SOCIETY IN TRANSFORMATION

EARLY IRON AGE MIXED FARMING COMMUNITIES IN THE LOWER THUKELA BASIN, ZULULAND.

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ABSTRACT

This dissertation is the result of a field-project conducted in the lower Thukela Basin over a twenty month period in 1984 and 1985. The dissertation sets out to document a regional survey of Early Iron Age sites in a part of the Lower Thukela Basin and report on the excavations and analysis of material from two sites, Mamba and Wosi. On the basis of the archaeological evidence iron smelting practices are discussed and the nature of first millennium mixed-farming, valley bottom settlements reported on. The ceramic finds are described and compared with other known samples from this period and are chronologically placed in the light of recent classificatory suggestions. Some arguments are submitted as to the changing nature of the archaeological record through time.

In response to appeals made at the 1985 conference of the Southern African Association of Archaeologists (Hall 1985a; Lewis-Williams 1985) I have, subsequent to the conducting of the field-work, attempted to inform myself more widely of prevailing applications of social theory in the interpretation of the southern African pre-colonial historical record. The latter part of this dissertation is my attempt at such an application and further, an attempt at testing specific theories and models against the field-data collected.

Unless otherwise acknowledged, all of the field-work reported on is my own. I remain indebted however to those who have gone before and provided the necessary frameworks on which much of my interpretation is based.

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Last, but not least, to my parents for their persistent encouragement, and to my wife Catherine for her stoic acceptance of "thesis-widowhood". A heartfelt thank you.

This dissertation is dedicated to Micah Khanye Emily: our first-born.

Len van Schalkwyk ONDINI August 1991.

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CHAPTER 1

INTRODUCTION

The original data that gave rise to this dissertation was collated during a field project conducted in the lower Thukela River Basin over a 20 month period in 1984 and 1985. This project formed part of a wider research programme initiated by Tim Maggs in the early seventies which, broadly stated, aimed to investigate the Iron Age settlement of the plateau slopes below the Drakensberg Escarpment of Natal, and map more extensively the region's precolonial historic record. My own involvement in this wider programme arose out of a need to undertake rescue excavations of certain known Early Iron Age (EIA) sites in the lower Thukela Basin that were threatened by the proposed construction of a series of dams along the river course.

As a result of the rescue emphasis imposed upon the subsequent excavations, these were not conducted within the framework of a pre-determined research design, but rather, purely as a gathering of a set of data. However, in comparison to most other excavated EIA sites in the region, these lower Basin sites were not highly eroded. Their sealed contexts were thus thought to be potentially of a higher resolution than other previously excavated sites of the same period. Further, the envisaged study area, and the large number of recorded sites within it, appeared to have the potential of providing greater insights into the location pattern and settlement density of first millennium mixed-farming communities. In the course of ensuing discussions it will be shown that the latter potential was adequately realised. The site survey and excavation reports (Chapters 4, 5 and 6) detail the field work that was undertaken and the subsequent results that were obtained (see also Appendix One and appended unpublished specialist reports).

Data derived from this field study have added to, and substantiate, the growing data base of the region's pre-colonial past; and support the historical time-depth accorded to settled mixed-farming communities in the region. Further, they have provided an independent set of data to test against other published field studies in the region, dating to the same period.

However, at the time of the initial formulation of this dissertation I came to realise that, as a result of the rather loose and atheoretical motivations behind the field study, the wider interpretation of my data would require a more structured theoretical orientation. The watershed of this orientation came about at the 1985 conference of the Southern African Association of Archaeologists. David Lewis-Williams' (1985) lucid explanation of the historical materialist model and its interpretive potentials and Martin Hall's (1985a) proposed concepts of "power", signification and symbolism as powerful analytical tools for the wider interpretation of pre-capitalist society posed a challenging option to the interpretation of my own field data.

The ensuing discussions are thus firstly a test and comparison of this independent set of data against other's published field reports. Secondly, within the offered interpretive models of historical materialism and structuration theory, I have attempted to demonstrate that, as a consequence of changing social relations of production that are argued to develop within first millennium mixed-farming communities, the society under review was one in the process of social transformation.

