in both periods are royal residences. The earlier of these sites has 1,085 A.U. more than the later period royal residence and the total A.U. decrease 1,080 A.U. This decrease in A.U. coupled with the tremendous increases in Zululand could be interpreted as more cattle at royal residences prior to European colonization and/or cattle being siphoned off from Swaziland into Zululand. In any case, the level of social hierarchy judged by A.U. seems to have decreased in Swaziland.

The 8 early measurable enclosures in the eastern Transvaal have a mean of 45,258 A.U. in central enclosures

and a mean of 268,811 A.U. for all enclosures with a total of 1,344,053 A.U. The 4 later central enclosures have a mean of 145,774 A.U. in central enclosures and 393,917 A.U. for all enclosures and a total of 1,575,668 A.U.

The results of the A.U. analysis suggest that livestock numbers increased through time in eastern Transvaal. This contradicts the settler model because it indicates that despite the inhospitable environment for cattle herding, far more cattle were kept during both periods in eastern Transvaal than in any other area and period. Furthermore, all of the eastern Transvaal sites with huge numbers of A.U. are specialized sites and part of the Lydenburg complex of production sites and settlements. Finally, the number of cattle penned in eastern Transvaal is more than 10 times as large as those in the later periods in Zululand even considering court sizes in Zululand.

These results indicate that specialized sites in the eastern Transvaal remained an important place to keep cattle although the environment was quite inhospitable. It is important to note the enormous impact on the mean enclosure sizes introduced by the ritual site of Klingbeil. Klingbeil was occupied during both periods and had a

substantially larger central enclosure and hence more animal units than any other site in the entire sample. Without this site, however, the eastern Transvaal is not that different from other regions. Therefore, Klingbeil is very different and understanding its place in the eastern Transvaal could help explain the larger enclosure sizes and presumed numbers of A.U. For instance, Klingbeil was constructed of stone walling, and contained slag piles, copper, iron and metal beads, specularite, engraved settlement plans, pit fields, and ivory objects. One possible reason for the larger stock facilities in the eastern Transvaal could have to do with European ships bringing supplies at Delagoa Bay.

The 4 early measurable enclosures from the western Transvaal have a mean of 5,252 A.U. in the central enclosure and a mean of 5,363 A.U. in all enclosures and a total of 2,145 A.U. The 1 later central enclosure contained 10 A.U., with a mean of 14 A.U. for all enclosures of this period. This sharp reduction in A.U. could indicate a reduced social hierarchy and the collapse of power in this area through time.

The most conspicuous thing about the western Transvaal results is that there is only 1 measurable enclosure for the later period. This might suggest that elite cattle were no longer being kept in this region indicating cattle loss, dispersion or site abandonment.

The last area, the Free State had a total of 2,166 A.U. for 7 early measurable central enclosures with a mean of 202 A.U. in central enclosures and 309 A.U. for all enclosures. The 6 later central enclosures yield a mean of 198 A.U. in central enclosures, 257 A.U. for all enclosures and a total of 1,541 A.U.

Based upon enclosure size alone, the amount of livestock in the Free State decreased slightly through time indicating a similar decrease in social hierarchy. Unexpectedly, the site with the most A.U. (770) is a later period primary producer site. The sites with second and third most A.U. are from earlier sites, a primary producer site, and an elite site respectively.

The large enclosures at primary producer sites, especially the largest enclosure, might suggest wealthier families lending their cattle, in a political patronage relationship called Mafisa among the Khoisan and the Sotho-

Tswana, Busa among the Xhosa and Cape "Nguni", Sisa among the Zulu and Ethula among the Swazi. In this type of arrangement commoner families could use milk and sometimes could eat and keep a proportion of the offspring. A key advantage for elite families in such an agreement was that the contract could be terminated at the lender's volition. This anomaly could also indicate sites occupied by racially mixed cattle raiders.

In terms of the settler model only Zululand and eastern Transvaal show increases in total number of enclosures, their mean size, total number of A.U., mean number of livestock at central enclosures and mean A.U. at all enclosures. This strongly suggests increasing social hierarchy. There is also evidence for non-state societies before the Mfecane/Difaqane in Zululand and state formation appears to have begun after the Mfecane/Difaqane. The evidence from the eastern Transvaal suggest a long and continuous tradition of social hierarchy in this region and that state formation in Zululand was not the first such incident in southeast Africa. Furthermore, the enclosure size evidence from eastern Transvaal may also suggest

interaction with Europeans in the Delagoa Bay area well before the Mfecane/ Difaqane.

In Swaziland, western transvaal, and Free State there is a decreases in the very categories (enclosures, animals, and the like) that increased in Zululand and eastern Transvaal. This strongly suggests decreasing social hierarchy in these regions.

Scale of Interaction Predicted by the Settler Model:
External Versus Internal Relations

The settler model predicts that prior to the Mfecane/Difaqane the polities in the various regions are essentially autonomous, rather than interdependent, and that after the Mfecane/Difaqane this pattern will change in specified ways. Long distace trade is one of the major types of interaction proposed by the settler model. Trade proponents stress African-European interaction in arguing that conflict over control of European trade items within the polities of the Delagoa Bay-Zululand region consequently gave rise to the Zulu state (e.g., Carlson 1984; Hedges 1978; Slater 1977). If the settler model is correct, then in the Zulu case we might expect that an expansion of trade in European items in Zululand would precede the period of

Zulu state formation. Are these predictions confirmed by the archaeological data?

There are two types of analyses, not necessarily mutually exclusive, that might be used to test the settler model's predictions. The first, rank-size analyses are important for identifying areas involved in long-distance relations through investigations of deviations from an expected rank-size distribution (Haggett et al. 1977, 111; Paynter 1982, 145). A second approach involves demonstrating an increased presence of European goods at African sites, especially in Zululand royal residences prior to Zulu state formation.

Another spatial tendency that seems to be a reasonable hypothesis is that site clustering should be a response to warfare and a more even site distribution should be a response to periods of relative peace. The creation of very large sites with densely packed populations is indicative of people gathering together or being gathered together as a result of cattle and captive raiding and its consequent warfare.

Rank-Size Relations

Johnson (1980) argues that as systems become more integrated, they will shift from either concave or convex deviations to log-linear distributions. Peripheral areas are notoriously poorly integrated, whereas core areas tend to be well integrated. Thus, examining deviations from the rank-size rule can prove useful for establishing the status of the selected areas in southern Africa and for identifying peripheral regions and hence large-scale interaction based on the rank-size relation.

Concave or primate is a classic pattern identified with underdeveloped countries and dendritic patterns of trade. Such patterns can indicate an area within which small places are tied to a big place that is linked to the outside (Hirth 1978, Kelly 1976).

Paynter (1982) argues that a convex rank-size pattern indicates large scale interaction when in the extreme peripheries of large interaction spheres. Johnson (pers. comm. 1988) notes that such distributions however, may be the result of the pooling of multiple small scale independent systems, so additional information is needed to

distinguish whether a convex distribution is indicative of large or small scale systems.

Falconer and Savage (1995) have recently proposed the double convex pattern as another pattern indicative of large scale interaction. This is a pattern associated with colonialism, in which the system associated with a large scale system is superimposed on a small scale system, if you will a combination of the points raised by Paynter and Johnson. At any rate, double convex systems would be indicative of external influence.

Patterns indicative of a lack of external interaction would be log-linear patterns, where the observed is reasonably close to the expected, or convex patterns where Johnson's pooling interpretive model holds.

In the southern African case the major limitation results from problems of site sample bias. For example, smaller more ephemeral sites are most likely to have been missed due to large site bias, resulting from a variety of "natural transforms" as well as their lack of archaeological visibility. Bias in favor of large sites can also result from conscious selection by archaeologists and local cultural experts alike (Perry 1991).

Some archaeologists have offered possible solutions to these and other limitations of rank-size analyses (Falconer and Savage 1995; Johnson 1977, 1980; Paynter 1980, 1982). For instance, Falconer and Savage (1995) randomly inflate or deflate site sizes using an assumed percentage range for a predetermined proportion of sites along with incorporating a "sliding probability" in an effort to avoid misestimating site sizes. Similarly, Paynter (1982, 152) proposes partitioning the study area into semiautonomous micro regions and studying their rank-size temporal trajectory. His experiments with "dummy" data sets, in which smaller and medium size sites were added to his distributions to gauge their effects on curve shapes, suggest that in general core-area samples will be concave, while peripheral areas will be convex.

Missing large sites has more of an effect on the accuracy of interpretations than missing medium or small sites. Since I am fairly confident that the large sites have been recorded, my interpretations should be robust. A statistical analysis along the lines suggested by Falconer and Savage could produce some interesting results, but for the purposes of historical interpretation my preliminary

analyses can be considered as a contribution to southern African archaeology, if only to encourage further research.

Archaeological Expectations

Zululand

Pre-Mfecane/Difaqane Zululand should be an autonomous region with little or no evidence of conflict or long distance interaction until just before the Mfecane/Difaqane. We should expect log-linear or convex curves.

Post-Mfecane/Difaqane sites should have evidence of hostile interaction like conflict, site desertion, militarization and the like. There should also be evidence of African-European interaction. The rank-size curves should be concave indicating a core-area.

Swaziland

The rank-size curve for early Swaziland exhibits a concave deviation, in pattern much like that for Zululand. Thus, Swaziland's pattern also diverges from the expected log-linear distribution for an autonomous area. Despite the formal similarity, the Swaziland curve differs from the Zululand curve in an important way, namely that its sites are much smaller than those in Zululand. This raises another possible explanation for the Swaziland curve. This

plot could represent problems of scale and defining boundaries, specifically, the problem of "partitioning" which may produce essentially artificial primate distributions. Partitioning can occur when an area is only a small sample drawn from a much larger actual region of interaction, thereby excluding the primate, and/or mid-level center(s) of a much larger system. Such a distribution could also represent a dendritic system in which surplus is concentrated in a few entrepôts outside of the sample area (Johnson 1980; Paynter 1982). Hirth (1978) has argued that dendritic hinterlands are created by long-distance trade networks. At any rate, the pre-Mfecane/Difigane Swaziland pattern differs from the expectation from the settler model, possibly in a way that suggests the involvement of Swaziland in a much larger interaction field.

Eastern Transvaal

There should be little evidence of interaction between pre-Mfecane/Difagane Sotho agropastoralists and pastroforagers, or interaction between Africans and Europeans. This should be expressed by few European items at African sites and log-linear to convex curves.

Post-Mfecane/Difaqane agropastoral sites should show some evidence of conflict and/or defense but there should be no such activity at pastroforager sites. Evidence for African-European interaction should be virtually nonexistent. Thus we should expect no European objects and log-linear to convex curves.

Western Transvaal

There should be little or no evidence of conflictual interaction among pre-Mfecane/Difaqane agropastoralists and no evidence for interaction with Europeans. Again we can expect an absence of European goods and log-linear to convex curves.

Post-Mfecane/Difaqane agropastoral sites should contain various types of evidence of military conflict but no evidence of European goods. The rank-size curves should be convex reflecting their peripheral relation to Zululand.

Free State

There should be no evidence of conflict or other types of interaction between pre-Mfecane/Difaqane agropastoralists and European communities. There should be evidence of conflictual relations between racially mixed

groups and African communities. The rank-size distributions should be convex but with no evidence of European goods.

We should expect plenty of archaeological evidence for post-Mfecane/Difaqane conflict and warfare as military polities from the Zulu heartland attacked Free State polities. Mixed sites should continue to show artifactual evidence of conflict. European sites should show evidence of population absorption. Convex curves should indicate the peripheral relation to Zululand. European goods should only be at mixed or European sites.

Analysis

First, a rank-size work sheet including site name, observed site size (in hectares), the logarithm of the observed size, the site rank (ordering sites by their size from the largest to the smallest), the logarithm of the rank, the expected site size based upon the assumptions of the rank-size rule (i.e., a log-linear relation between site sizes and their ranks), and the logarithm of the expected size was generated (see Appendix 4). Secondly, a rank-size line was plotted, based on the logarithm of the site size against the logarithm of its rank.

In the eastern Cape (Transkei), southern Mozambique, and the Cape Frontier, the samples were inadequate. Thus, although graphs were produced, they were not used in the analysis. Rank-size curves were produced, however, for each area and time period with adequate information (see figures 16-21). In addition, a combined rank size curve was constructed for all southeastern Africa sites for both time periods (see figure 21). These curves were then compared with those from Zululand and the deviations from these lines were evaluated and interpreted. Finally, the same procedure was followed combining all available early and late southeast African sites including Zululand.

Results and Interpretations

Zululand

Early sites in Zululand showed a concave primate curve. The concave curve is at odds with the settler model's assumption of autonomy and suggests interaction.

Later settlements in Zululand are described by a rank-size curve that is slightly convex at its upper end and joins a more accentuated lower convex curve with a stair-

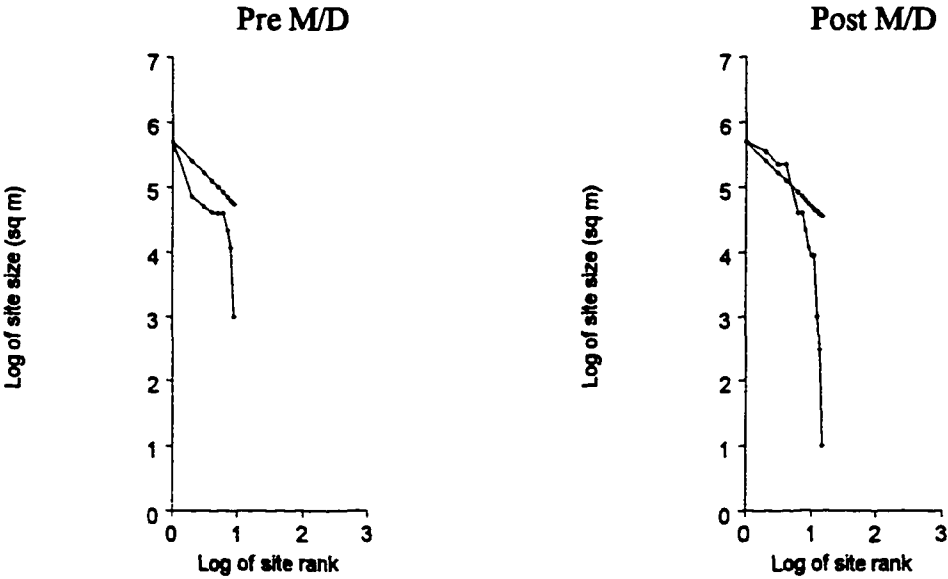


Figure 16: Pre- and Post-Mfecane/Difaqane Rank Size Curves for Zululand

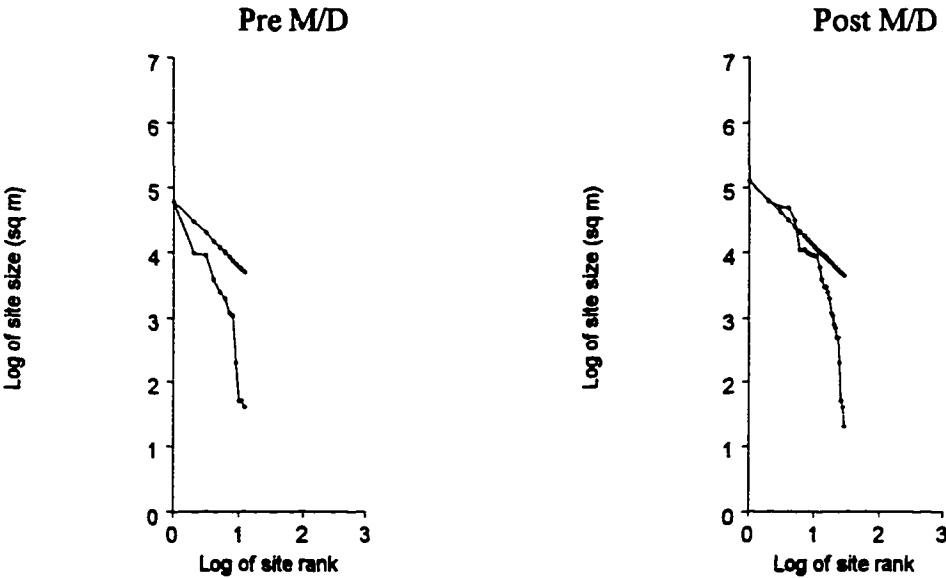


Figure 17: Pre- and Post-Mfecane/Difaqane Rank Size Curves for Swaziland

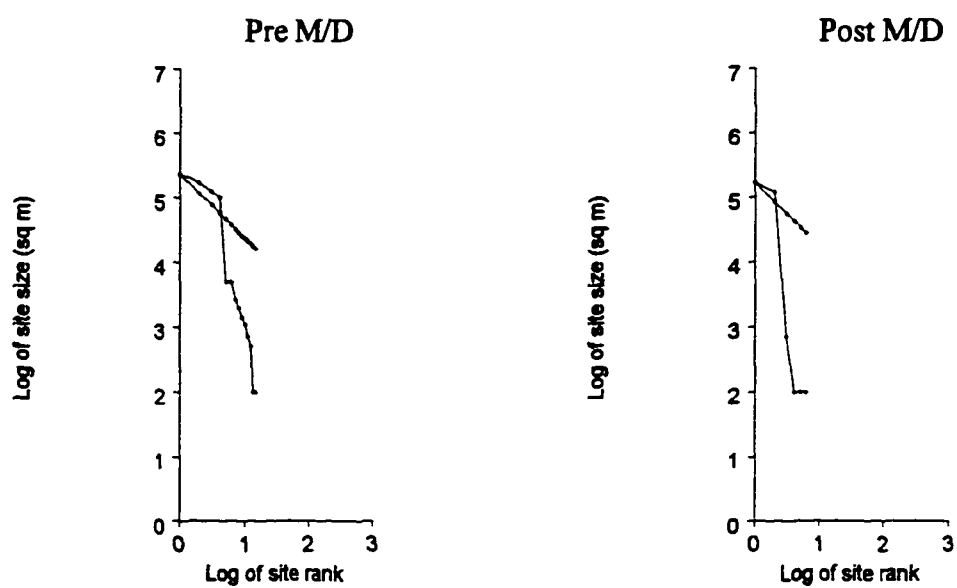


Figure 18: Pre- and Post-Mfecane/Difaqane Rank Size Curves for Eastern Transvaal

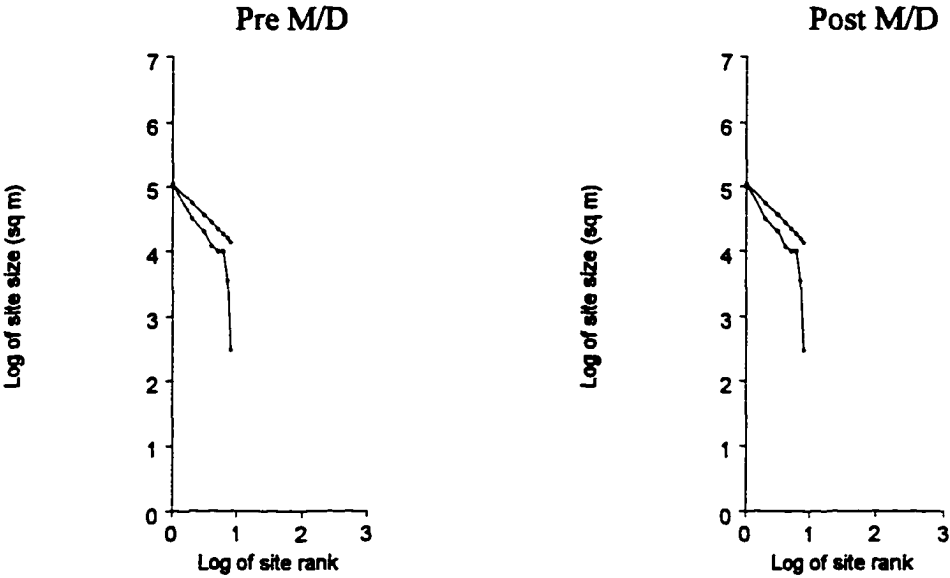


Figure 19: Pre- and Post-Mfecane/Difaqane Rank Size Curves for Western Transvaal

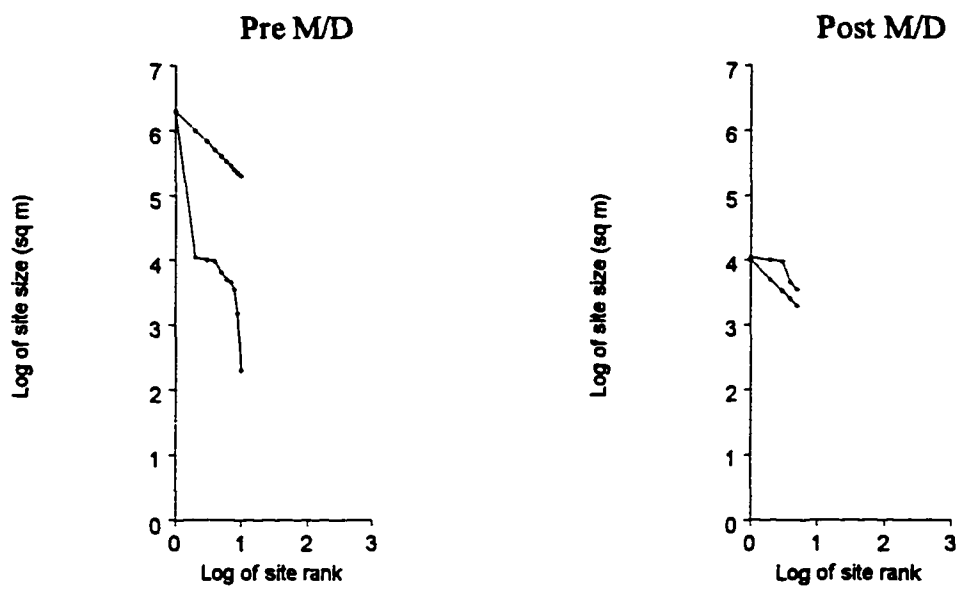


Figure 20: Pre- and Post-Mfecane/Difaqane Rank Size Curves for Free State

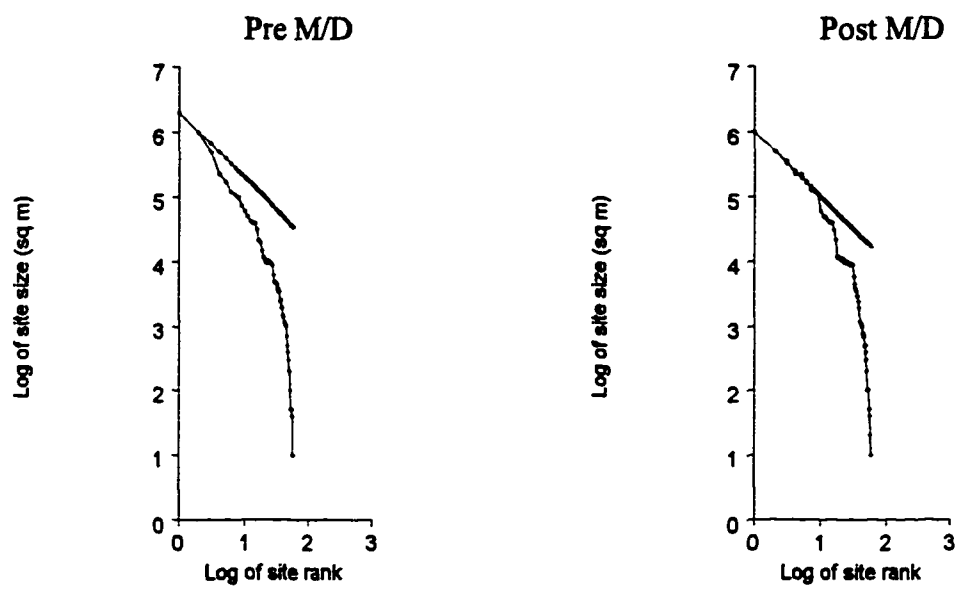


Figure 21: Pre- and Post-Mfecane/Difaqane Rank Size Curves for Southeast Africa Combined

step like distribution. Such distributions have been identified in Levantine data and been called "double convex" (Falconer and Savage 1995, 52). According to Falconer and Savage such compound curves may represent a superimposition of one settlement system on the other. This compound distribution results, in the Southern Levant, from

"loosely knit towns and cities ... established amid...an increasingly disarticulated system of small villages. Statuary excavations from coastal sites and texts from Egypt suggest that this patterning reflects the presence of Egyptain commercial missions in coastal towns" (Falconer and Savage 1995, 53).