My motivation in attempting to demonstrate such a transformation stems from a concurrence with arguments tendered by Hall (1986) as to the ahistorical nature of the "cognitive model" (Huffman 1985) in interpretations of the southern African Iron Age, and its limitations in coping systematically with change. It is to these interpretations that I now turn.

CHAPTER 2

RESEARCH PAST AND PRESENT

The "Iron Age" in southern Africa is now known to have extended over approximately the last two millennia. As a cultural term it designates groups of people who were iron producing and metal using mixed-farmers; who first colonised the Zambezi and Limpopo Basins, the East coast littoral, and the Eastern and north Eastern Plateau Slopes (following Wellington 1955), between circa. AD 250 - 900. These Early Iron Age (EIA) people are held to be directly ancestral to the Late Iron Age (LIA) Bantu speakers, who made contact with early Portuguese sea-farers and later European colonial expansion between the 16th and 18th centuries (Hall and Vogel 1980; Huffman 1970,1979,1982; Maggs 1977,1980a,1984a; Phillipson 1977,1985,1989).

The definition "Iron Age" for this period, and its subdivision into the Early Iron Age (c.AD 250 to 1000), and Late Iron Age (c.AD 1000 to the recent ethnographic past), has been questioned (Hall 1983,1984a,1984b,1987a,1987b; Huffman 1982). For the purposes of this dissertation the term "Iron Age" is retained for the period in question, and mixed-farming communities is used to describe the means of production (after Hall 1987a:61-73). The nature of the Early Iron Age / Late Iron Age sub-division will be addressed in later discussion.

However, the antiquity of these pre-colonial farming communities, and in particular, settlement of the Eastern Plateau Slopes and the East coast littoral, has not long been recognised. The time scales accorded to these earliest Iron Age colonists have, for the better part of this century, been constrained by perceptions held and perpetuated by late 19th and early 20th century historians and ethnographers (Hall 1984a,1984b,1987b).

A.T. Bryant's (1929,1949) now re-assessed works on the Zulu (Wright and Hamilton 1989), and Theal (1907), Stow (1905) and Soga's (1930) elucidations of Bantu origins all denied the settled existence of Bantu-speaking mixed-farming communities in the sub-continent before the 16th century. This interpretation can be attributed to colonial prejudices and an existing social milieu that was pre-occupied with race superiority. Tribal life-ways were viewed as innately conservative and static and the native mind short on memory and logic, and consequently indigenous populations were denied a greater time depth to their own cultural past (Hall 1987a,1987b). Further, culture-historic chronologies were flawed by the limitations imposed by "origins" derived from recorded oral histories, as is apparent in Bryant's Olden Times in Zululand and Natal (1929) and **The Zulu People** -as they were before the White Man came (1949), and Fuze's (1979) **The Black People** - and whence they came.

Such flawed historiography and prejudice were, however, not only confined to the academic milieu within South Africa, as the "settler paradigm" was overtly apparent in what was then Northern and Southern Rhodesia. Although R.N. Hall (1909) had postulated a connection between "ancient ruins" and "ancient mines", and ascribed them to an African origin, his hypothesis lacked solid evidence and was not generally accepted (Summers 1970). Great Zimbabwe had long held a fascination for European settlers, who had mythologised the Ruins and accorded them to a vanished Eastern Civilization.

Prior to the 1930's, post-Stone Age investigations in the Federation of Rhodesia and Nyasaland had been limited to a series of individual site investigations by visiting scholars on brief tours of inspection. As these were never conducted holistically as parts of regional surveys, or as comparative studies, the efforts of these early investigators had no great impact or lasting endurance (Summers 1970). In an attempt to obtain a better understanding of the cultural sequence of the Rhodesian precolonial past, and to clarify the origins of the "ancient ruins", Gertrude Caton-Thompson was appointed as researcher at Great Zimbabwe in 1929 (Caton-Thompson 1931). She is credited with initiating the first systematic field-work undertaken in the region, and to the chagrin of the local settler population she accorded an African origin to the Ruins.