Although, the post-Mfecane/Difagane Zululand rank-size curves are concave as predicted by the settler model, the compound curves indicate that though colonialism such as happened in the Levant certainly seems to be a reasonable social process to create a double convex pattern, internal forces might also be responsible. For instance, during periods of state formation, as a regions population finds itself splitting into two groups, those at a number of sites under the sway of contenders for the surplus accumulation role of sovereign and those seeking refuge from such a state, a double convex pattern may also occur. To be more

confident of these interpretations, however, we must look beyond the Zululand hinterlands.

Swaziland

The rank-size curve for early Swaziland exhibits an extreme concavity in its lower ranges, with all sites smaller than expected. This plot could represent problems of scale and defining boundaries, specifically, the problem of "partitioning" which may produce essentially artificial primate distributions. Partitioning can occur when an area is only a small sample drawn from a much larger actual region of interaction, thereby excluding the primate, and/or mid-level center(s) of a much larger system.

This exaggerated curve is characterized by a definite absence of large and medium sized sites and has many small lower order sites. Such a distribution could also represent a dendritic system in which surplus is concentrated in a few entrepots outside of the sample area (Johnson 1980; Paynter 1982). Hirth (1978) has argued that dendritic hinterlands are created by long-distance trade networks. Thus, the pre-Mfecane/Difaqane Swaziland rank-size curves are dissimilar from Zululand in their absence of

any large and medium sites and an abundance of sites smaller than expected.

The later Swaziland rank-size curve is double convex incorporating elements of, rank-size primacy in its upper-size range and convexity in their lower range. The social process would be much that suggested in the discussion of Zululand, namely that after the Mfecane/Difaqane, Swaziland was participating in a two tier settlement system, such as is found in some colonial situations. These curves are not in accordance with the settler model's expected convex curves.

The Eastern Transvaal

The early eastern Transvaal distribution is double convex in its upper ranges with large and medium sites slightly larger than expected, and small sites much smaller than expected. This rank-size curve is also different from those curves predicted by the settler model.

The rank-size curve for the later eastern Transvaal is also double convex, then a drop off and then convexity. Thus both eastern Transvaal rank-size distributions resemble the late rank-size curves for Zululand and Swaziland; all are double convex. Here again, the predicted rank-size

distributions from the settler model do not match the observed curves.

Western Transvaal

The curve for the early western Transvaal is slightly concave with large and medium sites slightly smaller than expected, and small settlements much smaller than expected. This distribution does not fit the expected log-linear to convex curves proposed by the settler model.

The later distribution for the western Transvaal is markedly concave, with only one large site. The small sites are smaller than expected. The western Transvaal curves are the first post-Mfecane/Difaqane sites thus far to not have any double convex distributions. With the exception of a slightly greater size difference between post-Mfecane/Difaqane expected and observed sites, the late distribution closely resembles the earlier one. These rank-size curves are not convex as predicted by the settler model.

The Free State

Early Free State settlements exhibit regional primacy characterized by a precipitous concave curve, with only one large site and all small sites significantly smaller than expected. Kelly (1976) has suggested that

dendritic systems exhibit large numbers of low level places oriented toward one higher place and a concentration of elites in the higher level place. This appears to be the situation in the early Free State. Once again, the rank-size distributions do not fit the settler model predictions.

In accordance with the settler model the later Free State sites produce a convex distribution with all sites larger than expected. This rank-size curve is assumed to indicate the region's peripheral relation to Zululand.

Beyond the Hinterlands

In recognizing the need to look beyond the hinterlands, all sites in southeast Africa were combined. Johnson (1977, 498) has cautioned that the larger the scale, the greater the probability for various stochastic processes to effect the rank-size curves. The rank-size curve for southeast Africa should be convex in both periods since we are most likely compounding many settlement systems. Instead the pre-Mfecane/Difaqane rank-size curve for southeast Africa is concave. As sites decrease in size they become increasingly smaller than expected. The post Mfecane/Difaqane rank-size distribution for southeast Africa

produced a more log-linear distribution with larger settlements lying along the linear rank-size line, while smaller sites show lower limb fall off being smaller than predicted. concavity being smaller than predicted.

There clearly are very complex settlement processes happening during post-fifteenth-century southeast Africa, and the analysis points to effects beyond the regions and indeed beyond the scale of southeast Africa. Throughout southeast Africa the pre-Mfecane/Difaqane period was marked, to varying degrees, by concave rank-size patterning, patterns of a relatively few large places and many small places. This was the case in every region investigated with the exception of the eastern Transvaal which had a double-convex pattern. Post-Mfecane/Difaqane patterns show a more complex situation---Zululand, Swaziland and the eastern Transvaal show double-convex patterning while the western Transvaal is concave and Free State appears convex.

When the entire region of southeast Africa is studied, instead of exhibiting the extreme convexity expectable of pooling independent systems, it actually looks like southeastern Africa is a single operation--with a a

concave pattern early on--as in the case of early colonialism--and a log-linear distribution later for larger sites and an increasingly concave pattern as sites become smaller--as the region becomes a functioning system within the larger global political economy with more mature colonialism.

All of these patterns indicate the effects of large-scale processes, even in the pre-Mfacane/Difaqane period, processes certainly larger than any of the individual regions and processes beyond the scale of southeast Africa. This points out the involvement of Europeans in state formation in southeastern Africa, yet leaves open the issue of the nature of that involvement. Is it that trade for prestige goods in the early period is driving state formation?

European Commodities Analysis

In examining the artifactual evidence, I used information from Appendix 1 to see which sites contained European and other trade goods and what types of sites do not. This inspection involved constructing two tables (see Appendix 5), one consisting of 21 early and the other having 20 later sites, indicating the type and number of sites and

the kinds of trade goods recovered. Since there was only one site (a post-Mfecane/Difaqane royal residence) in the Zululand sample where European goods were recovered, I also examined sites from the other areas in the southeast Africa sample.

Most site reports do not report quantities, therefore only some sites have good enough data for me to record some sense of quantity. I assumed that authors using the term "abundant" felt that the amounts of glass beads were above those amounts "normally" expected. Therefore, I choose to use this description in quotation marks to generally interpret quantities from the data.

Of the sites with European goods the Free State had the most pre-Mfecane/Difaqane sites with 9 and the eastern Transvaal was second with 7 post-Mfecane/Difaqane sites. The eastern Transvaal had the most post-Mfecane/Difaqane sites with 7 and the Free State was second with 6 post-Mfecane/Difaqane sites. These areas also had the most diverse kinds of European trade goods for both time periods (see Appendix 5). It must be emphasized that the amount and diversity of artifacts is conditioned by, among other things, the differential intensity of the archaeological

research. The most numerous European goods for both early and later sites were glass beads with 18 and 17 site occurrences respectively (see Appendix 5). The settler model and its various trade hypotheses suggest that glass beads and other European objects should be found with royal residences.

The association of glass beads with site types was as follows: Pre-Mfecane/Difaqane sites showed that of the 11 production sites, 2 (1 from the eastern Transvaal and 1 Free State site) or 18% had glass beads and European goods, both of which had "abundant" glass beads; of the 28 iron production sites only 2 (7%) had European goods and neither had "abundant" glass beads; and 1 pre-Mfecane/Difaqane Free State fort had "abundant" glass beads; of the 33 royal residences only 9 (27%) had European goods and all but 2 (6%) had glass beads and none had "abundant" amounts, and even more surprisingly, no early sites in Zululand had European goods (see Appendix 5). The 2 royal residences with no glass beads are from the Free State. One had gun flints and the other had horse remains. Of the 16 primary producer sites 4 (25%) had European goods, 3 (18%) had glass beads. One of the primary producer sites that had beads

included beads from the Atlantic ocean trade. The 1 primary producer site without glass beads had ammunition. Finally, burial sites (both royal and commoner), ritual sites, rock shelters, shell middens and refuge sites were all void of European objects.

Of the 30 post-Mfecane/Difaqane royal residences only 7 (23%) had glass beads and only 9 (30%) had any European goods. Only 1 post-Mfecane/Difaqane Zululand royal residence had any glass beads and 1 post-Mfecane/Difaqane military site in the Free State had "abundant" glass beads. Non-royal residences containing European trade goods are as follows. Of the 13 iron production sites, 3 (23%) had European goods; each of the three had glass beads and 2 had military paraphenelia. Of the 7 production sites 1 (14%) in the Cape frontier had European goods and these were glass beads. Of the 10 military sites 3 (30%) had European goods; all had glass beads but only the Free State military site had an "abundant" quantity. Of the 16 primary producer sites 4 (25%) had European goods and all had glass beads, with 1 site containing Atlantic coast beads. For the later period European goods were absent at burial sites (both

royal and commoner), shell middens, animal traps and refuge sites.

These results have several implications for the involvement of southeast Africa in European trade networks and hence in evaluating the settler model. First, mineral production sites contain the most glass beads during earlier times. Second, royal residences, although either first or second in numbers of glass beads for both periods, take the lead only after the Mfecane/Difaqane, and never contain "abundant" numbers. Furthermore, of the 4 earlier sites with large numbers of glass beads, only 1 is a royal residence, 2 are mineral production sites and the other is a military site. It is noteworthy that the mineral production sites are in the eastern Transvaal while the royal residence and fort are located in the Free State. On the other hand, there is only 1 later site with "abundant" amounts of glass beads and this is a fort located in the Free State. Of the 6 pre-Mfecane/Difaqane and 7 post-Mfecane/Difaqane sites with European military items (including horses) all are in the eastern and western Transvaal, the Free State and the Cape Frontier while none are located in Zululand.

These data present serious problems for the trade hypotheses and the settler version. Evidence for trade with Europeans is more prevalent in the pre-state-formation period than after states formed. This would seem to suggest that something other than access to European trade goods was the goal of the Zulu state or if it was their goal they were not successful. Moreover, it is interesting that the one place with evidence for trade was a fort, possibly indicative of the frontier nature of forts or of the possibility of trade for arms. The distribution of pre-Mfecane/Difaqane trade goods shows a distinct bias towards mineral production sites, suggesting that the European goods functioned as payment for goods rather than as prestige items in elite competitive duels. On the other hand, these explanations are not necessarily mutually exclusive. However, the production sites have no evidence of elite residences or other indications of elite domination, and therefore the data contradict the standard settler model.

Conclusions

My analyses suggest that the standard model is wrong, so the various proposed "explanations" of the

Mfecane/Difaqane are all moot--what they attempt to explain is not what actually happened. Pre-Mfecane/Difaqane primary producer settlements did not all exhibit "typical" "central cattle patterns", nor were they characterized by material culture forms indicative of their mode of production (i.e., stone tools associated with gatherer-hunters, pots with agropastoralists etc.). For example, OFD1, the largest site in the sample, had ritual paraphenelia, elite burials, and an elite culling pattern, and pastroforaging material culture. This anomalous site does not fit the standard settler model.

Secondly, landscape diversity was not always associated with geographic regions or ecological characteristics. For instance, the environmentally poor herding area of the eastern Transvaal has the most abundant amount of animal units for both periods. The presence of large mineral and iron production sites and their association with European goods and elite cattle patterns does not fit the settler version models. These observed site types are better explained by an explanation based on pre-Mfecane/Difaqane African-European trade relations.

Finally, royal residences, particularly those in Zululand do not fit the settler version model until the later periods.

The emergence of the Zulu state and the ensuing Mfecane/Difaqane has been the object of study by many different scholars of many different disciplines for more than fifty years, yet the archaeological data are remarkably incomplete. The comparison of the archaeological data, although fragmentary, with the settler model and some of the ethnohistorical single-variable hypotheses seems to better explain the relevant processes of demography and external trade in a number of ways. Although circumstantial evidence exists that strongly suggests post-Mfecane/Difaqane conflictual relations, the exact reasons for this conflict in terms of the captive-and cattle-raiding hypothesis cannot adequately be addressed with the present data. In the concluding chapter I discuss possibilities for future research that might shed light upon this particular explanation.

Both the ethnohistorical and population density analysis showed that only after Zulu state emergence did population and settlement size and density in Zululand increase along with the number of royal residences. Later

population increased 33% in Zululand, Swaziland and the western Transvaal while decreasing 34% in the Free State and the eastern Transvaal. I suspect that this inverse relationship may reflect increasing demographic densities resulting from population relocation. Furthermore, the eastern Transvaal and the Free State had the largest early sites in the entire sample, both of which were involved in exchange networks with Europeans at Delagoa Bay and the Cape frontier and both were abandoned after the eighteenth century.

The question of autonomous or interdependent polities and types of interaction like trade processes were investigated by analyzing the archaeological distribution of European trade goods, especially glass beads. Zululand had no European goods in earlier sites and only one later-period royal residence with glass beads. The Free State and the eastern Transvaal had the most sites with European goods for both time periods. Only later did Free State royal residences contain more glass beads than eastern Transvaal mineral production sites and Free State forts were third. Indeed, during the later period the Free State fort is the only site with "abundant" glass beads. Thus external

relations were most likely at work in the early Free State and the eastern Transvaal and only later in Zululand.

Zululand

Early Zululand's primate curve indicated that both large and small settlements were smaller than expected. Although Zululand's largest site was an iron production site, larger mineral and iron production sites existed outside of Zululand in the eastern Transvaal and the Free State. This could suggest less stratified social relations and iron production for local markets in Zululand. Furthermore, the only early Zululand site with an elite cattle culling pattern is a military site while the two royal residences had primary producer culling patterns.

Later Zululand is described by a double convex curve with large sites now larger and small sites smaller than expected and more medium size sites. All but the largest iron production site are royal residences, two of which had elite cattle patterns. I argue that the double convex curve is associated with colonial situations and quite possibly with those associated with the early stages of state formation. The curve indicates that either "independent" or subordinate settlement systems are being

sampled. The cattle patterns suggest that the defensive site was continuously occupied by higher status individuals who felt a need for protection.

The central cattle enclosure sizes at royal residences in Zululand, along with the number of cattle penned, increased dramatically during the later periods. The increased site sizes may indicate courts. Thus, it was not until after the emergence of the Zulu state that elite culling patterns and increases in herd size appeared at royal residences in Zululand.

Swaziland

Swaziland's early rank-size curve indicates involvement in a possibly long-distance-trade-related, larger system outside of the sample area. The later Swaziland curve could be interpreted as more centralized integration of large and medium sites and more pronounced ruralism reflecting the dismantling of the old system. Although mean central enclosure sizes in Swaziland became larger through time (591 A.U. pre-Mfecane/Difagane and 677 A.U. post-Mfecane/Difagane), the large central enclosures at royal residences got smaller. These results coupled with the fact that the total number of A.U. in Swaziland only

increased slightly suggests that cattle were probably removed from royal residences and dispersed into other locations. Finally, in terms of European trade goods Swaziland follows a Zulu pattern of none to some. This suggests that Swaziland, not unlike Zululand became engaged in international trade networks only after the Mfecane/Difaqane.

Eastern Transvaal

The eastern Transvaal rank-size curves for both early and late periods is double convex for both periods resembling that of later Zululand. Elite herd profiles in the early eastern Transvaal are found at one royal residence and two mineral production sites. The only later site with an elite pattern is a large mineral producing complex with enclosures greater than 100 m diameter. Thus, despite the inhospitable environment for cattle herding, far more cattle were kept during both periods than in any other area and period. It seems reasonable to suppose that eastern Transvaal is going through trade induced state formation during the early period, possibly a trade concentrating on beef. However, the whole state formation process falls apart, in part from competition from the Zulu and in part

from the withdrawal of European connections or from the intensification of European slaving.

Western Transvaal

The western Transvaal curves remained primate through time but lost 50% of their sites and all but one central enclosure. This suggests that cattle were no longer being kept in this region indicating cattle loss, dispersion and/or site abandonment. Two military sites, one with an elite culling pattern and the other with a primary producer pattern were occupied during both time periods. Here too, elites felt a need to be fortified during both periods.

Free State

The early Free State curve exhibits regional primacy like the late western Transvaal and contains a fort, one iron producing site, a ritual site and a royal residence both with elite culling patterns. Regional primacy has been argued to possibly reflect the effects of long-distance trade processes. Indeed the Free State has a significant number of European trade items, especially European weapons and horses. The early ritual site, the largest in the entire sample, had evidence of conflict and was later abandoned. The archaeological remains and assemblages are

anomalous, indicating stratified pastroforagers had occupied this site.

The later Free State sites produce the only occurrence of a convex pattern for the entire sample while losing 50% of their sites. This pattern is consistent with my argument for a loss of power in the Free State through time and is indicative of the later Free State's peripheral position. An iron producing site that was occupied during both periods goes from an elite to a primary producer culling pattern. This might also suggest a loss of power for those residing at the iron production site. Cattle enclosures and total A.U.'s in the Free State got slightly larger through time but remained relatively stable.

The rank-size analysis indicates that fifteenth-through seventeenth-century rank-size curves for each area are all primate concave curves varying only in their degree of steepness with the exception of the eastern Transvaal. This is interesting in that it suggests that the eastern Transvaal had a state formation process going on that got totally disrupted. Indeed, this is the most common rank-size distribution for polities involved in colonialism.

Demographic patterns parallel these rank-size interpretations. Through time Swaziland and Zululand had the greatest increases in their large sites while the eastern Transvaal lost 75% of its smaller sites, the western Transvaal lost 50% of all sites and the Free State lost 33% of their small sites and all their large and medium sites.

The later rank-size curves are more diverse. Zululand, Swaziland, and eastern transvaal exhibit the same "double convex" distribution curves. Free State is convex and western transvaal is concave. It seems reasonable to suggest that population growth in Zululand and Swaziland was related to the marked population declines in eastern and western Transvaal and the Free State. Discerning what is driving these demographic shifts would seem important for understanding the organizational changes suggested by the rank-size analyses. It also seems reasonable to see the rapid growth in Zululand and Swaziland to be related to the decline in the Free State and eastern and western Transvaal. Attention needs to be devoted to the causes of these declines, instead of focusing exclusively on the on the effects of population growth.

These analyses suggest the historical processes at odds with those of the settler model. Instead of a series of self contained regions, out of which the state emerges in one, Zululand, which then sweeps out to peripheralize all the others, a more fractured account seems required. For one, the pre-Mfecane/Difaqane interaction fields were much larger than any of these self-contained regions, though the exact nature of the relationships in these fields is still obscure. For another, similar processes seemed to be happening in Zululand and Swaziland, processes suggestive of relations of imposed colonialism and/or imperfect state formation. The eastern Transvaal seems to have passed from a period of relative organization to that of imposed colonialism or imperfect state formation. The western Transvaal became increasingly peripheralized and the Free State became very marginalized and quite thoroughly internally disorganized.

I suggest that this is directly related to changing power relations among southern African polities and their European allies revolving around the trade in African captives. For example, Zululand and Swaziland are very similar with the exception that Zululand seems to win the

state formation struggle. The eastern Transvaal looks like it stops being directly under the sway of European trade and its formerly organized polity disintegrates into independent polities, possibly each raiding the other for captives or possibly each being tied to different external sources of power. Something very similar may be happening with the Free State, except that it is even more shattered by captive raiding so that hierarchically organized polities of any size are missing.

Interpretations for the western Transvaal are more varied. The western Transvaal could be a refugee area with a central place that is either trying to exploit everyone or that shifts from being exploitative to being defensive. The western Transvaal could also represent a central place that is now thoroughly disconnected from the peasantry or a central place that is a Zulu-Swazi dependency.

Now that we have shown discordance between the settler model and the actual archaeological data, it remains to be considered how we might go about investigating the captive-and cattle-raiding hypothesis proposed above. In the next chapter I present some material manifestations of

the slavery hypothesis from the archaeological record for southern Africa.

CHAPTER VI
TOWARDS AN ARCHAEOLOGY OF IMPACT

Summary of the Results

Most historical research on southern Africa has uncritically accepted the role of Zulu state formation in the Mfecane/Difagane as the most important political event in later south African history. The Mfecane/Difagane describes a cataclysmic event precipitated by Zulu consolidation and expansion and involving the emergence of a number of other African military polities. There are several assumptions underpinning this standard settler version of southern African history. The first implies that the near-genocidal warfare characterized by cattle raiding, starvation, forced migrations and terror was internally generated. Another assumption is that the black-on-black violence created African refugee communities seeking "asylum" among European colonists, resulting in large tracts of depopulated areas where Europeans settled. Most settler version theorists assume that European involvement was minimal and consequently have omitted European agents from

the equation. They have focused instead on increasing conflictual relations between traditional African rivalries due to demographic stress and ecological deterioration. Others who concede European involvement highlight the commercial competition between African polities for control of ivory and cattle exports at Delagoa Bay. The notion of an internal, Zulucentric, Mfecane/Difaqane remains unchallenged.

My research and analysis suggest that the settler model of the Mfecane/Difaqane is wrong: it has the wrong people in the wrong places with the wrong political organization, and it incorrectly assumes a lack of political/economic ties between regions (see figure 22). This raises two questions: why did we wind up with this situation, and where do we go from here?

The reason we wound up in this situation is that everybody believed the settler version, because it served European colonial interests and the interests of African elites. The Europeans, for example, had an interest in obscuring the role and magnitude of slaving, and the effects that slaving had on African populations. The post-1820 African elites had an interest in legitimizing their own

Figure 22: Table for southeast African changes from pre to post Mfecane/Difaqane.
Cave = Concave, DC = Double Convex, LL = Log-linear, Vex = Convex refer to
the type of rank-size curves **EXPECTED = Exp**, and **OBSERVED = Obs**

Site	POP SIZE		SOCIAL HIEARCHY		CATTLE # OF ENCS.		RANK SIZE		TRADE EUROPEAN GOODS	
	Exp	Obs	Exp	Obs	Exp	Obs	Exp	Obs	Exp	Obs
ZULU	in-crease	in-crease	in-crease	in-crease	in-crease	de-crease	LL to cave	cave to DC	in-crease	in-crease
SWAZI	same	in-crease	in-crease	same	in-crease	de-crease	LL to vex	cave to DC	none same	in-crease
ET	in-crease	de-crease	same	de-crease	de-crease	in-crease	LL to LL	DC to DC	de-crease	de-crease
WT	in-crease	de-crease	same	same	in-crease	de-crease	LL to vex	cave to cave	none same	same
FS	in-crease	de-crease	in-crease	de-crease	de-crease	de-crease	vex to vex	cave to vex	none same	de-crease
SEA	in-crease	in-crease	in-crease	de-crease	in-crease	de-crease	vex to vex	cave to LL	in-crease	de-crease

superordinate status, and therefore had reason to disguise the nature of pre-1820 polities.

Where do we go from here? We start by using archaeology to bypass the biases of the ethnohistorical and documentary record. Archaeology is the way to find out what pre-Mfecane/Difaqane societies were like, and how both European and African polities were interrelated.

Cobbing's (1988) provocative reformulation of the Mfecane /Difaqane constructs a compelling case for considering the role of European trade in African captives that stimulated internal conflicts, and the militarization of African polities throughout southern Africa. This trade was to meet the internal and external labor demands of European colonists and the internal demands of their African agents. He also demonstrates how and why the standard settler version which vilifies the Zulu, functions in the modern South African political economy by masking the role of whites in destabilizing African polities, and by placing the onus of responsibility for the destruction of African societies on the Africans themselves.

In order to investigate Cobbing's hypothesis we must look at both the historical documents, oral texts and archaeological record beyond Zululand and consider both the full range of African and European dynamics within southern Africa. Essential to this endeavor is comprehending differences and similarities between African forms of incorporation and European notions of slavery.

According to Hall (1990:146) African captives who lost all kinship ties "become members of the conquerors' armies and households - in a word, slaves". He correctly emphasizes the wider application of the term "slavery" to distinguish armies used by Prazeros (land titles granted by the Portuguese King that made former renegades "official" land-holders and loyal Portuguese subjects) from African captives used for domestic and plantation labor in European colonies (Hall 1990, 129-32). Although he does not specifically say that "slavery" was a factor south of the Limpopo, he does call attention to the simultaneous occurrence of Zulu state formation, Mfecane/Difaqane and establishment of the trade in African captives between African groups throughout the subcontinent.

He argues that African "slavery" was an extension of the processes by which war captives were initially incorporated into African states, evolving out of indigenous African systems of forced incorporation. Hall (1990, 132) states that the definitive characteristic was the manner of capture and sale, which resulted in detaching them from their communities.

Many southern African polities yielded their autonomy in production and distribution to more powerful groups. However, this reality raises several questions that must be addressed. How repressive were the means, and how long lasting, and how socially extensive was their loss of power? Did it include all segments of the society? And finally, what were the effects on other communities not incorporated by these emergent states? Thus, can precolonial African social relations between captors and captives be legitimately called "slavery" and equated with "racial commodity slavery" as defined and described below?

Racial Commodity Slavery and African Incorporation

"Slavery" can be heuristically seen as a range of points on a continuum of labor relations. Both the conditions of coerced labor and the means used to procure it have been shown to be highly variable and historically specific within Africa and elsewhere (Etherington 1991b, 156). Hence, although racial commodity slavery and African incorporation involved subservience and exploitation of labor and its products, there were qualitative differences worthy of note.

Variable African Labor Relations

African incorporation and exclusion yielded different ways by which wealth generated from expropriated labor was transformed into elite political and economic power through accumulation and the attraction of followers.

Harries (1981, 320) points to the myriad types of incorporation known ethnographically and historically in southern Africa such as: ransomed hostages, volunteers, and concubines (i.e., daughters given to elite by fathers as [tribute or taxes] for material assistance and protection during upheavals and insecurity). Royal daughters from concubines produced agricultural surplus and commanded

inflated bride wealth in addition to providing lineage members. Mbatha (1960, 18 and 66-69) refers to persons reared from childhood by a clan not their own as "affiliate clansmen". He explains that this status entails mutual obligations and involves individuals and groups (war captives, commoners, refugees, etc.) who are forced to submit themselves and/or their families into service to a king, chief or headmen who sponsor them for land. Captive-raiding also provided a rapid means of acquiring labor, lineage descendants and a way to acquire profit. Elite used captives to enlarge the size of the superordinate groups' lineages with socially and economically dependent subordinates without kin, homestead affiliation or territorial ties. Thus captive raiding furnished a process by which reciprocal sets of kinship and marriage obligations could be avoided (Cohen 1967, 44; Kopytoff and Miers 1977 in Hall 1990, 132-3; Harries 1988, 314).

The Zulu state was characterized by processes of expansion, subordinate-incorporation, displacement and consolidation of an assortment of local and regional eighteenth-century polities (Slater 1976; Wright 1990). Zulu incorporation used kinship ideology to create

pejorative ethnic identities differentiating elite from commoners (Hamilton and Wright 1984, 7-9).

Yet African captives traded to other Africans, although relegated to the lowest social positions in the captor's society, had varying degrees of social mobility often depending on their manner of recruitment. For instance, most captives had some expectable political and economic rights such as protection against outsiders, ability to obtain marriage partners, access to the means of production, and sometimes, depending on one's skills, an opportunity to earn an independent compensation. They often became loyal and trusted political and administrative appointees precisely because they had no outside kin obligations.

Furthermore, one was not necessarily a "slave" for life. Captives could be heirs and many obtained positions of power and influence. Captives could achieve higher status and acquire freedom during their lifetime, through bravery in battle, skilled workmanship, and loyal service or after a specified time period when autonomy was granted and the person was incorporated into the superordinate's kin group as a full-fledged member. In addition, one's children

did not necessarily share a "kinless" fate. Often the rank of a captive's offspring was determined by the superordinate's rank, thereby sometimes ranking certain captives' offspring higher than those of non-captives (Cohen 1967, 45). Finally, captives remaining in Africa were often able to sustain their own or similar African institutions, language, customs, beliefs and cultural practices. A captive could often run away to a neighboring village as long as the old superordinate was compensated by the new. Similarly, those captives traded to European colonists in Africa were reasonably familiar with the terrain and often escaped to more friendly African polities.

Racial Commodity Slavery

The fabric of racial commodity slavery on the other hand excluded captives from rich interactions with others in society. On the basis of phenotype, language and culture, captives were afforded a permanent stigmatized social status, transmitted to their descendants with little or no opportunity for acquiring freedom. Moreover, these conspicuous attributes became justifications for European racist disdain, inhumane treatment and their permanent use as property. In addition, the use of firearms and violence

to obtain African captives for the European marketplace transformed African communities into specialized captive-raiding states and those resisting raiding. Globally, this traffic altered the political economy of Africa along with creating a tributary power relationship between Europe and Africa (Wolf 1982).

In most cases Africans were transported into a completely different cultural and environmental milieu too far from Africa to return. These African captives were forced to create new cultural forms of self-identity and survival.

There were also "mixed" communities like the Griqua and Korana who, despite rejection and abuse by Europeans, were willing colonial agents. They adopted European dress, religion, culture, and values. They also collaborated with Europeans in hunting down escaped captives and raided Africans to provide captives and cattle for Europeans and themselves (Etherington 1991a).

In sum, all southeast African polities possessed a variety of means for incorporation and exclusion of individuals and groups into and out of their societies. African incorporation sought to build kin groups by

incorporating kinless individuals. Racial commodity slavery was expansive and based upon a global division of labor rooted in an ideology of racism. Its nineteenth-century escalation into African polities drastically altered the nature of differential incorporation culminating in social marginality, within militarized, heterogenous, nationalized states. These states were themselves products of incorporation and amalgamation, some with the capability for sustained coalescence and resistance.

As European penetration coalesced, members of some conquered groups were enslaved by European frontier communities and others variously incorporated into African societies. This was accompanied by the increasing physical and social separation of whites from their African labor force, facilitating a legally sanctioned class ideology of racism and segregation enabling greater elite control of a racially divided labor pool. This process in southern Africa involved the political creation of colonial-defined, externally imposed color categories of new racial and ethnic identities of white inclusion and black exclusion.

More acquiescent African polities were given some internal autonomy to reinforce the new racial and ethnic

distinctions of colonialism. Groups were identified, their identities transformed, eliminated, assimilated and co-opted as struggles on economic, political and cultural fronts took shape. Other Africans seized this opportunity to utilize these dichotomies to act independently of the colonizers to create sociocultural and ideological structures of resistance in their quest for liberation.

African struggles over exclusion and incorporation were actively contested. Since the ideological and physical separation proceeded together, architectural trends accompanying the physical segregation should be reflected by particular artifact configurations or symbols of cultural continuity similar to Patterson and Gailey's (1987) "archaisms" and in other spatial realms of colonial architecture, material culture and African cultural landscapes.

The Impact of Racial Commodity Slavery

Raiding for captives involved killing and capturing people, burning villages and fields, and confiscating livestock and grain stores. These conditions effectively destroyed the agropastoral economic base, fostering insecurity and driving many families from their historic

communities and into migrant labor, commodity production and military organization.

The sheer number of captives, even counting only those "legally" traded, suggest that African societies suffered enormous population losses, particularly of the younger more productive members of society, especially men. This had detrimental consequences for the age pyramid and biological reproduction. It left many women without men. The more that women outnumber men, the more vulnerable women are to the men. Hence communities with fewer fighters tended to be vulnerable to attack. Captive-raiding also severely transformed gender relations causing an expansion in the incidence of polygamy (Cobbing 1988; Eltis 1987; Lovejoy 1983).

Social reproduction was drastically altered as African networks of kinship and marriage which had served as the traditional basis for alliances, power, and authority could now be circumvented by groups connected to Europeans and their agents. European weapons facilitated both the ability to exact tribute over wider areas by raw military force, and the ability to resist raiders. As captive-and cattle-raiding replaced trading as the dominant form of

economic activity, African labor became worthless without military protection (Wilmsen 1989). Racial commodity slavery was a brutal but effective means of accumulating the necessary labor for global capitalism. The stigmatized groups served capitalist accumulation by providing an available labor pool for external plantations and internal colonies and by lowering European wages at little cost to the colonial powers.

Finally, captive raiding generated an advancing colonial frontier that violently seized land and dispersed African populations providing huge depopulated areas on the peripheries of settlements of Europeans and their agents creating opportunities for more European settlement and expansion.

Regional Landscapes and Articulating Modes of Production

Marxist theory assumes that concepts like capitalist penetration and resistance represent actual historical sets of social relations yielding certain archaeological expectations dependent upon how hypotheses are framed to include archaeological data. Such concepts facilitate understanding of some distinctions not readily

apparent from the archaeological data alone, and which tend to be obscured in the more generalized models (Hall 1990, 64).

Althusser and Balibar (1971) have argued that colonial areas were social formations characterized by "articulating modes of production" where the capitalist and noncapitalist modes of production coexisted contradictorily in conflict and acquiescence. Southern African landscapes were dynamic and operated at different scales, that is, they constituted regions or parts of regions that varied considerably in function, size, extent, duration and interaction with social formations outside of Africa.

The sixteenth-century Portuguese destruction of east African coastal polities shattered the once stable commercial relations between the coast and the interior and forced the collapse of Great Zimbabwe and the emergence of the Torwa and Mutapa states to the south. The new kingdoms had alliances with Portuguese based at Mozambique who plundered local groups for captives and established markets and hegemony over vast estates (Hall 1990, 130). The demand for African labor collapsed local lineages and made access

to coercion and destruction the basis for alliances and power.

Further south, powerful eastern Transvaal polities who had been heavily engaged in metal trade with African interior groups for hundreds of years became involved in commercial relations with Europeans at Delagoa Bay. During the seventeenth century European competition to control ivory resulted in African-European conflictual relations and alliances in and around Delagoa Bay. By the mid-seventeenth century ivory sources were primarily coming from the areas south of Delagoa Bay (Hedges 1978). By the eighteenth century the Mthetwa-Zulu were engaged in regional elite commercial relations, initially involving commodities of little value in their own economies. For instance, ivory was exported for commodities given value by their rarity. These exclusive wealth forms were essential to the emergent ruling class, replacing cattle accumulation as the principal means for signifying wealth, power and authority.

The nineteenth century witnessed an intensification of livestock-and African captive-raiding throughout southern Africa. For instance, Griqua captive- and cattle-raiders attacked Xhosa villages in 1805, Zulu homesteads in 1821,

Ndebele communities in 1828 and had displaced Free State Sotho-Tswana communities by the 1820-30s (Cobbing 1988). These early decades of the nineteenth century also saw Boers invading and occupying the southern highveld and into the Free State forming the South African Republic in 1836 (Etherington 1991a).

These events suggest that we look beyond declining access to exotic commodities by the Zulu as cause of the Mfecane/Difaqane. Hall (1990, 125) points out that although the Zulu and Xhosa polities generally prevented fissioning and at times successfully contested European colonial penetration, there is little evidence for class formation like that found at Great Zimbabwe.

It is possible that the transition to military polities and from useless to useful exports like cattle and people during the nineteenth century was based upon a demand for firepower. Unlike earlier wealth forms that maintained and lubricated ruling-class alliances, European weapons could be used to confront competing Africans and Europeans. European hegemony was facilitated by providing collaborating African polities the advantage of firearms, horses and alliances for augmenting their slave- and cattle-raiding

capabilities, further accelerating and entrenching African dependence. European agents sought to instigate and aggravate internal African rivalries and to deceive, disrupt and destabilize African polities (Cobbing 1988).

The plunder of African communities by Europeans and their African agents combined with European settler competition for land, food and labor resources, placed a premium on militarized polities. This resulted in famine and displacement for those communities and individuals without military protection. People were forced to move into areas that were simultaneously parts of their traditional homelands and parts of the newly emerging landscapes that were perceived as marginal by European settlers.

Thus the late-eighteenth-century rapid proliferation and coalescence of military polities was one manifestation of African resistance to European penetration. These polities were forged of different African people who superimposed firearms onto preexisting structures like the Amabutho during the Mfecane/Difaqane.

Europeans transformed the landscapes they found with various new forms of materials, like guns, forts and

horses. These material cultural forms were manipulated by Europeans and Africans alike and African cultural landscapes became part of a specialized periphery of a new larger totality whose centers of gravity were elsewhere and whose commercial activity was rooted in class-based commodity production and consumer demands in Europe. The peripheralization was based on the expropriation of indigenous raw materials, food resources, land and human labor for a colonial plantation economy rooted in racial exclusion (Cruz-Uribe and Schrire 1991) From the beginning, however, these local and global transformations engendered forms of African resistance and contestation which must be reflected in the material world and cultural landscapes of southern African.

A Comparative Archaeological Look at Southern Africa

The results of looking at the archaeology suggests that ecological, demographic and trade processes appear to have little validity as monocausal explanations of the Mfecane /Difaqane. The archaeological and ethnohistorical evidence reveals certain trends that indicate that the historical processes responsible for the Mfecane/Difaqane

were much more complex and certainly involved Europeans. Furthermore, this evidence indicates that processes affecting southeast Africa had opposite effects in Zululand than in the Free State and the eastern and western Transvaal. For example, all demographic analyses point out that the post-eighteenth-century Zulu population was about 50 times larger than in the fifteenth through eighteenth-century with a 33% increase in the number of sites. These increases were associated with population decreases in the Free State and the eastern Transvaal and a corresponding 34% decrease in the number of sites. A comparative analysis of the Free State and eastern and western Transvaal with Zululand reveals the inverse pattern more clearly.

The Free State shows no evidence of agropastoral settlement until about 1300 AD when numerous stone-walled livestock enclosures and settlement units appear (Hall 1990). Maggs (1976a, 330) has defined four types of Free State settlements based upon different architectural features and tentatively identified specific groups with each type.

The earliest sites are the southwestern, fourteenth- to nineteenth-century type R settlements along

the Riet River. Larger type R settlements sites contained rock engravings, rock gongs, and stone-lined burial pits with exotic grave goods. This circumstantial evidence suggests involvement in European commercial relations and differential social status. Yet wild game, lithics, and undecorated grass-tempered pottery would suggest pastroforagers. The evidence of at least one burnt dwelling and the site's eighteenth century abandonment could suggest changing regional power relations.

Both the late-fifteenth-century northeastern Free State type N sites and the eastern type V sites date from the sixteenth-century. Type N settlement units are characterized by surrounding perimeter walls enclosing the entire settlement unit and are generally situated at higher elevations (Hall 1990, 49-50; Maggs 1976a, 321-2). Earlier sites are larger, more dispersed than later sites and concentrated on hilltops (Maggs 1971, 1976a, 1976b). At least one of these type N sites, Klipriversberg, became fortified and contained European commodities.

During the late-sixteenth century many new type V settlements were constructed between and superimposed onto older type N's which continued to be occupied or reoccupied.

By the early-seventeenth century type V sites became the most widely distributed type on the southern highveld and by the eighteenth century they were abandoned.

Makgwareng, a late-eighteenth through early-nineteenth-century type V site contained ostrich egg shell beads, iron spear points, and cattle and horse remains. The settlement seems to have been "suddenly and violently abandoned" as evidenced by the remains of several stores of iron tools, clusters of spear points around a homestead entrance and a human jaw bone in the cattle enclosure entrance (Hall 1990).

Type Z sites are densely packed settlements in the drier north-western Free State and date from the late-fifteenth through the nineteenth-centuries. During the sixteenth and seventeenth centuries, new type Z's emerge between older ones.

In sum, southern highveld settlements began to aggregate after the fifteenth century, exhibiting differences between elite northwestern sites with European commodities and primary producer eastern sites. There were four early sites with elite cattle culling patterns; a fort, an iron producing site and two royal residences. The one

iron producing site that remained occupied during both periods went from an elite to a primary producer culling pattern. This might suggest a loss of power for those residing at the iron production site. Furthermore, most elite sites were abandoned by the eighteenth century and the number of forts increased.

The archaeological evidence consisting of regional primacy, greater kinds and amounts of European goods, especially European weapons and horses, tends to support the documentary record that Free State polities were involved in long-distance exchange relations with Europeans at the Cape, both before and after the Mfecane/Difaqane. Before the Mfecane/Difaqane, eastern Transvaal production sites contain the most glass beads. After the Mfecane/Difaqane Free State royal residences and a fort with "abundant" amounts of glass beads contained the most beads. Free State faunal assemblages exhibit mostly primary producer cattle culling patterns with wild game providing a significant portion of the diets (Maggs 1975, 449-54 in Plug and Brown 1982, 120).

Zululand settlement transformations are the opposite of those in the Free State. Archaeological settlement studies from Zululand indicate a large-scale

expansion of type B stone-walled settlements into the southeastern grasslands near dolerite outcrops between the sixteenth and eighteenth centuries. These areas were unoccupied by agropastoralists earlier (Hall 1981; Hall and Maggs 1979). Type B sites are architecturally dissimilar to traditional "central cattle pattern" settlements and exhibit primary producer cattle culling patterns and an absence of European commodities (Hall 1984c, 1990; Hall and Mack 1983).

My analyses show more royal residences, and military sites in Zululand than any other region and that two of three early royal residences in Zululand had primary producer cattle culling patterns. A fortified type B site had an elite cattle culling pattern and evidence of earthwork ditches and sinuous cattle passages protecting against cattle raiding. These early period patterns suggest the continued importance of military individuals and a concern with cattle raiding in Zululand.

The later Zululand sites consisted of two royal residences with elite cattle culling patterns. These later royal residences yield older cattle (for military shields?) and a differential distribution of higher and lower status body parts (Plug and Brown 1982; Plug and Roodt 1990).

Central enclosure sizes and presumably the number of cattle increased significantly during the later periods at the royal residences. The increasing court and cattle sizes suggest the growing importance of royal residences after the eighteenth century.

The largest sites for both periods were iron producing sites. The number of furnaces and by implication the demand for iron weapons and tools increased until the late-nineteenth century. With the onset of colonialism these sites were abandoned. This circumstantial evidence could reflect iron production for local markets before the Mfecane/Difaqane and greater local demand and regional markets like the Free State after the eighteenth century. Oral traditions indicate that Free State populations acquired iron implements from Zululand iron producing sources prior to the early decades of the nineteenth-century (Maggs 1982, 1984, 202).

Thus, substantial evidence for conflictual relations before the Mfecane/Difaqane can be found in the continuous presence of military elite in Zululand with elite cattle culling patterns at fortified sites. Fortifications increase in Zululand after the eighteenth century.

A similar inverted relationship also existed between Zululand and the eastern Transvaal through time.

The eastern Transvaal had the most metallurgical and primary producer settlements, and despite its poor agropastoral environment, more cattle during both periods than any other area. The cattle were primarily at large specialized sites. Herd profiles in the early eastern Transvaal sites are mostly elite cattle culling patterns from a royal residence and two production sites. Pre-eighteenth-century metallurgical and production sites are found in the eastern Transvaal and evidence of commercial relations with Europeans is found by the early-eighteenth century. The only later site is the large production complex that continues to exhibit an elite cattle culling pattern.

By the late-eighteenth century large metallurgical sites become larger, fortified, and defensively situated. Large settlements become more architecturally complex with cattle tracts, terracing, and different size livestock enclosures and are surrounded by smaller sites at lower elevations.

In summary, the archaeology suggests that the eastern Transvaal and Free State sites show increasing

evidence of settlement aggregation, social stratification, conflictual relations and European commercial relations after the fifteenth century. By the eighteenth century these areas show evidence of fortification, elite and primary producer site abandonment, and reduction or agglomeration of cattle at large specialized sites. Taken together, these patterns suggest conflictual relations and population dispersion in regions on the expanding European colonial frontier by the eighteenth century.

The documentary sources and oral texts speak of the dispersal of Free State and Transvaal groups sometime after the mid-eighteenth century. It was not until the early decades of the nineteenth century that these communities began to aggregate in these areas as people began to vacate their towns. Huffman (1984) attributes these transformations to events in Zululand in particular, not European intrusion.

As I have stressed, the archaeological evidence from Zululand shows increases in precisely those categories that decreased in the Free State and eastern Transvaal. I contend that these patterns mean that people found life in those areas near European settlements dangerous and moved

into Zululand, or that they were forcibly incorporated into the Zulu state as regional power shifted to Zululand after the start of the nineteenth century.

Besides the accumulation of wealth forms signifying power and authority, long-distance processes also involved access to European firepower, protection and force. The analysis suggests that Zululand exhibited no European artifacts until after the Mfecane/Difaqane. The Eastern and western Transvaal and the Free State showed commercial contact with Europeans before the Mfecane/Difaqane.

Whatever the conditions in southeast Africa during the pre-and post-Mfecane/Difaqane, they were having the opposite effects on communities in Zululand, Swaziland and western Transvaal and those in the Free State and eastern Transvaal. Although evidence for conflictual relations is undeniable, the exact causes of this conflict cannot be addressed definitively with the present data.

Nonetheless, all analyses and results suggest that the Mfecane/Difaqane as traditionally characterized in settler history is inadequate in explaining the post-fifteenth-century transformation in southern Africa. The

transformation is are better understood as a result of more complex global processes involving Europeans.