Interpreting her finds in the absence of radio-carbon dating, Caton-Thompson postulated a cultural sequence based on relative dates derived from beads and other artifacts imported to Great Zimbabwe. Although her sequence ultimately had to bear a far heavier interpretive burden than she had ever intended for it, her methodology and systematic approach to excavation was to have a profound influence on the later investigations of Rhodesian and South African prehistory (Summers 1970).

John Schofield, an architect and amateur archaeologist, had since the 1920's been interested in the construction techniques of the "ancient" Rhodesian ruins (Schofield 1926). Largely influenced by Caton-Thompson, he attempted a classification of Rhodesian pottery and developed a 3-phase cultural sequence spanning the precolonial record from "prior to AD 1400 to 1830" (Schofield 1942). To each period he accorded the influence of specific ethnic groups; the earliest to Sotho speakers, the second to Shona, and the last phase to Rozwi-Venda speakers. " Taken in conjunction with his [relative] successive dates, it seems probable that he [Schofield] visualised a series of cultural "invasions", each wiping out the product of its predecessor...
The interpretation of differing ceramic types as the products of 'invasions' was a concept that was popular in Britain during the first half of the 20th Century, and this probably influenced Schofield's thoughts on Rhodesian culture" (Summers 1970:95).

Stemming from this, and others' earlier work, further investigation and research co-ordinated by Keith Robinson (Inspector of Monuments 1947 - 1964), Roger Summers (as reviewed in Summers 1950,1970) and David Phillipson (1968) added a steady volume of information to an understanding of the region's precolonial Iron Age cultural sequence. Summers (1970) had been influenced by the "Iron Age" sequence propounded by Hawkes (1931) for the British Iron Age, and following Wells (1933) and Mason (1952) entrenched the term within southern African archaeology. A number of hypotheses, sub-divisions and re-assessments of the "Iron Age" cultural sequence between the Limpopo and Zambezi Rivers were proposed by various authors as research and investigations increased in volume after 1950. The 29th Wenner Gren Symposium at Burg Wartenstein in 1965 (Bishop and Clarke 1967) was in part an attempt to re-assess all the prehistoric cultures of Africa, and the term "Iron Age" was accepted as standard terminology. Phillipson's (1968) review of a series of Iron Age cultures in Zambia saw the introduction of the term "Early Iron Age" to the cultural sequence in southern and central Africa.

By 1970 the excavation of over 200 sites and the availability of 63 radio-carbon dates had allowed for the generation of a model that argued the Rhodesian Early Iron Age to be but one small part of an enormous cultural explosion radiating out from some nuclear source area around the Great Lakes of central Africa; an area that was, however, still to be adequately defined (Huffman 1970; Summers 1970). Further, the Early Iron Age was now known to slowly give place to the Later Iron Age between about AD 700-1100 (Summers 1970). The recognition that a comparable sequence was apparently present in the northern Transvaal re-kindled an interest in Iron Age investigations south of the Limpopo. It was the growing realization of a greater cultural time-depth of the extant indigenous populations in southern and central Africa, and the increasing volume of evidence to support it, that was to largely influence researchers to begin scientific and systematic Iron Age investigations within the borders of the Republic.

Although pioneer Iron Age investigations along the north-Eastern Plateau Slopes and in the Transvaal Lowveld were carried out between circa. 1912 - 1950 (Bates 1947; Laidler 1932; Lindblom 1926; Paver 1933; Swellnuss 1937; Trevor 1912; van Hoepen 1939), no scientific excavations were conducted during this period. Publication of these finds was confined to reports of surface material, usually discovered during the execution of commercial ventures, and the greater majority was ascribed to the terminal phase of the Iron Age (Evers 1981:65-68).