Lastly, I have argued that the context of colonialism and global power relations has resulted in bias not only in the historical record but also in the archaeological questions concerning the Mfecane/Difaqane. This bias becomes most apparent when identifying and formulating hypotheses accounting for the discrepancies between the archaeological and documentary records. As suggested by Leone and Potter (e.g., 1988) "ambiguities" in the different lines of evidence are places where power lies - power that has resulted in telling histories that affect social relations today. If this is the case, then how can we go about finding out what happened? What research is necessary to better understand post-fifteenth-century southern Africa?

Prospects for an Archaeology of Impact

This section is concerned with the ways in which historical archaeology can contribute to the theoretical and historical discourses regarding questions of capitalist penetration, colonialism, domination and resistance in post-

fifteenth-century southern Africa. I present some possibilities for an agenda for subsequent research topics with questions and archaeological implications based upon certain data deemed important for the different interpretations. My goal is to present different ways anthropologists might utilize archaeological methods for collecting, interpreting and analyzing data to contribute to a better understanding of issues of power. I use questions from the contrastive case, that of African captive-and cattle-raiding, to direct future research strategies that can shed more light on this particular historical case.

Long Distance Processes: Core-Periphery Relations

Although core-periphery relations leave archaeological traces that can affect data, there have been relatively few archaeological studies of these relations. This is due partly to the difficulty in situating such studies within an archaeological survey of comparatively small areas, and partly to problems with recognition. One must be looking for such landscapes in order to recognize them; one must be cognizant that one is looking at only a sector of a global system.

Two expected theoretical configurations of peripheral-colonial cultural landscapes are dendritic patterns and regional primate patterns (Blanton 1976; Crumley 1976; Johnson 1977, 1982; Kelly 1976; Paynter 1982; Smith 1976a, 1976b; Wright and Kus 1979).

Several areas exhibited characteristics of dendritic systems and regional primacy. Early and late Swaziland and late western Transvaal sites show larger numbers of smaller sites oriented toward a significantly larger elite site. Only early Free State sites had evidence for long-distance trade networks. This could indicate the exclusion of larger African or European sites, in southern Mozambique, Cape frontiers or elsewhere. These patterns beg the question of the location of these entrepôts.

Archaeological surveys and/or excavations of African and European entrepôts, near Delagoa Bay, Natal and the like, straddling coastal exchange corridors can provide opportunities for data collection for studying processes of European penetration. Archaeological research in Natal has focused on African sites and has ignored early colonial sites like trading posts, missions and European farmsteads and little has been done in the Delagoa Bay area.

Future research must also examine European settlements and structures at these entrepôts and elsewhere. My settlement maps indicate an increasing proliferation of European forts, initially located in coastal communities and later inland. This pattern raises questions about the spatial distribution of other European settlement types.

Resistance and Contestation

African captive-and cattle-raiding involved both local and external resistance and contestation. A Eurocentric perception of enslavement and domination masks the faces and muffles the voices of resistance by active social agents. Archaeological considerations of how landscapes, identities and objects were transformed to contest Western penetration and organize resistance has generally been excluded from explanations of the African past.

Resistance and contestation are always more than a collection of individual acts. They range from open defiance, and armed confrontation, to passive resistance, to other forms of non-cooperation that limit and impede domination. They involved minor acts of sabotage to harass captors and colonists like theft, feigning illness, work

slowdowns, deception, desertion, evasion of census/taxation, and purposeful laziness (i.e, "shucking and jiving") and ineptitude (Davis 1971; Patterson and Gailey 1987; Scott 1990). They also entailed major acts like cattle theft, burnings, fighting, poisonings, escaping and providing havens for escaped captives and, of course, insurrection, insurgency and armed warfare. These conscious strategies sent unequivocal messages about African dissatisfaction and their willingness and ability to resist.

The presence of European and African forts themselves along with the looting of European towns and farmsteads, attests to the hostile environment of the colonial encounter. I contend that the proliferation of military polities is reflective of resistance to Western incursion as warfare reinforced the leadership and promoted specialized military groups.

Armed Confrontation

Armed confrontation and military specialization are key characteristics defining the colonial encounter globally. Armed confrontation in southern Africa occurred between Africans over forced incorporation and between Africans and Europeans over colonization. The

archaeological evidence indicates that fortified African settlements, evidence of conflictual relations and European contact was manifested long before the Mfecane/Difaqane in areas outside of Zululand, and only in post Mfecane/Difaqane Zululand are sites large military towns with specialized areas for royalty (Parkington and Cronin 1979; Plug and Roodt 1990; Watson and Watson 1990).

Biohistorical evidence of armed confrontation would include data from burials and battlefields revealing African and European individuals injured or slain in combat from gunshots or spear thrusts. One must remember that both Africans and Europeans used firearms and there were many intra-European conflicts on the frontier as well. I know of no study of battlefields or African skeletal remains concerned with those questions. A review or reanalysis of published materials on burials with such questions in mind should prove productive.

Firearms and Spears

Theoretically, since all Africans, including slave and cattle raiders were ultimately supplied by mainland European gun makers, we should be able to use weapons and related material objects to relatively date archaeological

sites and as reflections of armed conflict. European military uniform paraphernalia, horses and horse and wagon equipment, could also signify the sites of European agents. Locally made gun flints and arms repairs could indicate resistance and should be sought in sites occupied by African populations (Schrire and Deacon 1989, 109).

The eastern and western Transvaal and Free State have evidence of these categories of European goods during both periods. Evers (1979, 34) recovered pieces of muzzle loading guns from the Mapoch site, a stone walled African fort destroyed by Europeans in 1883 in the eastern Transvaal. Kgopolwe Hill, a nineteenth century royal village, yielded military uniform buttons and a gun muzzle and barrel (Evers and van der Merwe 1987, 90-91) and Oudepost 1 has yielded cannon balls, gun flints and evidence of burning and sacking by the Ju/'hoansi (Schrire 1988).

Despite the historically known frequency and scale of warfare, archaeological excavations have so far recovered relatively few examples of European or African metal weaponry at sites in proportion to the known historic incidence of warfare. The documentary record indicates that Africans reused and/or refashioned iron materials and

removed their projectiles and European weapons at the conclusion of battles (Edgerton 1988; Shaw and Van Warmelo 1974, 112). British soldiers also collected firearms from the dead Africans (Edgerton 1988, 78 and 95). The more necessary an imported, difficult-to-acquire technology is, the more it is curated. Guns are almost always highly curated, and do not get discarded until they are hopelessly beyond repair.

Summary and Conclusions

These brief sketches are only intended to indicate research approaches needed to investigate questions of colonialism. My efforts to test single-variable hypotheses have led me to reconsider the problem of Zulu state formation and the Mfecane/Difagane in terms of colonialism, multiple-variable hypotheses, and to propose approaches and methods outlined above.

Global, local and regional scales of analysis are essential to understanding the complex post-fifteenth-century transformations in southern African-European historical dynamics involving ethnicity creation, domination-resistance, acquiescence and collaboration from

both Africans and Europeans. Crucial to understanding these historical global processes is the roles of African captivity in both African and European societies as they shifted to contribute to the accumulation of wealth and power for the few.

This dissertation has illustrated that archaeology has an important role to play in the recovery of the past of southern Africa. Most historical studies, no matter how self-critical, are always faced with the problem of the Eurocentric and white supremacist biases of the documents. Adding an admittedly problematic source of information, archaeological sites, points out areas of contrast, in part due to the problems of the documents, and calls for renewed investigations of documentary and material records. For the archaeologist the most immediate task is to survey and excavate sites in what are today blank spots on the map, especially eastern Cape, Lesotho and perhaps most important for questions of impact, southern Mozambique. But this dissertation also argues that collecting more sites is not enough. Archaeologists need to be more attentive to issues of power, issues concerning how it was exercised in African and European communities and how it was resisted, internally

and externally. Research designs with these goals in mind could then be joined to the archaeological and historical research on colonialism being undertaken at the Cape and elsewhere to provide a fuller picture of impacts on all aspects of society when Europeans came to plunder southeastern Africa.

APPENDIX 1 Southern African Sites used in the Analyses

Table 1 ZULULAND

Pre and post refer to sites occupied before and after the Mfecane/Difaqane respectively. * = Elite culling pattern and # = primary producer culling pattern. S.U. = settlement unit.

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Ngombe River	1838 (post)			Battlefield		
2. Congela	1829- 1838 (post)	22.5 ha		Royal residence		
3. Lungwini	1750- 1770 (pre)			Royal residence (Mthetwa)		
4. Gundanemi	1750- 1800 (pre)			Royal residence, stone wall sites		
5. Mbatheni	1750- 1800 (pre)			Royal residence, stone wall type B		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
6. Qungebeni	1770- 1830 (pre/ post)			Royal residence		
7. emMbamba	1750- 1800 (pre)			Royal residence		
8. Enkwazini C68	1600- 1910 (pre/ post)	.1 ha	mollusk	Shell middens & undecorated pots		15-23 cm
9. Kwishini (Gwegweni)	1775- 1850 (pre/ post)			Royal residence (Ndwandwe)		
10. Godwayo (eMagudu)	1750- 1850 (pre/ post)			Royal residence		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
11. Hluhluwe	1750- 1860 (pre/ post)	4 ha		Complex w/19 villages & 15 147 + iron production furnaces & dwellings		18 cm
12. RV30 (Hluhluwe)	1650- 1830 (pre/ post)	5.06 ha		Iron furnaces & undecorated pottery		
13. RV29 (Hluhluwe)	1750- 1910 (pre/ post)	7.2 ha		Iron production 16 + furnaces & undecorated pottery		18 cm
14. Isandhl- wana	1879 (post)			Battlefield		
15. Kwa- Bulawayo	1824 (post)			Royal residence		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
16. Kwa- Buthelezi (Elangeni iNguga)	1750- 1800 (pre)	4 ha		Royal residence stone wall type B		
17. Kwa- Dlovunga I (KwaMbuzi)	1750- 1800 (pre)			Royal residence		
18. Kwa- Dlovunga II (Thokazi)	1750- 1800 (pre)			Royal residence		
19. Kwa- Gqokli Hill	1818 (post)			Battlefield		
20. KwaKhumalo	1759- 1800 (pre)			Royal residence		
21. Kwa- Mpungabi (KwaZungu)	1750- 1800 (pre)			Royal residence		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
22. KwaZulu (Esikleb- heni)	1750- 1770 (pre)			Royal residence		
23. Kwaxulu	1700- 1800 (pre)			Royal residence		
24. Mabhija	1690- 1885 (pre/ post)	50 ha	Large upper & lower grind stones	Iron, & coal? prod. village w/74 paired, elliptical furnaces. Iron blades, spear pts w/doubled tang. 1 stone wall dwelling		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
25. Mgo- duyanuka I	1630- 1830 (pre/ post)	4.2 ha	*Cattle Large upper & lower grind stones & burnt maize cobb	Defensive stone walled type B w/uphill facing entrance & earthwks ditch. Iron blade & spear pts. Undecor. Pots		40-50 cm
26. Mgo- duyanuka II	1630- 1830 (pre/ post)	2.2 ha		Defensive stone walled type B w/downhill facing entrances		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
27. Nqabeni	1700-1800 (pre)	1.2 ha	# Cattle & maize, millet & sorghum	Royal residence, stone wall site Type B w/uphill facing entrances, Spear pts & iron blades		20 cm
28. Odwini	1750-1800 (pre)	.032 ha	# Cattle	Royal residence		
29. Ondini	1873-1879 (post)	35 ha	*Cattle but lower status body parts dominate, Sheep/goat & much wild game	Royal residence w/ palisades. Many stone, bone tools, & animal skins		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
30. Opiyaneni	1775- 1800 (pre)			Royal residence (Ndwandwe)		
31. Oyengweni I & II	1750- 1800 (pre)			Royal residence (Mthetwa)		
32. Pitfall Traps	1819- 1840 (post)	.0012 ha		Animal traps		1.4 m
33. Skurwe- krans	1850- 1900 (post)	.9 ha		Refuge site		
34. Ulundi	1873- 1879 (post)	.90+ ha		Royal residence & nearby battle field		
35. uMgungund- lovu	1829- 1838 (post)	22.5 ha	# Cattle w/ large % burnt	Royal residence, with small brass production. Barracks, shield racks,	Brass wire from Delagoa Bay. Glass beads	7-45 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
36. Umhlanga Lagoon & Rock Shelter	1665- 1735 (pre)		Hunted game	Iron slag, small primary producer village, & rock shelter. Microliths		
37. Rorke's Drift	(post)			Battlefield		
38. 11 British Forts	(post)			Forts		
39. Kwa- Mpongose	1879 1750 (pre)			Royal residence		
40. Isandlunda	1827 (post)			Battlefield		Surface

Table 2
SWAZILAND

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Balekane (Ebuland- zeni)	1815- 1845 (post)	3.1 ha		Stone walled Fort w/stone ladder. Undecor. ceramics	Glass beads	
2. Border Cave (Emgodini)	1450- 1860 (pre/ post)	0.12 ha	Maize	Grave site w/ undecor. & inverted pots		7.5-15 cm
3. Buseleni (Ngaba- neni)	1836- 1845 (post)			Refuge site		
4. Dlovungu I & II	1845- 1850 (post)			European church & mission station		
5. Ntfonjeni Nkundla	1845- 1855 (post)			Royal residence. Same location as S151		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
6. Embilaneni (Nzama)	1750- 1800 (pre)	0.99 ha		Royal grave		
7. Elliptical Furnace	1690- 1885 (pre/ post)	.005 ha		Iron production site		surface
8. Eludzid- zini / Emdzidzini	1825- 1868 (post)			Royal residence		
9. Ezabeni	1870- 1894 (post)			Royal residence		
10. Ezulwini Tindzala	1825- 1870 (post)	.60 ha		Royal residence		
11. Hhohho II	1845- 1865 (post)	1.12 ha	Grind stones	Royal residence w/ udecorated ceramics		surface

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
12. Kadake (Londozi)	1818- 1885 (post)	.92 ha	Sheep / goat some burnt	Primary producer stone walled sites w/ inward down slope facing entrances, terracing, cattle tracks, stone mounds. Undecorated ceramics & soapstone talc objects, "flawed bowl"? & "strike-a- light"		60-86 cm
13. Kahhohho I	1680- 1839 (pre/ post)	.39 ha	Cattle & grind stones	Royal residence w/ iron hoe & pot leg? Burnt dung		25-35 cm
14. Khubutha	1820- 1880 (post)	.08 ha		Refuge sites w/ undecorated ceramics		surface

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
15. Lobamba II (Matenga)	1910- present (post)	12.5 ha		Royal residence		
16. Lobamba Lombzala	1820- 1845 (post)	5.02 ha	Cattle some burnt, sheep /goat grind stones	Royal residence w/ burnt dung, undecor. ceramics (inverted), iron ring & spiked spearhead?, ostrich egg shell	Glass beads & 1 square- cut nail?	46-60 cm
17. Lozitha	1930- present (post)	4.875 ha		Royal residence made of cement		
18. Maghebuke- leni	1500- 1900 (pre/ post)	.114 ha		Iron extraction site w/ iron slag heaps, hammer stones, & stone tools		surface

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
19. Mahlan- gatja Hills Sites	1815- 1845 (post)	.918 ha		Primay producer stone walled sites		
20. Mbekelweni	1860- 1889 (post)	1.125 ha		Royal residence w/ decorated ceramics		surface
21. Mgwayisa Valley Sites	1818- 1889 (post)	.003 ha		Primay producer stone walled sites w/ terracing		
22. Mlokotwa (Zikho- theni)	1680- 1850 (post)	.20 ha		Royal graves		
23. Ngun- gunye's Lobamba (Hlobani)	1680- 1770 (pre/ post)	.30 ha		Royal rsidence		surface

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
24. Ngwenya (Bomvu Ridge)	1400- 1900 (pre/ post)	.25 ha		Production sites. Ore extraction sites for pigment		
25. Nkanini	1830- 1890 (post)	.30 ha		Royal residence		
26. Nsalitje	1880- 1900 (post)	.05 ha		Production site. Coal & quartz extraction sites w/ undecorated ceramics, stone tools & quart nodules		surface

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
27. Shishel- weni Nkundla	1680- 1820 (pre/ post)	.918 ha	Cattle, many burnt; Sheep /goat some burnt, grind stones	Royal residence w/ 1 decorated ceramic, burnt dung, hematite nodules, stone bead, quartz "strike-a- lights"?	Glass beads	48 cm
28. Sibebe Cave (Langub- hele)	1800- 1900 (pre/ post)	.02 ha		Rock shelter Undecorated ceramics, stone tools		25 cm
29. Siphiso Cave (Mlaula Shelter)	1650- 1900 (pre/ post)	.004 ha		Rock shelter w/ inverted undecor. pots, lead pellets, fabric pieces, wooden pens, & a metal blade.		35 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
30. Sitobela	1690- 1885 (pre/ post)	.005 ha		Iron production w/ eroded furnace & iron slag heaps		surface
31. Zombodze I	1690- 1900 (pre/ post)	6 ha		Royal residence		
32. Zombodze II	1890- 1940 (post)	.078 ha		Royal residence		

Table 3
SOUTHERN MOZAMBIQUE

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Manekweni	1100- 1680 (pre)	1 ha	*Cattle w/in walls & sheep/ goat outside w/ wild game, marine foods	Stone walled elite dzimbahwe, w/ iron production		
2. Matola	1650 (pre)	1.5 ha	Shell middens	Small primary producer village w/iron production & decorated pots		
3. Chalmite II	1850 (post)			Royal grave		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
4. Gaza Sites or Ngungun- yane's sites 1, 2 & 3	1 = 1827- 35; 2 = 1839- 62; 3 = 1889-95 (post)			Royal residence south of Gaza		

Table 4
EASTERN TRANSVAAL

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Magoebas- kloof	1500- 1900 (pre/ post)		grind stones	Pot & pit westward facing elite burials w/ bored stones, undecor. pots		32 cm- 2.04 m
2. Eiland Sites	1310- 1800 (pre)	100 ha		Production sites. Salt, & soapstone bowl factories & copper mine w/ decorated & undecor. pots		40 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
3. Black Hills (Eiland) (24/30 BA east)	1570-1670 (pre)	23 ha	*Cattle Lots of wild game, grind stones	Production sites. Smelting & stone terraced primary producer village w/ forges, slag, decor. pots, stone tools, ash middens, iron, copper & bronze objects, spindle whorls, ostrich egg shell beads	Abundant glass beads	40 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
4. Eiland 64 & 5/72 east	1570- 1800 (pre)	.5 ha		Production sites. Salt factories & primary producer villages w/bowls some w/handles, mruba board, stone tools		
5. Kgopolwe Hill Phalaborwa SPK4	1370- 1860 (pre/ post)	12 ha	Cattle, sheep/ goat, wild game & marine foods	Royal residence (19th cent.) w/terraced dwellings & iron prod. 1 larger dwelling w/hemispherical central hearth not firebowl like others	Military uniform buttons, & large blue glass beads	122 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
6. Ngome Hill Phalaborwa	1660-1900 (pre/post)	.01 ha		Large defensive terraced royal residence & villages w/ copper smelting for beads, copper rods (<u>marale</u>), undecor. ceramics & elite pot burials (Sealeng)		30-45 cm
7. Lolwe Phalaborwa	1040-1750 (pre)			Iron production & smelting site W/ primary producer villages w/ slag heaps, mine shafts & adits		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
8. MK/Kal Hill Phalaborwa	1825- 1900 (post)			Small primary producer villages on terraced slopes w/16 dwellings	large blue glass beads	2-5 cm
9. Sekgopo Phalaborwa	1800- 1900 (post)	.01 ha		Terraced primary producer village w/ small forge & decorated pots	large blue glass beads, gun muzzle & barrel, military uniform button	
10. Vudogwe Phalaborwa	1500- 1900 (pre/ post)	.01 ha		Large terraced primary producer villages w/ stock pens		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
11. Square	1790- 1860 (pre/ post)	.07 ha		Terraced primary producer village w/ iron furnaces & slag heaps below & iron objects	Glass beads	
12. Molotho	1770- today (pre/ post)			Copper furnace		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
13. Nsikazi Sites Crocodile River	1500- 1900 (pre/ post)		Wild game, sheep/ goat & diseas- ed cattle abun- dant grind stones, marine foods	Primary producer villages w/ long occupation, undecorated pots, bone marks = metal blades & small stone burial mounds		
14. Harmony Mine Site	1679- 1800 (pre)	.14 ha		Stone terraced primary producer villages, iron, copper, mining & production, abundant undecor. ceramics		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
15. Mbhuleni	1850- 1865 (post)			Swazi military outpost		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
16. Harmony Village 50/74	1679- 1800 (pre)	.02 ha	*Cattle ,sheep/ goat, marine foods, wild game & metal cut bone	Terraced primary producer village w/ copper & bead production, undecorated pots, soapstone bowls, bone,clay, wire & copper molded beads, ostrich egg shell beads, stone tools & cores, abundant grindstones w/ red ochre stains, iron tang & red ochre pigment pencil	Abundant glass beads	25 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
17. Bushman Rock Shelter	1750- 1800 (pre)	0.11 ha		Rock shelter w/ digging stick weights or stone rings		
18. Pilgrams Rest	1873- (post)			European mining town		
19. Longridge	1670- 1770 (pre)		Grind stones & storage pits	Furnaces w/ village nearby		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
20. Badfontein	1540- 1820 (pre/ post)	51.2 ha	Cattle, sheep/ goat, sorghum seeds, grain bin stands	Elite & commoner stone walled terraced villages away from furnaces, cattle tracks, metal wking, & gold mine, undecor. pots & bases, burnt dung, iron spears w/ leafed-shaped blades, razor, rings, hoes, soapstone bowls, ochre stained querns	Glass beads	
21. Barberton	1884 (post)			Gold mining camp		
22. British Forts	1877- 1880 (post)			British forts (10)		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
23. Mapoch	1770- 1883 (post)			African European style fort w/ furnace & audience chamber	Pieces of muzzle- loading guns, imported pipes & bowls & glass beads	
24. Lydenburg	1360- 1860 (pre/ post)	16.5 ha	*Cattle narrow- grooved grinding stones w/oval opening	Elite ritual sites, iron prod., terraced, primary producer villages & burials. Larger sites on higher ground, rock engraving decor. pots, soapstone bowls, bone & shell beads, pit fields	Glass beads	85 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
25. Lydenburg Heads Site	1360- 1680 (pre)	10 ha		Ritual site w/ several buried large clay masks & decor. pots		
26. Lydenburg D31	1500- 1800 (pre)	26 ha		Stone walled primary producer Sites w/ specialized bilobial dwellings, terracing, tracks		
27. Eludlambe- dwini	1846- 1855 (post)			Primary producer village		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
28. Klingbeil Lydenburg	1680- 1865 (pre/ post)		*Cattle sheep/ goat, many grooved grind stones, & iron hoes	Stone walled ritual site w/ specialized bilobial dwellings terracing tracks w/slag piles, metal beads, decor. pots, ivory objects, specularite, copper, iron & metal beads, & iron ritual objects, engraved settlement plans & pit fields		40-85 cm
29. Sekhu- khune's Stad	1877- 1880 (post)			Royal residence		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
30. Ohrigstad	1845-1900s (post)			Boer fort, cemetery & settlement		
31. Gravelotte	1679 (pre)	0.5 ha		Copper mine, iron & soapstone production w/ spindle whorls & bronze objects		
32. Mabete	1660-1780 (pre)	.05 ha		Stone walled w/ iron prod. Primary producer Village w/ burned dwelling & away from furnace		5-15 cm
33. Bamboo	1660-1780 (pre)		Grain pits in central enclosure	Primary producer village		

Table 5
WESTERN TRANSVAAL

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1.Klein Africa	1360- 1585 (pre)			Stone walled primary producer village w/burial & decorated pots		
2. Bult- fontein	1400- 1500 (pre)			Furnace & primary producer village settlement		20-40.6 cm
3. Buffles- fontein	1480- 1620 (pre)		Carbon- ized "with- ies"	Hill top, primary producer settlement, furnace & undecor. pots		
4. Ifati	1450- 1550 (pre)			Copper furnace & dwelling w/ decorated pots		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
5. Rooiberg	1470- 1726 (pre/post)			Iron, bronze & tin mines & furnaces w/ iron production tools & ingots		
6. Welgegund I & II	1560- 1760 (pre)	0.35 ha		Villages w/ elite? burial, iron neck rings, hippo tusk pendant & copper beads		
7. Melville Koppies	1580 (pre)			Furnaces		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
8. Schiet- kraal	1500- 1800 (pre)			Stone walled primary producer settlement on hill top with furnaces below		28 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
9. Heidelberg (CAL)	1500- 1900 (pre/ post)	11.25 ha	Sheep/ goat, cattle & wild game, grain storage bins, grind stones	Stone walled elite, ritual site w/ iron tools, weapons, cowrie shells, copper beads, clay shields & cattle figurines, many engraved settlement plans	Glass beads & other European commodities	

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
10. Olifants- poort 20/71	1650- 1870 (pre/ post)	1.2 ha	*Cattle sheep/ goat, grain bins, iron hoe, grind stones, millet, human copro- lites	Fortified royal, ritual residence Type V & Z bayed stone walled settlement unit w/ 1 forge inside dwelling, furnaces, terraced fields & burials, un or min.decor. pots, clay shields & cattle figurines, iron & copper wire, tools & many weapons, cowrie shells, ivory, stone flaking floors & engraved settlement	Glass beads	150 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
11. Buffel- shoek	1570- 1890 (pre/ post)			Stone walled primary producer settlement unit w/ burnt dung		
12. Platberg Sites	1630- 1810 (pre/ post)		Cattle, wild game & sheep/ goat	Primary producer villages		
13. Triangle Sites	1060- 1610 (pre)	1 ha	Cattle, sheep/ goats, millet	Village with furnace		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
15. Broeder-stroom 24/73	1620-1800 (pre)	2 ha	Cattle, wild game, marine foods, upper & lower grind stones	Royal residence (burnt) w/furnaces, shell bead prod., large quartz blocks, & slag heaps & human (infant) & animal pot burials, decor. pots		
16. Modder-fontein	1720-1790 (pre)			Furnaces		
17. Rheno-sterklof	1600-1795 (pre)			Furnaces		
18. Kadit-shwene	1620-1850 (pre/post)	1 ha	Cattle, sheep/goat, wild game	Hill-top military stone walled royal residence with iron production		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
19. Hartebees- fontein	1860 (post)			Stone wall ritual village w/ settlement plan rock engravings		
20. Bruma	1850 (post)		Sheep/ goat, cattle, wild game	African hmstd on European farm, w/ furnace & decorated sherd, burial?		
21. Remhoogte Farm	1840- 1890 (post)			European farmsted		
22. Potchef- stroom	1881 (post)	0.1729 ha		British fort		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
23. Boschoek	1700- 1800 (pre)	3.24 ha		Primary producer bilobial stone wall residence w/ stone grain pit on tall stone platforms & elite burials in the dung removed central enclosure, court above the central enclosure, 1 solid stone grain platform in small enclosure next to court, backyds had grainaries & primary producer graves, 22		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
24. Wildebbeest -fontein	1780- 1915 (pre/ post)	.03 ha	# Cattle	Type V & N stone walled S.U.'s w/ burnt dung, undecor. pots, clay pipe, twisted wire, bone tools, marine shells, grind stones w/red ochre stains & hill- top human burials	Gin bottle, 303 car- tridge, tin box, hack saw blades & tin cans	40 cm

Table 6
FREE STATE

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Klip- riversberg 18/69	1520- 1600 (pre)	.15 ha	* Cattle =18/69, sheep/ goat, wild game, iron hoes, grind stones	Hill-top bayed military stone walled type N terraced, villages with furnace, ash heaps, figurines, burnt dung, decorated pots, copper objects, metal & bone beads, ostrich egg shell beads, & spear blades	Glass beads	

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
2. Klip-riversberg 5/65 (later)	1600-1800 (pre)	.5 ha	#Cattle =5/65 sheep /goat, wild game, iron hoes, grind stones	Hill-top bayed military stone walled type N terraced, villages with furnace, ash heaps, burnt dung, decorated pots, copper objects, figurines, metal & bone beads, ostrich egg shell beads, & spear blades	Glass beads	
3. Mophathe OMB1	1600-1850 (pre/ post)			Primary producer stone walled type Z w/ imported metal objects		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
4. Makwareng	1400- 1875 (pre/ post)	0.35 ha	# Cattle sheep /goat, marine foods, a lot of wild game & grind stones	Stone walled military elongated type V & N (elite) w/great quantity & range of iron work, decorated pots, iron tool stores, spear heads, a human jaw, copper rings & sheets	Horse	

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
5. Phuka OU 2	1400- 1500 (pre)		* Cattle sheep/ goat, marine foods, wild game, iron hoes, grind stones	Stone walled elongated type V & N (elite)		
6. Roberts- drift	1400- 1900 (pre/ post)	.97 ha	* Cattle (burnt) sheep/ goat, marine foods, wild game, querns	Stone walled fort & ritual cave sites w/ decor. pots, iron & copper objects, undecor. pots, ostrich egg shell & bone beads, ash middens, figurine, iron blades	Abundant glass beads, china ware, pocket knife, buckle, bullet parts, harness nails, & European metal objects	2.5-5cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
7. Ntsuanat-satsi OU1	1600-1870 (pre/post)	0.45 ha	# Cattle, sheep/ goat, marine foods, lots of wild game	Stone walled elongated type N & V (elite)		
8. Mequatling OND 2	1600-1850 (pre/post)		# Cattle, lots of wild game	Primary producer stone walled type V		
9. Tihela OND 3	1600-1850 (pre/post)	.0243 ha	# Cattle lots of wild game	Stone walled military elongated type V (elite)	Gun flints	

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
10. Rose Cottage Cave	1340-present (pre/post)			Cave site & stone walled dwelling below w/ stone tools, undecor. grass-tempered & decor.pots	European pots, post WWII bullets & metal items	
11. Khartoum 1	1320-1830 (pre/post)	1.1 ha	Cattle, wild game	Primary producer stone walled type R w/ undecorated grass-tempered pots & stone pipe	Glass beads (west coast)	15 cm
12. Meriba Matloang OXF1	1600-1800 (pre)	0.64 ha	Cattle	Primary producer stone walled type Z, w/ imported metal objects		

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
13. Riet River OFD1	1520- 1620 (pre)	200 ha	Sheep/ goat, *cattle ?, marine foods, lots of wild game, grind stones	Stone walled elite, ritual production, royal residence? type R w/ bead production, burnt house, stone tools, undecorated grass-tempered pots, burials w/stone lined graves & goods, minature pots, rock gongs, red ochre, bored stones, copper	Glass beads & glass bead earings	25 cm

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
14. St. Clair Burials	1475- 1845 (pre/ post)	.1 ha	Grind stones	Burials (12) decorated flexed & extended w/ ochre stained grind stones, copper wire rings & buttons, cowrie shells & hallois shells	Glass beads	

Table 7
CAPE FRONTIER

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Dithakong	1450- 1840 (pre/ post)	100 ha	Sheep/ goat, cattle & lots of wild game	Stone walled type Z royal residence, w/ stone circles & tools, maraba boards, spindel whorls, grass- tempered undecor. pots		surface
2. Blink- klipkop (Tsant- sabane)	790- 1900 (pre/ post)	.042 ha	sheep/ goat, cattle	Specularite & haematite mining sites w/ stone mining tools, resin beads, ostrich egg shell beads, LSA pots	Glass beads	

Table 8
Eastern Cape (Transkei)

SITE	TIME	SIZE	DIET	SITE TYPE & ARTIFACTS	EUROPEAN GOODS	DEPTH
1. Mpame	1410 (pre)	.0015 ha	mussel, fish, marine foods cattle? wild game	Shell Midden w/ ceramics		20 cm

APPENDIX 2 Population estimates for various southern African polities and African royal residences (Numbers in brackets are derived from information presented in original source)

*** = special occasions, ** = at royal residence**

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
1. Zulu	1824	[80,000] + [8- 10,000+] women = 88- 100,000	[60,000 mi ²] or 156,000 km ²			Gluckman 1960:157& in Stevenson 1968:40
2. Zulu	1870	[250- 500,000]	[60,000 mi ²] or 156,000 km ²	[3.5] per sq. mile (2.6 km ²)		Fortes & Evans- Pritchard 1967:7 & Gluckman in Stevenson 1968:40
3. Zulu	1816	[78,000] for Zululand & [100, 000] in Natal =178,000		[8]per sq. mile (2.6 km ²)		Bryant 1929:81-82 Stevenson 1968:43-49

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
4. Zulu	Pre- M/D			[10]per sq. mile (2.6 km ²)		Stevenson 1968:43-49
5. Zulu	1824	[477- 539,000]	[9-10, 000 mi ²] or 23, 400-26, 000 km ²	[12]per sq. mile(2.6 km ²)		Stevenson 1968:49
6. Zulu	1850			[14-20] per sq. mi (2.6 km ²)		Stevenson 1968:49
7. Zulu at Ulundi	1873- 1879		.90 ha		1,000 houses, 100s of houses	Morris 1965:573; Edgerton 1988:16; Guy 1982:36

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
8. Zulu	1816 1828	[2,000] [200, 000], [40,00 soldiers + 10,000 women = 50,000 +] (civil- ian pop)				Chanaiwa 1980:13&16
9. Zulu	1816- 1828	army = [14,000] (Fare- well), [50,000] (Flynn), [20,000] (Bryant) regiment =800- 1,000				Krige 1973[36]: 484
10. Zulu	Pre- Shaka	[2,000]				Hoernle 1946:68

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
11. Zulu	Pre- Shaka	[1,500]	[100 sq. mi.] or 260 km ²			Morris 1965:64
12. Zulu	1820- 24	[20,000]	[11,500 sq. mi.] or 23,400- 29,900 km ² = Zulu heart- land			Morris 1965:64
13. Zulu	Shaka 1820s Din- gane 1830s & Cets- wayo 1870s	[5-7,000 & 15,000] *	[31,000 km ²]			Huffman 1984:7 & 19; 1986:326

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
14. Zulu at uGun- gundlo- vu	1829- 1838	[5,650]**	22.5 ha		1,100 houses	Parkington & Cronin 1979
15. Zulu at Ondini	1872- 1879	[5,000]**	35 ha		1,500 houses	Watson & Watson 1990:33-34
16. Zulu	1817 1824	[2,000] warriors [40,000] warriors	[11,500 sq. mi.] or 29,900 km ²			Roberts 1974: 49 & 54
17.Zulu	1879	[50- 70,000] men bet. 17-50 yrs. old & [25, 000] warriors				Edgerton 1988:34

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
18. Zulu	post Shaka	[2,048, 000]		[46 persons per/mi] or 2.6 km ²		Schapera 1967:35
19. Zulu	1800	[2,000]				Mostert 1992:499
20. Mtetwa	1800	[4,000] people & [500] warriors = 4,500 total				Morris 1965:40-41
21. Ndwana- dwe	1819	[18,000] warriors at KwaGqoki Hill + 1,000 civil- ians ?				Morris 1965:63

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
22. Zizi Dlamini at Mabhija	1690- 1840		2.5 ha		13 Settlement Units	Maggs 1980
23. Mgodu- yanuka in Zulu- land	1630- 1830		6.4 ha		28 houses at S.U. I & 31+ houses at S.U.II = 59 total	Maggs 1982:97
24. Swazi	post Shaka	[410, 000]		[50/ persons per /sq. mi.] or (2.6 km ²)		Schapera 1967:35

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source (s)
25. Swazi	1936	[180, 000] in Swazi- land & [40,000] in South Africa	[6,704 sq. mi.] or 17,430 km ²	[Avg. 7.2 /primary producer hmstds & 22.5/ elite hmstds]	66 primary producer homesteads = 475 people total	H.Kuper 1965: 484 & 1970:90
26. Swazi	1934	[265] at Lobamba**	12.5 ha	[Avg. 7.2 /primary producer hmstds & 22.5/ elite hmstds]	11 hses, 23 bar- racks, in 1935 & 49 in 1937	H. Kuper 1947:4 & 37-38

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
27. Swazi	1934 & 1988	[137] elite + soldiers at Lozitha**	4.875 ha		30 barracks 36 circular houses, 38 rectangu- lar houses, 5 cement structures 186 oval structures & 14 rec- tangular	H. Kuper 1947: 37-38 & Perry 1987
28. Swazi at Lobamba	1984		12.5 ha		448 oval & 221 rectangu- lar + 39 mil. hses = 708 hses & structures	Perry 1987

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
29. Swazi at Zom- bodze II	1930s	[70]**	.078 ha			H. Kuper 1947: 37-38
30. Swazi	1940s	[300] **				H. Kuper 1986:79
31. Swazi	1914 1976	60% in highveld & 43% in middle- veld 50-200 locally	2,500 km ²	[28. 5] persons per/sq. mi. or 2.6 km ² ; [11. 5] on commoner land & [36] on King's land	343 hmstds; 141 bet. Manykyane & Hlatik- hulu	Goudie & Price- Williams 1983:39-41
32. BaThla- ping Tswana	1801 & 1813	[10- 15,000 & 6-7,000]				D. Taylor 1975:178

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
33. BaThla- ping Tswana	1823	[8- 10,000]				Kinsman 1984:13
34. Rolong Tswana	1823, 1825 1826				[500+] households [327] households [230] hshlds	Kinsman 1984:13
35. Kgatla Tswana at Mochudi	1813 1871	[5,000] [6-7, 000] [5-8, 651]**				D. Taylor 1975:178 Huffman 1984:19-20
36. Kxatla Tswana	1946		[68 wards w/ pop. range of 40- 1,500]	[x of 280] persons/per ward = 19,040		Schapera 1967

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
37. Tlowa Tswana at Malete		[1,500- 3,000]**				Huffman 1984:20
38. Tlowa Tswana at Sho- shong		[20- 30,000]**				Huffman 1984:20
39. Tlowa Tswana at Old Palapye		[20- 30,000]**				Huffman 1984:20
40. Tlokwa Tswana	1833	[24,000]				Lye & Murray 1980:46
41. Tlokwa Tswana		[1,800]				Huffman 1984: 6

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
42. Sotho- Tswana	1834	[7,000]				Lye & Murray 1980:53
43. Sotho- Tswana	1700- 1800				22 houses	Huffman 1986:299
44. Tswana		[254, 600] w/ $\bar{x}$ of [27,000]	[104, 775 sq. mi.] or 272, 415 km ²	3 persons per/ sq.mi. or (2.6 km ²) w/ $\bar{x}$ density of 2.4 persons		D. Taylor 1975:104- 105
45. W.Socho & E. Tswana	1957	[816, 000] [27,000]		[$\bar{x}$ hshd size = 5-7 persons up to 15; 20- 50 persons in part of village; ward pop. range = 100-1,000]		Schapera 1967:35; 1970: 140-141

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
46. Tlokwa Tswana	1950	[2,000]			5 wards = 1,400 at 280 per/ward	Schapera 1970: 140- 141
47. Ngwato Tswana	1870	[101, 000]		[2.5 per sq. mile] (2.6 km ²)		Fortes & Evans- Pritchard 1967:7
48. Ngwato Tswana	1950 1936	[110, 000] [101, 481]	[39,000 sq. mi.] or (101, 400 km ²)	[300 wards; Serowe** = 84,000; 113 wards w/pop. =25,000]. 113 = 31,640	170 villages w/ range of 100- 2,000; x person/ per ward = 200-400	Schapera 1970: 140- 141; 1967: 56-58
49. Ngwa- ketse	1942	[39,000]				Huffman 1984: 6; 1986:294
50. Trans- vaal Sotho	Post 15th cent.	[19- 57,000]			166 S.U.'s w/ 1-200 enclosures each	Marker & Evers 1976: 160

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
51. Lovedu		[133, 000]		[235/mi ²] or (2.6 km ²)	5-15 hses per/ village & 40-80 hses in old villages	D. Taylor 1975:150
52. Venda		[150, 000] w/ [200] **				D. Taylor 1975:160
53. Sotho	1830s	[25,000]			Thaba Bosiu	Shillington 1987:47
54. Sotho at Lesotho		[682, 000]	[11, 700 sq. mi.] or 30, 420 km ²	[58/ sq. mi.]or (2.6 km ²)		Schapera 1967:10
55. Sotho- Tswana	1400- 1845	[1,500+]	10,000 km ²		100+ Type N Settle- ment units	Maggs 1976:322
56. Tswana	16- 1900	[1,000+]				Hall 1990:53

Group	Date	Population Size	Area (km ² /ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
57. Hurutse Tswana	1813 & 1820	[6-7,000 & 16,000]	1 ha at Kaditshwene			Omer-Cooper 1966:94
58. Tswana at OXF1	1600-1800	[1,000+] Population increase between 16-17th century	S.U. = 6.4 ha		9+ houses in S.U. & dense S.U.'s for 1km+	Hall 1990:53
59. Sotho at Lydenburg	1360-1680	[2-3,000] at S.U. & [19-57,000] in valley	S.U.'s = 6-10 ha		82 houses at Klingbeil	van der Merwe & Scully 1971 & Evers 1975
60. BaPhalaborwa, Sotho at Square	1790-1860	[200]	.07 ha		[8+] houses	van der Merwe & Scully 1971

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
61. Sotho- Tswana? Roberts -drift	1400- 1900				61 houses	Derricourt & Evers 1973
62. Sotho- Tswana? OFD1					[25] houses per/ village	Maggs 1976
63. Sotho- Tswana? OXF1	1600- 1800	[1,000+]	1 km+		Large S.U.'s w/ 9+ houses	Hall 1990:53
64. Sotho- Tswana Oli- fants- poort			S.U.'s = 1.2 ha		[250-300 +] houses	Mason 1973:486

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
65. Tswana at Broe- der- stroom	1620				at 24/73 44-49 houses	Mason 1973
66. Sotho at Phala- borwa	1700- 1860		15 ha+		800 sites w/ 1-6 houses each at Kgopolwe	Evers & van der Merwe 1987:90
67. Tswana? at Plat- burg	1630- 1810				31 houses	Mason 1973:486
68. Sotho- Tswana? at Eiland	15- 1900 in 1655				6 houses at 2430 & 1 at 50/74 = 7+	Evers 1975

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
69. Tswana BaThla- ping at Ditha- kong	1801 1813	[10- 15,000] [7-8,000] [6- 7,000]**	1 km ²		1,800 S.U.'s w/ 8+ housing cluster	Kinsman 1984:13; Huffman 1984:20
70. Tswana at Kuruman	1823	[8- 10,000]**				Kinsman 1984:13
71. Thonga among Sotho- Tswana	1950s	[1,369, 000]				Schapera 1967:35
72. Ngoni in South- ern Mozam- bique		[40- 50,000]			[47 persons per/sq. mi.] or (2.6 km ²)	D. Taylor 1975:104- 105

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
73. Ju/' hoansi	1955	[55,531]	[1,200 sq.mi.] or 3,120 km ²			Marshall 1965:243-45
74. Ju/' hoansi	1993	[1,200 mi] or 3,120 km ²	[8,000 km ²]			Lee 1993:10 & 13
75. Ju/' hoansi at Umh- langa	1665- 1735				12+ houses	Inskeep 1979
76. Ju/' hoansi at Type R's	post 1500				25 houses per/ village	Maggs 1976

Group	Date	Popula- tion Size	Area (km ² / ha)	Population Density (persons km ²)	Number of houses, homesteads etc.	Source(s)
77. Ju/' hoansi	1970s	[10] [25]		[5.9 m ² /per person] [10.2 m ² /per person]		Wiessner 1974: 349

APPENDIX 3 Pre and Post Mfecane/Difaqane enclosure sizes and cattle estimates by area
Table 9 PRE MFEKANE/DIFAQANE ZULULAND

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Mabhiya	4+ = 3 (7 m ²) 1 (177 m ²)	most 7 m ²	177 m ²	10		39 A.U. total & 35 in central enclosures + others
2. Mgodunya-nuka I	9 = 5 (79 m ²) 3 (95 m ²) 1 (177 m ²)	79-177 m ²	177 m ²	5	4	171 A.U. total & 35 in central enclosure
3. Mgodunya-nuka II	9 = 1 (201 m ²) 5 (79 m ²) 1 (50 m ²) 2 (20 m ²)	20-201 m ²	201 m ²	8	1	137 A.U. total & 40 in central enclosure
4. Nqabeni	10 = 1 (1,257 m ²) 1 (133 m ²) 1 (79 m ²) 7 (20 m ²)	20-1,257 m ²	1,257 m ²	7	3	322 A.U. total & 251 in central enclosure

Table 10 POST ZULULAND

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Mabhiya	4+ = 3 (7 m ²) 1 (177 m ²)	most 7 m ²	177 m ²			40 A.U. total & 35 A.U. in Central enclosure
2. Mgodunya-nuka I	9 = 2 (314 m ²) 1 (177 m ²) 3 (95 m ²) 3 (79 m ²)	79-314 m ²	314 m ²	5	4	265 A.U. total & 126 in central enclosures
3. Mgodunya-nuka II	9 = 1 (201 m ²) 5 (79 m ²) 1 (50 m ²) 2 (20 m ²)	20-201 m ²	201 m ²	8	1	137 A.U. total & 40 in central enclosure
4. Ulundi	1		164, 029 m ²			32,806 total A.U. & in central enclosure
5. uMgungund-lovu	1		255, 176 m ²	1		51,035 total A.U. & in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
6. Ondini	1		331,830 m ²			66,366 total A.U. & in central enclosure

Table 11 PRE SWAZILAND

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Zombodze I	1		707 m ²			141 A.U. in central enclosure
2. Shishelweni Nkundla	1		314 m ²			63 A.U. in central enclosure
3. Zombodze II	10 = 1 (7,854 m ²) 9 (707 m ²)	most 707 m ²	7854 m ²			2,843 total & 1,570 A.U. in central enclosure
4. Kadake	10 = 2 (95 m ²) 1 (50 m ²) 3 (28 m ²) 4 (3 m ²)	3-95 m ²	95 m ²	5	5	56 A.U. total & 38 in central enclosures

Table 12 POST SWAZILAND

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Lozitha	7 = 1 (2,827 m ²) 1 (1,963 m ²) 1 (1,257 m ²) 4 (314 m ²)	314 - 2,827 m ²	2,827 m ²			1,461 A.U. total & 565 A.U. in central enclosure
2. Nkanini	1		491 m ²			98 A.U. in central enclosure
3. Lobamba	1		2,376 m ²	1		475 A.U.s total

Table 13 PRE EASTERN TRANSVAAL

Site	# of Enclo-sures	Enclo-sure size range	Lar-gest Enclo-sure size	# of Prim-ary Enclo-sures	# of Sec-on-dary Enclo-sures	Animal Unit Estimate
1. Phalaborwa MN5 & 6	10 = 1 (7,854 m ²) 3 (79 m ²) 6 (7 m ²)	7-7,854 m ² w/ most 7 m ²	7,854 m ²			1,579 total & 1,570 A.U. in central enclosure
2. Vudogwe KV	1		1,075 m ²			215 total A.U. & in central enclosure
3. Harmony 50/74	1		707 m ²			141 total A.U. & in central enclosure
4. Badfontein	16 total & 6 measured 1 (491 m ²) 1 (254 m ²) 1 (95 m ²) 2 (79 m ²) 1 (38 m ²)	38-491 m ²	491 m ²	5	11	207 A.U. minimum count & 98 A.U. in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
5. Klingbeil Lydenburg	58 total 5 measured 1 (1,767, 145 m ²) 4 (1,227, 184 m ²)	1,227, 184-1,767, 145 m ²	1,767, 145 m ²	15	43	1,335,176 minimum count & 353,429 A.U. in central enclosure
6. D31 Lydenburg	238 total 10 measured = 3 (7,854 m ²) 1 (110 m ²) 5 (50 m ²) 1 (30 m ²)	30-7,854 m ²	7,854 m ²	14	224	4,790 A.U. minimum count & 4,712 A.U. in central enclosure
7. B3 Lydenburg	397 total 2 measured = 1 (9,503 m ²) 1 (210 m ²)	20-9,503 m ² W/ most 20-79 m ²	9,503 m ²	11	386	1,943 A.U. minimum count & 1,900 A.U. in central enclosure
8. Mabete	3 total = 3 (3 m ²)	3 m ²	7 m ²			2 A.U. minimum count

Table 14 POST EASTERN TRANSVAAL

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Phalaborwa MN5 & 6	10 = 1 (7,854 m ²) 2 (707 m ²) 7 (7 m ²)	7- 7,854 m ² w/ most 7 m ²	7,854 m ²			1,570 A.U. in central enclosure + others
2. Klingbeil Lydenburg	58 total 5 measured 1 (1,767, 145 m ²) 4 (1,227, 184 m ²)	1,227, 184- 1,767, 145 m ²	1,767, 145 m ²	15	43	1,335,176 A.U. total & 353,429 in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
3. D31 Lydenburg	238 total 10 measured 1 (9,503 m ²) 3 (7,854 m ²) 5 (1,963 m ²) 1 (707 m ²)	707 - 9,503 m ²	9,503 m ²	14	224	8,717 A.U. minimum count & 1,901 A.U. in central enclosure
4. B3 Lydenburg	16 = 1 (1,130, 973 m ²) 10 (1,963 m ²) 5 (79 m ²)	79- 1,130, 973 m ² w/ most 79 m ²	1,130, 973 m ²			230,200 A.U. minimum count & 226,195 A.U. in central enclosure

Table 15 PRE WESTERN TRANSVAAL

Site	# of Enclosures	Enclosure Size Range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Kliprivers-berg	5 = 1 (104,635 m ²) 1 (1,075 m ²) 1 (154 m ²) 1 (133 m ²) 1 (113 m ²)		104,635 m ²		3	21,222 A.U. minimum count & 20,927 A.U. in central enclosure
2. Heidelberg	17+ = 1 (50 m ²) 1 (7 m ²) 15 (1 m ²)	7-50 m ²	50 m ²			14 A.U. minimum count & 10 A.U. in central enclosure
3. Boschoek	12 = 1 (314 m ²) 1 (177 m ²) 1 (133 m ²) 2 (79 m ²) 3 (50 m ²) 3 (28 m ²) 1 (20 m ²)	20-314 m ²	314 m ²		12	207 A.U. minimum count & 63 A.U. in central enclosure

Site	# of Enclosures	Enclosure Size Range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
4. Broeder-stroom	6 = 1 (28 m ²) 3 (7 m ²) 2 (3 m ²)	most between 3-7 m ²	28 m ²			11 A.U. minimum count & 6 A.U. in central enclosure

Table 16 POST WESTERN TRANSVAAL

Site	# of Enclosures	Enclosure Size Range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Heidelberg	17+ = 1 (50 m ²) 1 (7 m ²) 15 (1 m ²)	1-50 m ²	50 m ²			14 A.U. minimum count & 10 A.U. in central enclosure + others

Table 17 PRE FREE STATE

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. Klip River Sites	10+ = 1 (1,385 m ²) 2 (79 m ²) 2 (38 m ²) 4 (20 m ²) 1 (13 m ²)	13 - 1,385 m ²	1,385 m ²			342 A.U. minimum count & 277 A.U. in central enclosure
2. Khartoum	11 = 1 (1,662 m ²) 2 (201 m ²) 1 (177 m ²) 2 (79 m ²) 1 (28 m ²) 4 (20 m ²)	20 - 1,662 m ²	1,662 m ²	11		461 A.U. minimum count & 332 A.U. in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
3. OXF1	6+ = 1 (1,590 m ²) 1 (201 m ²) 1 (28 m ²) 1 (20 m ²) 2 (7 m ²)	7- 1,590 m ² Most 7-50 m ²	1,590 m ²			371 A.U. minimum count & 318 A.U. in central enclosure
4. OMB 1	4 = 1 (50 m ²) 3 (7 m ²)	7-50 m ²	50 m ²			14 A.U. total & 10 A.U. in central enclosure
5. Makwareng	5 = 1 (804 m ²) 4 (314 m ²)	314-804 m ²	804 m ²	6		412 A.U. total & 161 A.U. in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
6. Roberts-drift	50+ & 26 measured = 1 (314 m ²) 2 (201 m ²) 2 (95 m ²) 3 (79 m ²) 2 (64 m ²) 1 (50m m ²) 3 (7m) 3 (6m) 5 (5m) 3 (2m) 1 (1m)	1-314 m ²	314 m ²	14	36	278 A.U. minimum count & 63 A.U. in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
7.OFD1	41+ total 6 measured = 1 (1,257 m ²) 2 (50 m ²) 3 (28 m ²)	Primary = 28-1,257 m ² Most 3- 13 m ² Mean of 154 m ²	1,257 m ²	33	8	288 A.U. minimum count & 251 A.U. in central enclosure

Table 18 POST FREE STATE

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
1. OMB 1	4 = 1 (50 m ²) 3 (7 m ²)	7-50 m ²	50 m ²			14 A.U. total & 10 A.U. in central enclosure
2. Makwareng	2 = 1 (314 m ²) 1 (79 m ²)	79-314 m ²	314 m ²	6		79 A.U. minimum count & 63 A.U. in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
3. Roberts-drift	50+ & 26 measured = 1 (314 m ²) 2 (201 m ²) 2 (95 m ²) 3 (79 m ²) 2 (64 m ²) 1 (50 m ²) 3 (38 m ²) 3 (6 m ²) 5 (5 m ²) 3 (2 m ²) 1 (1 m ²)	1-314 m ²	314 m ²	4	46	297 A.U. minimum count & 63 A.U. in central enclosure
4.OFD1	41 & 6 measured = 1 (1,018 m ²) 2 (50 m ²) 3 (28 m ²)	28-1,018 m ²	1,018 m ²	33	8	240 A.U. minimum count & 204 A.U. in central enclosure

Site	# of Enclosures	Enclosure size range	Largest Enclosure Size	# of Primary Enclosures	# of Secondary Enclosures	Animal Unit Estimate
5. OND 3	1		707 m ²			141 A.U. in central enclosure
6. Afvallings-kop	1		3,848 m ²			770 A.U. in central enclosure

APPENDIX 4 Pre and Post Mfecane/Difaqane Rank-Size Work Sheets

Table 19 PRE ZULULAND

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Mabhiya	50,000	4.70	1	0.00	50,000	4.70
2. RV 29	7,200	3.86	2	0.30	25,000	4.40
3. RV 30	5,000	3.70	3	0.48	16,667	4.22
4. Mgoduyanuka I	4,200	3.62	4	0.60	12,500	4.10
5. Hluhluwe Complex	4,000	3.60	5	0.70	10,000	4.00
6. KwaButhe- lezi	4,000	3.60	6	0.78	8,333	3.92
7. Mgoduya- nuka II	2,200	3.34	7	0.85	7,142	3.85
8. Nqabeni	1,200	3.08	8	0.90	6,250	3.80
9. Enkwa- zini	100	2.00	9	0.95	5,555	3.74

Table 20 POST ZULULAND

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Mabhija	50,000	4.70	1	0.00	50,000	4.70
2. Ondini	35,000	4.54	2	0.30	25,000	4.40
3. Congela	22,500	4.35	3	0.48	16,667	4.22
4. uMgungund- lovu	22,500	4.35	4	0.60	12,500	4.10
5. Mgoduya- nuka I	4,200	3.62	5	0.70	10,000	4.00
6. KwaButhe- lezi	4,000	3.60	6	0.78	8,333	3.92
7. Hluhluwe Complex	4,000	3.60	7	0.85	7,143	3.85
8. Mgoduya- nuka II	2,200	3.34	8	0.90	6,250	3.80
9. Ngabeni	1,200	3.08	9	0.95	5,555	3.74

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
10. Ulundi	900	2.95	10	1.00	5,000	3.70
11. Skurwe- krans	900	2.95	11	1.04	4,545	3.66
12. Enkwa- zini	100	2.00	12	1.08	4,167	3.62
13. Odwini	30	1.48	13	1.11	3,846	3.59
14. Pitfall Traps	1	0.00	14	1.15	3,571	3.55

Table 21 PRE SWAZILAND

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Zombodze	6,000	3.78	1	0.00	6,000	3.78
2. Embilane- ni	990	3.00	2	0.30	3,000	3.48
3. Shishel- weni	910	2.96	3	0.48	2,000	3.30
4. Kahhohho I	390	2.59	4	0.60	1,500	3.18
5. Ngwenya	250	2.40	5	0.70	1,200	3.08
6. Mlokotwa	200	2.30	6	0.78	1,000	3.00
7. Border Cave	120	2.08	7	0.85	857	2.93
8. Maghebu- keleni	110	2.04	8	0.90	750	2.88
9. Sibebe	20	1.30	9	0.95	667	2.82

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
10. Ellip- tical Furnace	5	0.70	10	1.00	600	2.78
11. Sitobela	5	0.70	11	1.04	545	2.74
12. Siphiso	4	0.60	12	1.08	500	2.70

Table 22 POST SWAZILAND

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Lobamba II	12,500	4.10	1	0.00	12,500	4.10
2. Zombodze I	6,000	3.78	2	0.30	6,250	3.80
3. Lobamba Lombzala	5,000	3.70	3	0.48	4,167	3.62
4. Lozitha	4,800	3.68	4	0.60	3,125	3.49
5. Balakane	3,100	3.49	5	0.70	2,500	3.40
6. Hhohho II	1,100	3.04	6	0.78	2,083	3.32
7. Mbekel- weni	1,100	3.04	7	0.85	1,786	3.25
8. Embilane- ni	990	3.00	8	0.90	1,563	3.19
9. Kadake	920	2.96	9	0.95	1,389	3.14

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
10. Shishel- weni	910	2.96	10	1.00	1,250	3.10
11. Mahlan- gatja	910	2.96	11	1.04	1,136	3.06
12. Ezulwini Tindzala	600	2.78	12	1.08	1,042	3.02
13. Kahhohho I	390	2.59	13	1.11	962	2.98
14. Nkanini	300	2.48	14	1.15	893	2.95
15. Ngungun- ye's Lobamba	300	2.48	15	1.18	833	2.92
16. Ngwenya	250	2.40	16	1.20	781	2.89
17. Mlokotwa	200	2.30	17	1.23	735	2.87
18. Border Cave	120	2.08	18	1.26	694	2.84

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
19. Maghebu- keleni	110	2.04	19	1.28	658	2.82
20. Khubutha	80	1.90	20	1.30	625	2.80
21. Zombodze II	70	1.85	21	1.32	595	2.77
22. Nsalitje	50	1.70	22	1.34	568	2.75
23. Nzama	50	1.70	23	1.36	543	2.73
24. Sibebe	20	1.30	24	1.38	521	2.72
25. Sitobela	5	0.70	25	1.40	500	2.70
26. Ellip- tical Furnace	5	0.70	26	1.41	481	2.68
27. Siphiso	4	0.60	27	1.43	463	2.67
28. Mgwayisa	2	0.30	28	1.45	446	2.65

Table 23 PRE EASTERN TRANSVAAL

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Black Hills	2,3000	4.36	1	0.00	23,000	4.36
2. Lydenburg Complex	17,000	4.23	2	0.30	11,500	4.06
3. Kagopolwe	12,000	4.08	3	0.48	7,667	3.88
4. Lydenburg Heads	10,000	4.00	4	0.60	5,750	3.76
5. Eiland 64 & 5/72	500	2.70	5	0.70	4,600	3.66
6. Grave-lotte	500	2.70	6	0.78	3,833	3.58
7. Lydenburg D31	260	2.41	7	0.85	3,286	3.52
8. Harmony Village	200	2.30	8	0.90	2,875	3.46
9. Harmony Complex	140	2.15	9	0.95	2,555	3.41

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
10. Bushman Rock Shelter	110	2.04	10	1.00	2,300	3.36
11. Square	70	1.85	11	1.04	2,091	3.32
12. Mabete	50	1.70	12	1.08	1,917	3.28
13. Ngome Hill	10	1.00	13	1.11	1,769	3.25
14. Vudogwe	10	1.00	14	1.15	1,643	3.22

Table 24 POST EASTERN TRANSVAAL

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Lydenburg Complex	17,000	4.23	1	0.00	17,000	4.23
2. Kagopolwe	12,000	4.08	2	0.30	8,500	3.93
3. Square	70	1.85	3	0.48	5,667	3.75
4. Ngome Hill	10	1.00	4	0.60	4,250	3.63
5. Vudogwe	10	1.00	5	0.70	3,400	3.53
6. Sekgopo	10	1.00	6	0.78	2,833	3.45

Table 25 PRE WESTERN TRANSVAAL

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Heidel- berg	11,000	4.04	1	0.00	11,000	4.04
2. Boschoek	3,200	3.51	2	0.30	5,500	3.74
3. Broeder- stroom 24/73	2,000	3.30	3	0.48	3,667	3.56
4. Oliphants -poort 20/71	1,200	3.08	4	0.60	2,750	3.44
5. Kadit- shwene	1,000	3.00	5	0.70	2,200	3.34
6. Triangle	1,000	3.00	6	0.78	1,833	3.26
7. Welgegund I & II	350	2.54	7	0.85	1,571	3.20
8. Wilde- beest- fontein	30	1.48	8	0.90	1,375	3.14

Table 26 POST WESTERN TRANSVAAL

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Heidel- berg	11,000	4.04	1	0.00	11,000	4.04
2. Olifants- poort 20/71	1,200	3.08	2	0.30	5,500	3.74
3. Kadit- shwene	1,000	3.00	3	0.48	3,667	3.56
4. Wilde- beest- fontein	30	1.48	4	0.60	2,750	3.44

Table 27 PRE FREE STATE

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. OFD1	200,000	5.30	1	0.00	200,000	5.30
2. Khartoum	1,100	3.04	2	0.30	100,000	5.00
3. St.Clair	1,000	3.00	3	0.48	66,667	4.82
4. Roberts- drift	970	2.99	4	0.60	50,000	4.70
5. OXF1	640	2.81	5	0.70	40,000	4.60
6. Klip- rivers- berg 5/65	500	2.70	6	0.78	33,333	4.52
7. OU1	450	2.65	7	0.85	28,571	4.46
8. Makwareng	350	2.54	8	0.90	25,000	4.40
9. Klip- rivers- berg	150	2.18	9	0.95	22,222	4.35
10. OND3	20	1.30	10	1.00	20,000	4.30

Table 28 POST FREE STATE

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Khartoum	1,100	3.04	1	0.00	1,000	3.00
2. St. Clair	1,000	3.00	2	0.30	500	2.70
3. Roberts- drift	970	2.99	3	0.48	333	2.52
4. OU1	450	2.65	4	0.60	250	2.40
5. Makwareng	350	2.54	5	0.70	200	2.30

Table 29 PRE SOUTHEAST AFRICA

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. OFD1	200,000	5.30	1	0.00	200,000	5.30
2. Dithakong	100,000	5.00	2	0.30	100,000	5.00
3. Mabhija	50,000	4.70	3	0.48	66,667	4.82
4. Black Hills	23,000	4.36	4	0.60	50,000	4.70
5. Lydenberg Complex	17,000	4.23	5	0.70	40,000	4.60
6. Kagopolwe	12,000	4.08	6	0.78	33,333	4.52
7. Heidel- berg	11,000	4.04	7	0.85	28,571	4.46
8. Lydenberg Heads	10,000	4.00	8	0.90	25,000	4.40
9. RV 29	7,200	3.86	9	0.95	22,222	4.35
10. Zombodze I	6,000	3.78	10	1.00	20,000	4.30
11. RV 30	5,000	3.70	11	1.04	18,181	4.26

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
12. Mgoduya- nuka I	4,200	3.62	12	1.08	16,666	4.22
13. Hluhluwe Complex	4,000	3.60	13	1.11	15,385	4.19
14. KwaButhe- lezi	4,000	3.60	14	1.15	14,285	4.15
15. Boschoek	3,200	3.51	15	1.18	13,333	4.12
16. Mgoduya- nuka II	2,200	3.34	16	1.20	12,500	4.10
17. Broeder- stroom	2,000	3.30	17	1.23	11,764	4.07
18. Matola	1,500	3.18	18	1.26	11,111	4.05
19. Nqabeni	1,200	3.08	19	1.28	10,526	4.02
20. Khartoum	1,100	3.04	20	1.30	10,000	4.00
21. St. Clair	1,000	3.00	21	1.32	9,524	3.98

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
22. Kadit- shwene	1,000	3.00	22	1.34	9,091	3.96
23. Triangle	1,000	3.00	23	1.36	8,696	3.94
24. Manekweni	1,000	3.00	24	1.38	8,333	3.92
25. Embilane- ni	990	3.00	25	1.40	8,000	3.90
26. Roberts- drift	970	2.99	26	1.41	7,692	3.89
27. Shi- shelweni	910	2.96	27	1.43	7,407	3.87
28. OXF 1	640	2.81	28	1.45	7,143	3.85
29. Eiland 64 & 5/72	500	2.70	29	1.46	6,897	3.84
30. Grave- lotte	500	2.70	30	1.48	6,667	3.82
31. Klip- rivers- berg 5/65	500	2.70	31	1.49	6,452	3.81

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
32. OU1	450	2.65	32	1.51	6,250	3.80
33. Kahhohho I	390	2.59	33	1.52	6,061	3.78
34. Makwareng	350	2.54	34	1.53	5,882	3.77
35. Welgegund I & II	350	2.54	35	1.54	5,714	3.76
36. Ngwenya	250	2.40	36	1.56	5,556	3.74
37. Lyden- berg D31	260	2.41	37	1.57	5,405	3.73
38. Harmony Village	200	2.30	38	1.58	5,263	3.72
39. Mlokotwa	200	2.30	39	1.59	5,128	3.71
40. Klip- rivers- berg	150	2.18	40	1.60	5,000	3.70
41. Harmony Complex	140	2.15	41	1.61	4,878	3.69

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
42.Border Cave	120	2.08	42	1.62	4,762	3.68
43. Maghebu- keleni	110	2.04	43	1.63	4,651	3.67
44. Bushman Rock Shelter	110	2.04	44	1.64	4,545	3.66
45. Enkwazini	100	2.00	45	1.65	4,444	3.65
46. Square	70	1.85	46	1.66	4,348	3.64
47. Mabete	50	1.70	47	1.67	4,255	3.63
48. Blink- klipkop	40	1.60	48	1.68	4,167	3.62
49. Wilde- beest- fontein	30	1.48	49	1.69	4,082	3.61
50. OND3	20	1.30	50	1.70	4,000	3.60
51. Sibebe	20	1.30	51	1.71	3,922	3.59

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
52. Ngome Hill	10	1.00	52	1.72	3,846	3.59
53. Vudogwe	10	1.00	53	1.72	3,774	3.58
54. Ellip- tical Furnace	5	0.70	54	1.73	3,704	3.57
55. Sitobela	5	0.70	55	1.74	3,636	3.56
56. Siphiso	4	0.60	56	1.75	3,571	3.55
57. Mpame	1	0.00	57	1.76	3,509	3.55

Table 30 POST SOUTHEAST AFRICA

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
1. Dithakong	100,000	5.00	1	0.00	100,000	5.00
2. Mabhija	50,000	4.70	2	0.30	50,000	4.70
3. Ondini	35,000	4.54	3	0.48	33,333	4.52
4. Congela	22,500	4.35	4	0.60	25,000	4.40
5. uMgungund- lovu	22,500	4.35	5	0.70	20,000	4.30
6. Lydenberg Complex	17,000	4.23	6	0.78	16,667	4.22
7. Lobamba II	12,500	4.10	7	0.85	14,286	4.15
8. Kagopolwe	12,000	4.08	8	0.90	12,500	4.10
9. Heidel- berg	11,000	4.04	9	0.95	11,111	4.05

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
10. Zombodze I	6,000	3.78	10	1.00	10,000	4.00
11. Lobamba Lombzala	5,000	3.70	11	1.04	9,091	3.96
12. Lozitha	4,800	3.68	12	1.08	8,333	3.92
13. Mgodu- yanuka I	4,200	3.62	13	1.11	7,692	3.89
14. Kwa- Buthelezi	4,000	3.60	14	1.15	7,143	3.85
15. Hluhluwe Complex	4,000	3.60	15	1.18	6,667	3.82
16. Balakane	3,100	3.49	16	1.20	6,250	3.80
17. Mgodu- yanuka II	2,200	3.34	17	1.23	5,882	3.77
18. Nqabeni	1,200	3.08	18	1.26	5,555	3.74

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
19.Oli- fants- poort 20/71	1,200	3.08	19	1.28	5,263	3.72
20.Mbe- kelweni	1,100	3.04	20	1.30	5,000	3.70
21. Hhohho II	1,100	3.04	21	1.32	4,762	3.68
22. Khartoum	1,100	3.04	22	1.34	4,545	3.66
23. St.Clair	1,000	3.00	23	1.36	4,348	3.64
24. Kadi- tshwene	1,000	3.00	24	1.38	4,167	3.62
25.Embi- laneni	990	3.00	25	1.40	4,000	3.60
26. Roberts- drift	970	2.99	26	1.41	3,846	3.59
27. Kadake	920	2.96	27	1.43	3,704	3.57
28. Shishel- weni	910	2.96	28	1.45	3,571	3.55

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
29. Mahlan- gatja	910	2.96	29	1.46	3,448	3.54
30. Ulundi	900	2.95	30	1.48	3,333	3.52
31. Skurwe- krans	900	2.95	31	1.49	3,226	3.51
32. Ezulwini Tindzala	600	2.78	32	1.51	3,125	3.49
33. OU1	450	2.65	33	1.52	3,030	3.48
34. Kahhohho I	390	2.59	34	1.53	2,941	3.47
35. Makwareng	350	2.54	35	1.54	2,857	3.46
36. Nkanini	300	2.48	36	1.56	2,778	3.44
37. Ngun- gunye's Lobamba	300	2.48	37	1.57	2,703	3.43
38. Ngwenya	250	2.40	38	1.58	2,632	3.42

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
39. Mlokotwa	200	2.30	39	1.59	2,564	3.41
40. Border Cave	120	2.08	40	1.60	2,500	3.40
41. Maghe- bukeleni	110	2.04	41	1.61	2,439	3.39
42. Enkwazini	100	2.00	42	1.62	2,381	3.38
43. Khubutha	80	1.90	43	1.63	2,326	3.37
44. Zombodze II	70	1.85	44	1.64	2,273	3.36
45. Square	70	1.85	45	1.65	2,222	3.35
46. Nsalitje	50	1.70	46	1.66	2,174	3.34
47. Nzama	50	1.70	47	1.67	2,128	3.33
48. Blink- klipkop	40	1.60	48	1.68	2,083	3.32
49. Odwini	30	1.48	49	1.69	2,041	3.31

SITE NAME	OBSERVED SITE SIZE (x10m2)	OBSERVED LOG SIZE	RANK	LOG RANK	EXPECTED SIZE (x10m2)	LOG EXPECTED SIZE
50. Sibebe	20	1.30	50	1.70	2,000	3.30
51. Ngome Hill	10	1.00	51	1.71	1,961	3.29
52. Vudogwe	10	1.00	52	1.72	1,923	3.28
53. Sekgopo	10	1.00	53	1.72	1,887	3.28
54. Ellip- tical Furnace	5	0.70	54	1.73	1,852	3.27
55. Sitobela	5	0.70	55	1.74	1,818	3.26
56. Siphiso	4	0.60	56	1.75	1,786	3.25
57. Mgwayisa	2	0.30	57	1.76	1,754	3.24
58. Pitfall Traps	1	0.00	58	1.76	1,724	3.24

**APPENDIX 5 Pre and Post Mfecane/Difaqane African
Sites with European Goods
Table 31 Pre Sites**

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
ZULULAND (40 Sites)			0.00
SWAZILAND (13 Sites)			1
1.Shishel- weni	Royal residence	Glass beads	
S.MOZAMBIQUE (2 Sites)			0
E.TRANSVAAL (24 Sites)			7
1.Eiland 24/30	Metal Prod.	"Abundant" glass beads	
2. SPK 4	Royal residence	Military uniform buttons & large blue glass beads	
3.Square	Iron prod.	Glass beads	

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
4.Harmony 50/74	Metal & bead Prod.	"Abundant" glass beads	
5.Lydenburg Complex	Royal residence	Glass beads	
6.Badfontein Complex	Royal residence	Glass beads	
7. Mapoch	Military Fort	Pieces of muzzle loading guns; imported pipes & bowls & glass beads	
W. TRANSVAAL (20 Sites)			3
1.Heidelberg	Royal residence	Glass beads & other "European commodities"	
2. Olifantspoor t 20/71	Iron prod.	Glass beads & cowrie shells	

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
3. Wildebeest-fontein	Primary producer	Gin bottle, 303 cartridge, tin box, hack saw blades & tin cans	
FREE STATE (15 Sites)			9
1.Klipriver s-berg 18/69	Primary producer	Glass beads	
2.Klipriver s-berg 5/65	Primary producer	Glass beads	
3. Makwareng	Royal residence	Horse	
4.Roberts-drif	Military	"Abundant" glass beads, china ware, pocket knife, buckle, bullet, harness, nails	

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
5.Tihela OND3	Royal residence	Gun flints	
6.Rose Cottege Cave	Cave Site	European pots	
7. Khartoum	Primary producer	Atlantic coast glass beads	
8.OFD1	Royal residence w/ bead prod.	Glass beads	
9.St. Clair	Burial site	Glass beads, cowrie shells, hallois shells, copper wire	
CAPE FRONTEIR (3 Sites)			1

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
1.Blinkklip-kop	Royal residence w/mineral prod.	Glass beads	
			TOTAL = 21

Table 32 POST SITES

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
ZULULAND (36 Sites)			1
1.Umgungund- lovu	Royal residence	Brass wire & glass beads	
SWAZILAND (31 Sites)			3
1.Balakane	Military	Glass beads	
2.Lobamba Lombdzala	Royal residence	Glass beads & square cut nail	
3. Shishelweni Nkundla	Royal residence	Glass beads	
S.MOZAMBIQUE (2 Sites)			0
E.TRANSVAAL (22 Sites)			7

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
1.Kgopolwe	Royal residence w/ iron prod.	Military uniform button & large blue glass beads	
2.MK/KAL Hill	Primary producer	Large blue glass beads	
3.Sekgopo	Primary producer w/ iron prod.	Large blue glass beads, gun muzzle & barrel, military uniform button	
4.Square	Primary producer w/ iron prod.	Glass beads	
5.Badfontein Complex	Royal residence	Glass beads	
6.Lydenburg Complex	Royal residence	Glass beads	

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
7. Mapoch	Military Fort	Pieces of muzzle loading guns; imported pipes & bowls & glass beads	
W. TRANSVAAL (12 Sites)			2
1. Heidelberg	Royal residence	Glass beads & other "European commodities"	
2. Olifantspoort 20/71	Iron prod.	Glass beads & cowrie shells	
FREE STATE (10 Sites)			6
1. Makwareng	Royal residence	Horse	

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
2.Roberts-drif	Military	"Abundant" glass beads, china ware, pocket knife, buckle, bullet, harness, nails	
3.Tihela OND3	Royal residence	Gun flints	
4.Rose Cottege Cave	Cave Site	European pots	
5. Khartoum	Primary producer	Atlantic coast glass beads	
6.St. Clair	Burial site	Glass beads, cowrie shells, hallois shells, copper wire	

AREA & SITE	TYPE SITE(S)	TYPE GOODS	TOTAL # OF SITES W/GOODS IN PERIOD
CAPE FRONTEIR (3 Sites)			1
1.Blinkklip- kop	Royal residence w/ mineral prod.	Glass beads	
			TOTAL = 20

APPENDIX 6 Animal Unit Work Sheets

	Central Enclosure A.U.	Total A.U.
1. Zululand		
a. Pre		
1) Mabhija =	35	39
2) Mgoduyanuka I =	35	171
3) Mgoduyanuka II =	40	137
4) Ngabeni =	251	322
	$\bar{x} = 90$ A.U.	$\bar{x} = 134$ A.U.
	TOTAL PRE = 669 A.U.	
b. Post		
1) Mabhija =	35	40
2) Mgoduyanuka I =	126	265
3) Mgoduyanuka II =	40	137
4) Ulundi =	32,806	32,806
5) uMgungundlovu =	51,035	51,035
6) Ondini =	66,366	66,366
	$\bar{x} = 30,082$ A. U.	$\bar{x} = 30,130$ A. U.
	TOTAL POST = 150,649 A.U.	
2. Swaziland		
a. Pre		
1) Zombodze I =	141	141
2) Shishelweni =	63	63
3) Zombodze II =	1,570	2,843
4) Kadake =	38	67
	$\bar{x} = 453$ A.U.	$\bar{x} = 779$ A.U.
	TOTAL PRE = 3,114 A.U.	

b. Post

1) Lozitha =	56	1,461
2) Nkanini =	98	98
3) Lobamba =	475	475

$\bar{x}$ = 210	$\bar{x}$ = 678
A.U.	A.U.

TOTAL POST = 2,034 A.U.

3. Eastern Transvaal**a. Pre**

1) Phalaborwa MN5&6=	1,570	1,579
2) Vudogwe KV =	215	215
3) Harmony 50/74 =	141	141
4) Badfontein =	98	207
5) Klingbeil =	353,429	1,335,176
6) D31 =	4,712	4,790
7) B3 =	1,900	1,943
8) Mabete =	0	2

$\bar{x}$ = 45,258	$\bar{x}$ = 268,811
A.U.	A.U.

TOTAL PRE = 1,344,053 A.U.

b. Post

1) Phalaborwa MN5&6=	1,570	1,575
2) Klingbeil =	353,429	1,335,176
3) D31 =	1,901	8,717
4) B3 =	226,195	230,200

$\bar{x}$ = 145,774	$\bar{x}$ = 393,917
A.U.	A.U.

TOTAL POST = 1,575,668 A.U.

4. Western Transvaal**a. Pre**

1) Klipriversberg =	20,927	21,222
2) Heidelberg =	10	11
3) Boschoek =	63	207
4) Broederstroom =	6	11

$\bar{x} = 5,252$	$\bar{x} = 5,363$
A.U.	A.U.

TOTAL PRE = 2,145 A.U.**b. Post**

1) Heidelberg =	10	14

TOTAL POST = 14 A.U.**5. Free State****a. Pre**

1) Klip River =	277	342
2) Khartoum =	332	461
3) OXF1 =	318	371
4) OMB1 =	10	14
5) Makwareng =	161	412
6) Robertsdrift =	63	278
7) OFD1 =	251	288

$\bar{x} = 202$	$\bar{x} = 309$
A.U.	A.U.

TOTAL PRE = 2,166 A.U.**b. Post**

1) OMB1 =	10	14
2) Makwareng =	63	79
3) Robertsdrift =	63	297
4) OFD1 =	204	240
5) OND3 =	141	141
6) Afvallingskop =	769	770

$\bar{x} = 198$	$\bar{x} = 257$
A.U.	A.U.

TOTAL POST = 1,541 A.U.

BIBLIOGRAPHY

- Abrahams, Gabebah. "The Development of Historical Archaeology at the Cape, South Africa." Bulletin of the South African Cultural History Museum 5 (1984): 20-32.
- Acocks, J.P. Veld Types of South Africa. Botanical Survey of South Africa. Memoir 28. Pretoria: Government Printer, 1953.
- Afigbo, A.E., E.A. Ayandele, R.J. Gavin, J.D. Omer-Cooper and R. Palmer, The Making of Modern Africa vol. 1. United Kingdom: Longman, 1986.
- Althusser, Louis and Etienne Balibar. Reading Capital. London: New Left Books, 1971.
- Avery, D.M. "Remarks Concerning Vertebrate Faunal Remains from the Main House at Paradise." South African Archaeological Bulletin 44 (1989): 114-116.
- Baker, C. and S. Sessions. "Predictive Model Development and Evaluation." Archaeological Variability Within the Bisti-Starr Lake Region, Northwestern New Mexico. Ed. M.F. Kemrer. Albuquerque, New Mexico: Esca-Tech Corporation (1981): 121-173.
- Beaumont, Peter P. "Communication on Sites and Samples from Swaziland in the Files of the Swaziland National Trust Commission, n.d." [Photocopy].
- . The Ancient Pigment Mines of Southern Africa. South African Journal of Science 69 (1973): 140-6.
- . "Border Cave." M.A. Thesis, University of Cape Town, 1978.
- Behrens, Joanna. "European Artefacts from Rose Cottage Cave." South African Archaeological Bulletin 47 (1992): 13-15.
- Berglund, Axel-Ivar. Zulu Thought-Patterns and Symbolism. South Africa: David Philip, 1976.
- Blakey, Michael L. "Socio-political Bias and Ideological Production in Historical Archaeology." The Socio-Politics of Archaeology. Ed. Joan M. Gero, David M. Lacey and Michael L. Blakey. Research Report 23, Department of Anthropology. University of Mass. Amherst, 1983.

- Blanton, Richard E. "The Role of Symbiosis in Adaptation and Sociocultural Change in the Valley of Mexico." The Valley of Mexico. Ed. Eric Wolf. Albuquerque: University of New Mexico Press, (1976): 181-201.
- Bodenstein, W. and O.F. Raum. "A Present Day Zulu Philosopher." Africa 30 (2) (1960): 166-180.
- Bohannon, Paul and Phillip Curtin. Africa and Africans. Illinois: Waveland Press, 1988.
- Bonner, Phillip L. "Classes, The Mode of Production and the State in Precolonial Swaziland." Economy and Society in Preindustrial South Africa. Ed. Shula Marks and Anthony Atmore. London: Longmans (1980): 80-101.
- . Kings, Commoners and Concessionaires: The Evolution and Dissolution of the Nineteenth-Century Swazi State. Johannesburg: Ravan Press, 1983.
- Bowen, A. D. Certificate Geography of Swaziland. Johannesburg, South Africa: Longman, 1978.
- Bryant, A.T. Olden Times in Zululand and Natal. London: Longmans, 1929.
- Carlson, Swen. H. Trade and Dependency: Studies in the Expansion of Europe. Stockholm: Almqvist and Wiksell International, 1984.
- Chanaiwa, David. The Zimbabwe Controversy: A Case of Colonial Historiography. Eastern African Studies VIII, Program of Eastern African Studies Maxwell School of Citizenship and Public Affairs, Syracuse University, 1973.
- . "Historiographical Traditions of Southern Africa." The Historiography of Southern Africa: Proceedings of the Experts Meeting, Gaborone, Botswana, 7-11 March 1977. Paris: UNESCO, (1980a): 25-44.
- . "The Zulu Revolution: State Formation in a Pastoralist Society." African Studies Review 23 (3) (1980b): 3-20.
- Chatterton, J.F., D.P. Collett and J.T. Swan. "A Late Iron Age Village Site in the Letaba District, Northeast Transvaal." South African Archaeological Society, Goodwin Series 3 (1979): 109-119.

- Clarke, John Henrik. Introduction. Introduction to African Civilizations. By J.G. Jackson. New York: University Books (1970): 3-35.
- Cobbing, Julian. "The Mfecane as Alibi: Thoughts on Dithakong and Mbolompo." Journal of African History 29 (1988): 487-519.
- Cohen, Ronald. Introduction. "Slavery in Africa." Transaction (Jan./Feb. 1967): 44-47.
- Collett, D.P. "Ruin Distributions in the Stone-Walled Settlements of the Eastern Transvaal, South Africa." South African Journal of Science 78 (1982a): 39-40.
- . "Excavations of Stone-Walled Ruin Types in the Badfontein Valley, Eastern Transvaal, South Africa." South African Archaeological Bulletin 37 (1982b): 34-43.
- Crumley, Carole L.. "Toward a Locational Definition of State Systems of Settlement." American Anthropologist 78 (1976): 59-73.
- Cruz-Urbe, Kathryn and Carmel Schrire. "Analysis of Faunal Remains from Oudepost I, an Early Outpost of the Dutch East India Company, Cape Province." South African Archaeological Bulletin 46 (1991): 92-106.
- Daniel, J.B. McI. "A Geographical Study of Pre-Shakan Zululand." South African Geographical Journal 55 (1)(1973): 23-31.
- David, Nicholas. "Early Bantu Expansion in the Context of Central African Prehistory: 4000-1 B.C." L'expansion Bantoue, tome III, Ed. L. Bouquiaux. Societe d'Etudes Linguistiques et Anthropologiques de France, numero special 9 (1980): 609-647.
- Davidson, Claire C. and J. Desmond Clark. "Transvaal Heirloom Beads and Rhodesian Archaeological Sites." African Studies vol. 35 (2) (1976): 123-137.
- Davis, Angela. "The Black Woman's Role in the Community of Slaves." The Black Scholar (3) 4 (1971): 1-14.
- Davison, Patricia. "The Social Use of Domestic Space in a Mpondo Homestead." South African Archaeological Bulletin 43 (1988): 100-108.

- Delius, Peter. The Land Belongs to Us. Johannesburg, South Africa: Raven Press, 1983.
- Denbow, James.R. "Cenchrus Ciliaris: An Ecological Indicator of Iron Age Middens Using Aerial Photography in Eastern Botswana." South African Journal of Science 75 (1979): 405-408.
- Denbow, James R. and Edwin N. Wilmsen. "Iron Age Pastoralist Settlements in Botswana." South African Journal of Science 79 (1983): 405-408.
- . Advent and Course of Pastoralism in the Kalahari. Science, 234 (December 1986): 1509-1515.
- Denoon, Donald and Balam Nyeko. Southern Africa Since 1800 London: Longman, 1986.
- Derricourt, R.M. and T.M. Evers. "Robertsdrift, an Iron Age Site and Settlement on the Banks of the Vaal and Klip Rivers Near Standerton, South Eastern Transvaal." African Studies 32 (1973): 183-96.
- Diamond, Jared. "How Africa Became Black." Discover Magazine (Feb. 1994): 72-81.
- Diop, Cheikh Anta. The African Origin of Civilization: Myth or Reality. Westport: Lawrence Hill and Company, 1974.
- Dubois, W.E.B. The World and Africa. New York: Monthly Review Press, 1969.
- Du Bruyn, Johannes. "Ousting both the Mfecane and the anti-Mfecane." Report on the colloquium, "The Mfecane Aftermath: Towards a New Paradigm." University of Witwatersrand. South African Historical Journal 25 (1991): 166-170.
- Ebert, James I.. "Remote Sensing Applications in Archaeology." Advances in Archaeological Method and Theory 7. Ed. Michael Schiffer (1984): 293-362.
- Ebert, J.I. and A.A. Gutierrez. "Relationships Between Landscapes and Archaeological Sites in Shenandoah National Park: A Remote Sensing Approach." APT Bulletin of the Association for Preservation Technology XI(4)(1979): 69-87.

- . "Cultural Resources Remote Sensing in the Eastern Deciduous Woodland: Experiments at Shenandoah National Park." In Proceedings of the Conference on Scientific Research in the National Park (2nd) vol. 1. Washington, D.C.: National Park Service, (1980): 118-150.
- Edgerton, Robert. Like Lions They Fought, New York: The Free Press, 1988.
- Eldredge, Elizabeth. "Sources of Conflict in Southern Africa, c.1800-30: The "Mfecane" Reconsidered." Journal of African History 33 (1992): 1-35.
- Elphick, Richard. Kraal and Castle: Khoikhoi and the Founding of White South Africa. New Haven: Yale University Press, 1977.
- Eltis, David. Economic Growth and the Ending of the Transatlantic Slave Trade New York: n.p., 1987.
- Etherington, Norman. "The Great Trek in Relation to the Mfecane: a Reassessment." South African Historical Journal 25 (1991a): 3-21.
- . "The Aftermath of the Aftermath." Report on the Colloquium, The "Mfecane" Aftermath: Towards a New Paradigm. University of Witwatersrand. South African Historical Journal 25(1991b): 154-162.
- Evers, T. M. "Iron Age Trade in the Eastern Transvaal, South Africa." South African Archaeological Bulletin 29 (1974): 33-37.
- . "Recent Iron Age Research in the Eastern Transvaal, South Africa." South African Archaeological Bulletin 30 (1975): 71-83.
- . "Salt and Soapstone Bowl Factories at Harmony, Letaba District, Northeast Transvaal." South African Archaeology Society, Goodwin Series 3 (1979): 94-107.
- . "Excavations at the Lydenburg Heads Site, Eastern Transvaal, South Africa." The South African Archaeology Bulletin 37 (1982): 16-33.
- . "Sotho-Tswana and Moloko Settlement Patterns and the Bantu Cattle Pattern." Frontiers: Southern African Archaeology Today. Ed. M.Hall, G. Avery, D.M. Avery, M.L. Wilson and A.J.B. Humphreys. Oxford: British Archaeological Reports (1984): 236-247.

- Evers, T.M. and W.D. Hammond-Tooke. "The Emergence of South African Chiefdoms: An Archaeological Perspective." Journal of African Studies 45 (1) (1986): 37-41.
- Evers, T.M. and Nicholaas van der Merwe. "Iron Age Ceramics from Phalaborwa South Eastern Transvaal Lowveld, South Africa." South African Archaeological Bulletin 42 (1987): 87-106.
- Fagan, Brian. "Early Trade and Raw Materials in South Central Africa." Journal of African History 10 (1) (1969): 1-13.
- "A Fairer View of the World." Science 84. (May 1984):7.
- Falconer, Steven E. and Stephen H. Savage. "Heartlands and Hinterlands: Alternative Trajectories of Early Urbanization in Mesopotamia and the Southern Levant." American Antiquity 60 (1)(1995): 37-58.
- Feely, J.M.. "Smelting in the Iron Age of Transkei." South African Journal of Science 81 (1985): 10-11.
- Flannery, Kent V.. "The Cultural Evolution of Civilizations." Annual Review of Ecology and Systematics 3 (1972): 399-426.
- Fortes, Meyer and E.E. Evans-Pritchard. African Political Systems. London: Oxford University Press, 1967.
- Fredrickson, George M. White Supremacy: A Comparative Study in American and South African History. New York: Oxford Press, 1981.
- Gailey, Christine W. "Culture Wars: Resistance to State Formation." Power Relations and State Formation. Ed. Thomas C. Patterson and Christine W. Gailey. Archaeology Section/American Anthropological Association Pub. Washington D. C. (1987): 35-56.
- Gailey, Christine W., and Thomas C. Patterson "Power Relations and State Formation." Power Relations and State Formation. Ed. Christine W Gailey and Thomas C. Patterson. Washington, DC: American Anthropological Association (1987): 1-26.
- Gluckman, Max. "The Kingdom of the Zulu of South Africa." African Political Systems. Ed. M. Fortes and E.E. Evans-Pritchard. London: Oxford University Press (1940): 25-55.

- . "The Rise of the Zulu Empire." Scientific American 202 (4)(1960): 157-168.
- Goudie, Andrew S. and David Price-Williams. The Atlas of Swaziland. Lobamba, Swaziland: The Swaziland National Trust Commission, Occasional Paper 4, 1983.
- Guy, Jeff. "Ecological Factors in the Rise of Shaka and the Zulu Kingdom." Economy and Society in Pre-Industrial South Africa. Ed. Marks, Shula and Atmore Anthony. Johannesburg: Raven Press (1980): 102-119.
- . The Destruction of the Zulu Kingdom. Johannesburg: Raven Press, 1982.
- Haggett, P., A.D. Cliff and A. Frey. Locational Analysis in Human Geography. New York: Wiley, 1977.
- Hall, Martin. "The Ecology of the Iron Age in Zululand." Diss. University of Cambridge, 1980a
- . "An Iron-Smelting Site in the Hlulhuwe Game Reserve, Zululand." Annals of the Natal Museum 24 (1) (1980b): 165-175.
- . Settlement Patterns in the Iron Age in Zululand: An Ecological Interpretation. Oxford: British Archaeological Reports, 1981.
- . "Pots and Politics: Ceramic Interpretations in Southern Africa." World Archaeology 15 (3) (1984a): 262-273.
- . "The Burden of Tribalism: The Social Context of Southern African Iron Age." American Antiquity 49 (3)(1984b): 455-467.
- . "The Myth of the Zulu Homestead: Archaeology and Ethnography." Africa 54(1) (1984c): 65-79.
- . Farmers, Kings and Traders: The People of Southern Africa 200-1860. Chicago: University of Chicago Press, 1990.
- . "The Archaeology of Colonial Settlement in Southern Africa." Annual Reviews of Anthropology 22 (1993): 177-200.

- Hall, Martin and Kathleen Mack. "The Outline of an Eighteenth Century Economic System in South-East Africa." Annals of the South African Museum 91 (2) (1983): 163-194.
- Hall, Martin and Tim Maggs. "Nqabeni, a Late Iron Age site in Zululand." The South African Archaeological Society, Goodwin Series 3 (1979): 159-176
- Hall, M. and A. Malan. "Excavation and Analysis of Paradise, an Eighteenth Century Household in Newlands, Cape Town." Final Report to the Human Sciences Research Council, 1988. Photocopied.
- Hall, M. and J.C. Vogel. "Some Recent Radiocarbon Dates from Southern Africa." Journal of African History 21 (1980): 431-455.
- Hall, Martin, David Halkett, Jane Klose and Gabrielle Richie. "The Barrack Street Well: Images of a Cape Town Household in the Nineteenth Century." South African Archaeological Bulletin 45 (1990a): 73-92.
- Hall, M., D. Halkett, P. Huigen van Beek and J. Klose. "A Stone Wall Out of the Earth that Thundering Cannon Cannot Destroy? Bastian and Moat at the Castle, Cape Town." Social Dynamics 16 (1990b): 22-37.
- Hall, M. and J.C. Vogel. "Some Recent Radiocarbon Dates from Southern Africa." Journal of African History 21 (1980): 431-455.
- Hamilton, Carolyn Anne "A Positional Gambit: Shaka Zulu and the Conflict in South Africa." Radical History Review 44 (1989): 5-31.
- . "The Character and Objects of Chaka: A Reconsideration of the making of Shaka as "Mfecane" Motor." Journal of African History 33 (1992): 373.
- Hamilton, Carolyn and John Wright. "The Making of the LaLa: Ethnicity, Ideology and Class Formation in a Pre-Colonial Context." Paper presented to The Third History Workshop Conference, University of the Witwatersrand, Johannesburg, South Africa, 1984.
- Harinck, Gerrit "Interaction between Xhosa and Khoi: Emphasis on the Period 1620-1750." African Societies in Southern Africa. Ed. Leonard Thompson. New York: Praeger (1980): 145-170.

- Harries, Patrick. "Slavery, Social Incorporation and Surplus Extraction; the Nature of Free and Unfree Labour in South-East Africa." Journal of African History 22 (1981): 309-330.
- Hedges, David. "Trade and Politics in Southern Mozambique and Zululand in the Eighteenth and Nineteenth Centuries." Diss. London, School of Oriental and African Studies, 1978.
- Henthorn, D.I., John Parkington and R.C. Reid. "An Archaeomagnetic Survey of Mgungundlovu." The South African Archaeological Society, Goodwin Series 3 (1979): 149-158.
- Hirth, Kenneth G.. "Interregional Trade and the Formation of Prehistoric Gateway Communities." American Antiquity 43 (1)(1978): 35-46.
- Hodder, Ian. Reading the Past: Current Approaches to Interpretation in Archaeology. London: Cambridge University Press, 1986.
- Hoernle, Winifred. "Social Organization." The Bantu Speaking Tribes of Southern Africa. Ed. I. Schapera. London: Routledge & Sons (1946): 67-93.
- Honey, de S.G.M.A. "A History of Swaziland." Honey Papers, Typescript. Swaziland Government Archives, Mbabane, 1915.
- Huffman, Thomas N. "The Early Iron Age and the Spread of the Bantu." South African Archaeological Bulletin 25 (1970): 3-21
- . "Shona Pottery from Pumula Township, Bulawayo, Rhodesia." South African Archaeological Bulletin 27 (1972): 66-81.
- . "Ceramics, Classification and Iron Age Entities." African Studies 39 (2) (1980): 123-174.
- . "Archaeology and Ethnohistory of the African Iron Age." Annual Reviews of Anthropology 2 (1982): 133-150.
- . "Archaeological Evidence and Conventional Explanations of Southern Bantu Settlement Patterns." Paper presented at the South African Association of Anthropologists, RAU Island, 1984.

- . "Iron Age Settlement Patterns and the Origins of Class Distinction in Southern Africa." Advances in World Archaeology 5 (1986): 291-338.
- Humphreys, A.J.B. "A Report on Excavations Carried Out on a Type R Settlement Unit (Khartoum I) in the Jacobsdal District, O.F.S." Annals Cape Province Museum (Natural History) 9 (1973): 123-157.
- Inskeep, R.R. The Peopling of Southern Africa. New York: Barnes and Noble, 1979.
- Johnson, Gregory A. "Aspects of Regional Analysis in Archaeology." Annual Reviews In Anthropology 6 (1977): 479-508.
- . "Rank-Size Convexity and System Integration: a View From Archaeology." Economic Geography, 56 (3)(1980): 234-247.
- . "Organizational Structure and Scaler Stress." Ed. A.C. Renfrew, M.J. Rowlands and B.A. Segraves. Theory and Explanation in Archaeology: The Southhampton Conference. New York: Academic Press (1982): 389-421.
- Jones, Peta. "An Approach to Stone Settlement Typology of the Late Iron Age: Stone Walling on the Klip River 27-0 10E, 29-0 10E." African Studies 37 (1) (1978): 83-97.
- Kelly, K.B.. "Dendritic Central-Place Systems and the Regional Organization of Navajo Trading Posts." Regional Analysis Vol. I Social Systems. Ed. Carol Smith. New York: Academic Press (1976): 219-254.
- Klapwijk, Menno. "Pot-and Pit-Burials from the North-Eastern Transvaal, South Africa." South African Archaeological Bulletin 44 (1989): 65-69.
- Kuper, Adam. "Symbolic Dimensions of the Southern Bantu Homestead." Africa 50 (1980): 8-23.
- . Wives for Cattle: Bridewealth and Marriage in Southern Africa. London: Routledge and Keagan Paul, 1982.
- Kuper, Hilda. An African Aristocracy: Rank Among the Swazi. London: Oxford University Press, 1947.

- . "The Swazi of Swaziland." Peoples of Africa. Ed. James L. Gibbs. New York: Holt, Rhinehart and Winston (1965): 479-512.
- . "Kinship Among the Swazi." African Systems of Kinship and Marriage. Ed. A.R. Radcliffe-Brown and Daryll Forde. I.A.I. Oxford. London (1970): 86-110
- . "The Language of Sites in the Politics of Space." American Anthropologist, 74 (1972): 411-425
- . The Swazi: A South African Kingdom. 2nd ed. New York: Holt, Rhinehart and Winston, 1986.
- Kus, Susan M.. "The Social Representation of Space: Dimensioning the Cosmological and the Quotidian." Archaeological Hammers and Theories. Ed. James A. Moore and Arthur S. Keene. New York: Academic Press (1983): 277-298.
- Lee, Richard B.. The !Kung San: Men, Women, and Work in a Foraging Society. London: Cambridge University Press, 1979.
- . The Dobe Ju/'hoansi. New York: Holt, Rinehart and Winston, 1993.
- Legassick, Martin. "The Sotho-Tswana Peoples before 1800." African Societies in Southern Africa. Ed. Leonard Thompson. UK: Praeger (1969):86-125.
- Leone, Mark P. and Crosby, Constance A. "Epilogue: Middle-Range Theory in Historical Archaeology." Consumer Choice in Historical Archaeology. Ed. Suzanne M. Spencer-Wood. New York: Plenum Press (1987): 397-410.
- Leone, Mark P. and Potter, Parker B. eds. The Recovery of Meaning. Washington, D.C.: Smithsonian, 1988a.
- . "Introduction: Issues in Historical Archaeology." The Recovery of Meaning. Ed. Mark P. Leone and Parker B. Potter. Washington, D.C.: Smithsonian (1988b): 1-22.
- Lovejoy, Paul E.. The Transformations in Slavery. A History of Slavery in Africa. London: Cambridge University Press, 1983.

- . "The Impact of the Atlantic Slave Trade on Africa: a Review of the Literature." Journal of African History, 30 (1989): 365-394.
- Lye, William F. and Colin Murray. Transformations on the Highveld: the Tswana and Southern Sotho. Cape Town, South Africa: David Phillip, 1980.
- Maggs, Tim O.. "Pastoral Settlements on the Riet River." South African Archaeological Bulletin 26 (1971): 37-63.
- . "Early Farming Communities on the Southern Highveld: A Survey of Iron Age Settlements." Diss. University of Cape Town, 1974.
- . "Iron Age Settlement Patterns and Sotho History on the Southern Highveld, South Africa." World Archaeology 7 (1976a): 318-332.
- . Iron Age Communities of the Southern Highveld. South Africa: Pietermaritzburg, 1976b.
- . "Some Recent Radio Carbon Dates from Eastern and Southern Africa." Journal of African History 18 (2) (1977): 161-191.
- . "The Iron Age Sequence South of the Vaal and Pongola Rivers: Some Historical Implications." Journal of African History 21 (1)(1980): 1-15.
- . "Mabhija: a Pre-Colonial Industrial Development in the Tugela Basin." Annals of the Natal Museum 25 (1)(1982): 123-141.
- . "Iron Age Settlement and Subsistence Patterns in the Tugela River Basin, Natal." Frontiers: Southern African Archaeology Today. Ed. M. Hall, G. Avery, D.M. Avery, M.L. Wilson and A. J. B. Humphreys. Oxford: British Archaeological Reports (1984): 194-206.
- . "Metalwork from Iron Age Hoards as a Record of Metal Production in the Natal Region." South African Archaeological Bulletin 46 (1991): 131-136.
- Maggs, Tim and Galvin Whitelaw. "A Review of Recent Archaeological Research on Food-Producing Communities in Southern Africa." Journal of African History 32 (1991): 3-24.

- Markell, Ann, Martin Hall, and Carmel Schrire.
 "The Historical Archaeology of Vergelegen,
 an Early Farmstead at the Cape of Good Hope."
Historical Archaeology, 29,(1)(1995): 10-34.
- Marker, M. E. and T.M. Evers. "Iron Age Settlement and
 Soil Erosion in the Eastern Transvaal, South Africa."
South African Archaeological Bulletin 31 (3&4)
 (1976): 153-165.
- Marks, Shula. "The Rise of the Zulu Kingdom." The Middle
 Ages of African History. Ed. Roland Oliver. London:
 Oxford University Press, 1967.
- . "The Traditions of the Natal "Nguni": A Second
 Look at the Work of A.T. Bryant." African
 Societies in Southern Africa. Ed. Leonard Thompson.
 London: Praeger (1969): 126-144.
- Marshall, Lorna. "The Kung! Bushmen of the Kahlari Desert."
Peoples of Africa. Ed. James L. Gibbs. New York:
 Holt, Rhinehart and Winston (1965): 479-512.
- Marwick, B. A.. The Swazi. London: Cambridge University
 Press, 1940.
- Mason, Revil. "Transvaal and Natal Iron Age Settlements
 Revealed by Aerial Photography and Excavation."
African Studies 27 (4) (1968): 167-180.
- . "First Early Iron Age Settlement in South Africa:
 Broederstroom 24/73, Brits District, Transvaal."
South African Journal of Science, 69 (Nov. 1973):
 324-326.
- . "Archaeology of the 1880-1881 Fort Potchefstroom."
South African Military History Journal 3 (4)(1975):
 132-137.
- Mason, Revil J., J. M. Houmoller and R. Steel.
 "Archaeological Survey of the Magalies Valley."
South African Journal of Science 77 (7)(1981):
 310-312.
- Masson, John R.. Prehistoric Swaziland: An Archaeological
 Outline. Occasional Paper #1. Lobamba, Swaziland:
 Swaziland National Trust Commission, 1981.
- Matsebula, J. S. M.. A History of Swaziland. Johannesburg:
 Longmans, 1980.

- Mbatha, Mphiwa B.. "Migrant Labour and its Effects on Tribal and Family Life among Nyuswa of Botha's Hill." Masters Thesis, University Of Natal, 1960.
- McKenzie, B.. "Utilization of the Transkeian Landscape: an Ecological Interpretation." Annals of the Natal Museum 26 (1)(1984): 165-172.
- Meintjes, Sheila. "The Mfecane Colloquium: Impressions." Report on the colloquium, "The Mfecane Aftermath: Towards a New Paradigm," at University of Witwatersrand. South African Historical Journal 25 (1991): 173-176.
- Mentis, M.T. and R.R. Duke. "Carrying Capacities of Natural Veld in Natal for Large Herbivores." South African Journal of Wildlife Research 6 (2)(1976): 65-74.
- Meltzer, Lalou. "The Treasure from the Shipwreck, _Reijgersdaal (1747)." Bulletin of the South African Cultural History Museum 5 (1984): 5-19.
- Mentis, M.T. and R.R. Duke. "Carrying Capacities of Natural Veld in Natal for Large Herbivores." South African Journal of Wildlife Research 6 (2)(1976): 65-74.
- Meyer, A.. "A Profile of the Kruger National Park, South Africa." Frontiers: Southern African Archaeology Today. Ed. M. Hall, G. Avery, D.M. Avery, M.L. Wilson and A.J.B. Humphreys. London: British Archaeological Reports (1984): 215-226.
- Monstert, Noel. Frontiers: The Epic of South Africa's Creation and the Tragedy of the Xhosa People. New York: Alfred Knopf, 1992.
- Morris, Donald. The Washing of the Spears. New York: Simon and Schuster, 1965.
- Omer-Cooper, J. D..The Zulu Aftermath:a Nineteenth-Century Revolution in Bantu Africa. London: Longman, 1966.
- . "Political Change in the Nineteenth-Century Mfecane." African Societies in Southern Africa Ed. Leonard Thompson. New York: Praeger (1969): 207-229.
- . History of Southern Africa. London: Heineman, 1988.

- Parkington, John and Mike Cronin. "The Size and Layout of Mgungundlovu 1828-1838." The South African Archaeological Society, Goodwin Series 3 (1979): 133-148.
- Parkington, John and Martin Hall. "Patterning in Recent Radiocarbon Dates from Southern Africa as a Reflection of Prehistoric Settlement and Interaction." Journal of African History 28 (1987): 1-25.
- Patterson, Thomas, and Gailey, Christine eds. Power Relations and State Formation. Washington D.C.: Archaeology Section/American Anthropological Association Publication, 1987
- Paynter, Robert. "Social Complexity in Peripheries: Problems and Models." Paper presented at the symposium on Approaches to the Study of Complexity. Albert Eggs an Giffen Instituut Voor Praeen Protohistorie, Universiteit van Amsterdam, The Netherlands, 4-6 September 1980b.
- . Models of Spatial Inequality: Settlement Patterns in Historical Archaeology. New York: Academic Press, 1982.
- Perry, Warren. Field Interviews. Interviewed by author, 7 July and 27 July 1987, Swaziland. Tape recording. Swaziland National Trust Commission, Swaziland.
- . "Problems in the Integration of Oral History and Archaeological Data in Swaziland, Southern Africa." Anthropology of Work Review 12 (2)(1991): 1-6.
- . "Commitment and Contradiction: Race and Class in Swaziland Research." Paper presented at the American Ethnological Society, Annual meeting as part of the session, Class Across Culture: Working Class Visions of the New World Order, sponsored by the CUNY Working Class Anthropology Project in Memphis, Tennessee, 27 March 1992.
- . "Dimensions of Power in Swaziland Research: Coercion, Reflexivity and Resistance." Transforming Anthropology. Arlington, Virginia: Association of Black Anthropologists. In press.
- Phillipson, David. African Archaeology. 2nd ed. London: Cambridge University Press, 1993.

- Plug, Ina and A. Brown. "Mgoduyanuka: Faunal Remains." Annals of the Natal Museum 25 (1)(1982): 115-121.
- Plug, Ina and Frans Roodt. "The Faunal Remains from Recent Excavations at uMgungundlovu." South African Archaeological Bulletin 45 (1990): 47-52.
- Posnansky, Merrick. "West African Reflections on African American Archaeology." Ed. Theresa Singleton. We Too Are America: Essays in African American Archaeology. University Press of Virginia
In press.
- Price-Williams, David. "Archaeology in Swaziland." South African Archaeological Bulletin 35 (1980): 13-18.
- Price-Williams, David and Lawrence S. Barham. "A Provisional Note on the Excavations at the Siphiso Rock Shelter, Northeast Swaziland." Nyame Akuma 21 (1982): 43.
- Roberts, Brian. The Zulu Kings. New York: Charles Schribner & Sons, 1974
- Rodney, Walter. How Europe Underdeveloped Africa. Washington, D.C.: Howard University Press, 1981.
- Rycroft, David K. Concise SiSwati Dictionary. Pretoria: J.L. van Schaik (Pty) Ltd., 1982.
- Saitowitz, S.J., R.O. Heckroodt and Ethleen Lastovica. "The Cape Glass Company, Glencairn: Archaeology of an Historical Site." South African Archaeological Bulletin 40 (1985): 88-93.
- Sanders, William and Barbara Price. Mesoamerica, The Evolution of a Civilization. New York: Random House, 1968.
- Schapera, Issac. Government and Politics in Tribal Societies. New York: Schocken, 1967.
- . "Kinship and Marriage Among the Tswana." African Systems of Kinship and Marriage. Ed. A.R. Radcliffe-Brown and Daryll Forde. I.A.I. Oxford. London (1970): 111-139.
- Schrire, Carmel. The Historical Archaeology of the Impact of Colonialism in 17th century South Africa. Antiquity, Vol 62 #235 (June 1988): 214-225.

- Schrire, Carmel., K. Cruz-Urbe, and J. Klose. "The Site History of the Historical Site at Oudepost I, Cape." South African Archaeological Society, Goodwin Series 7 (1995): 21-32.
- Schrire, Carmel and Janette Deacon. "The Indigenous Artifacts from Oudepost I, a Colonial Outpost of the VOC at Saldanha Bay, Cape." South African Archaeological Bulletin 44 (1989): 105-113.
- Schultz, E.A. and R.H. Lavenda, Anthropology: A Perspective on the Human Condition. Mountainview, California: Mayfield Publishing Company, 1995.
- Schuyler, R.L., and C. Mills. "The Supply Mill on Content Brook in Massachusetts." Journal of Field Archaeology 3 (1976): 61-95.
- Scott, James. Domination and the Arts of Resistance: Hidden Transcripts. New Haven, CT.: Yale University Press, 1990.
- Scully, R. T. K.. "Phalaborwa Oral Tradition." Diss. State University of New York at Binghamton, 1978.
- Seddon, J.D.. "An Aerial Survey of Settlement and Living Patterns in the Transvaal Iron Age: a Preliminary Report." African Studies 27 (1968): 189-194.
- Shaw E.M. and N.J. Van Warmelo. "The Material Culture of the Cape Nguni: Part 2 Technology. Cape Town: South Africa." Annals of the South African Museum 58, 1974.
- Shillington, Kevin. History of Southern Africa. London: Longman, 1987.
- Slater, Henry. "Transitions in the Political Economy of South-Eastern Africa before 1840." Diss. U. K., University of Sussex, 1976.
- Smith, Alan K. "The Trade of Delagoa Bay as a Factor in Nguni politics 1750-1835." African Societies in Southern Africa. Ed. Leonard Thompson. New York: Praeger (1969): 171-189.
- Smith, Carol A.. "Exchange Systems and the Spatial Distribution of Elites: the Organization of Stratification in Agrarian Societies." Regional Analysis Vol.I Social Systems. Ed. Carol Smith. New York: Academic Press (1976a): 309-374.

- . "Regional Economic Systems: Linking Geographical Models and Socioeconomic Problems." In Regional Analysis Vol II Economic Systems. Ed. Carol Smith. New York: Academic Press (1976b): 255-300.
- Sorenson, John. "History and Identity in the Horn of Africa." Dialectical Anthropology 17 (1992): 227-252.
- Stevenson, Robert F. Population and Political Systems in Tropical Africa. New York: Columbia University Press, 1968.
- Stuiver, M. and G.W. Pearson "High-precision Calibration of the Radiocarbon Time Scale, AD 1950-500 BC." Radiocarbon, 28 (2B), Calibration Issue: Proceedings of the Twelfth International Radiocarbon Conference, 1985. Ed. M. Stuiver & R.S. Kra. Trondheim, Norway, 1986.
- Taylor, Donna. "Some Locational Aspects of Middle-Range Hierarchical Societies." Diss. The City University of New York, 1975.
- Taylor, Michael O.V.. "Wildebееstfontein: a Late Iron Age Site in the Southern Transvaal." South African Archaeological Society Goodwin Series 3 (1979b): 120-129.
- Tanaka, Jiro. "Comments on Paradigmatic History of San-Speaking Peoples" Current Anthropology 31 (5) (1990): 515-516.
- Thorbahn, Peter F. "Br'er Elephant and the Briar Patch." Natural History 4 (1984): 71-78.
- van der Merwe, Nicholaas and David Killick. "Square: An Iron Smelting Site near Phalaborwa." The South African Archaeological Society, Goodwin Series 3 (1979): 86-93.
- van der Merwe, Nicholaas and R.T. Scully. "The Phalaborwa Story: Archaeological and Ethnographic Investigation of a South African Iron Age Group." World Archaeology 3 (1971): 178-196.
- Watson, E.J. and V. Watson. "Of Commoners and Kings: Faunal Remains from Ondini." South African Archaeological Bulletin 45 (1990): 33-46.

- Webster, Alan. "The Mfecane Paradigm Overthrown." Report on the Colloquium, "The Mfecane Aftermath: Towards a New Paradigm," at University of Witswatersrand. South African Historical Journal 25 (1991): 170-172.
- White, Gavin. "Firearms in Africa." Journal of African History 12 (2) (1971): 173-184.
- Willcox, A.R. Shipwreck and Survival on the South-East Coast of Africa. Natal, South Africa: Drakensberg Publications, 1984
- Willmsen, Edwin N. "The Ecology of Illusion: Anthropological Foraging in the Kalahari." Reviews in Anthropology 10 (1) (1983): 9-20.
- . Land Filled with Flies: a Political Economy of the Kalahari. Chicago: University of Chicago Press, 1989.
- Wilson, Monica and, Leonard Thompson eds. "South Africa to 1870." The Oxford History of South Africa. 2 vols. Oxford: Claredon Press, 1969-71.
- Wolf, Eric R. Europe and the People Without History. Berkeley: University of California Press, 1982.
- Wright, Henry T.. "Recent Research on the Origin of the State." Annual Review of Anthropology 6 (1977): 279-397.
- Wright, Henry T. and Gregory A. Johnson. "Population, Exchange, and Early State Formation in Southwestern Iran." American Anthropologist 77 (1975): 267-289.
- Wright, Henry T. and Susan Kus. "An Archaeological Reconnaissance of Ancient Imerina." Madagascar in History. Ed. Raymond K. Kent. Albany, California: The Foundation for Malagasy Studies, (1979): 1-31.
- Wright, John B.. "The Dynamics of Power and Conflict in the Thukela-Mzimkhulu Region in the Late Eighteenth and Early Nineteenth Centuries: a Critical Reconstruction." Diss. University of Witwatersrand, 1990.
- Wright, John B. and Hamilton, Carolyn. "Olden Times and Beyond: Conceptualizing the Pre-Documentary History of Zululand Natal." Paper presented to the Conference on the History of Natal and Zululand. University of Natal. Durban, South Africa, 2-4 July 1985.

Yellen, John E. "The Integration of Herding into Pre-historic Hunting and Gathering Economies."
Frontiers: Southern African Archaeology Today.
Ed. M. Hall, G. Avery, D.M. Avery, M.L. Wilson
and A.J.B. Humphreys. (1984): 53-64.