During the 1930's and 40's, ceramic collections from a number of surface sites in the geographical areas of Transkei, Natal and Zululand had been reported (Chubb et al. 1932; Schofield 1935). All these collections were from the coast or from the lower valley basins of the major east flowing rivers. Following on Laidler's (1932) earlier work Schofield's (1948) Primitive Pottery was a further attempt at chronologically ordering known ceramic collections from the "Bantu period" in southern Africa. This ordering was largely influenced by his work on the Rhodesian precolonial cultural sequence (Schofield 1942), and on typological grounds he constructed a regional chronology for Natal, in which

> " by a process of elimination, and by the comparative study of the wares from a large number of sites ... found [it] possible to classify the pottery under three main heads " :

Natal Coastal Ware 1 : Class NC1 - including all pre-Bantu pottery.

Natal Coastal Ware 2 : Class NC2 - including pottery belonging to the earliest Bantu inhabitants, iron-using pastoral cultivators with Sotho affinities.

Natal Coastal Ware 3 : Class NC3 - including the pottery belonging to the later Bantu inhabitants, who were iron-smelting pastoral cultivators, and probably belonged to a section of the Lala people (Schofield 1948:150).

However, and in keeping with the historiography of the time, Schofield accorded a "Bantu" presence in the region to no earlier than "before the middle of the 16th century" (Schofield 1948:161). Schofield's classification remained the archaeological standard in the region until its re-appraisal by Tim Maggs during the early seventies.

Reviews of Iron Age research conducted in the sub-continent after World War II (Hall 1984b,1987a,1987b; Inskeep 1978; Phillipson 1977,1985) reflect the growing interest to the north of the Limpopo but, apart from the research and excavations conducted at Mapungupwe (Fouche 1937; Gardener 1955) and in the eastern and central Transvaal (Mason 1951,1952,1962,1968), a relative dearth of systematic Iron Age research was carried out within the Republic. This has been partly ascribed to the prevailing political milieu, in which the ruling minority strove to maintain the colonial myths of a limited and static indigenous cultural past and stressed recent internecine strife to bolster ideologies of ethnic separateness and tribal affiliation (Hall 1984a,1984b). Thus an academic milieu was fostered in which a deeper precolonial "Bantu" culture history was not perceived to exist.

However, in the light of the growing body of evidence for a far older Iron Age past north of the Limpopo, systematic and scientific investigations were initiated in the late sixties and later reported and published by Maggs (1974,1976), Mason (1962,1968) and van der Merwe and Scully (1971). Iron Age communities of the Southern Highveld, North-east Plateau and the north-Eastern Plateau Slopes were shown to have an historical and ethnographic link to people of known Sotho/Tswana and Venda descent, and the results of this research began to illustrate clearly a pre-colonial cultural record that extended back beyond the 14th century AD.

By the early seventies extensive research on the North-east Plateau and along the north-Eastern Plateau Slopes of the Transvaal (Inskeep 1971; Inskeep and Maggs 1975; Mason 1973; Evers 1973; Klapwijk 1973,1974) and along the Eastern Plateau Slopes of Natal (Maggs 1973) had begun providing a series of Carbon-14 dates that enabled the construction of a new radio-carbon chronology for the Early Iron Age of these regions (Maggs 1977; Hall and Vogel 1980). This widening data base led prehistorians to recognise the antiquity of the region's Iron Age past, and that the Early Iron Age within the Republic was chronologically comparable to that north of the Limpopo. Research further served firmly to place precolonial farming communities as being settled south of the Limpopo by the 3rd century AD, and finally pensioned off "the hoary old veteran of South African historiography" - the gradual movement of Iron Age peoples southward, reaching the Eastern Cape Frontier only in the 18th Century (Maggs 1977).

Analysis of ceramics was already tentatively linking pottery expressions from these sites to known expressions in the north and east, as well as on a wider regional basis (Evers 1973; Klapwijk 1973; Maggs 1973; Mason 1973). In Natal, Maggs had recognised ceramic similarities between NC3 (Schofield 1948), Broederstroom (Mason 1973), the Lydenburg Head's site (Inskeep and von Bezing 1966; Inskeep 1971), and Shixini ware from the Transkei,as later published by Derricourt (1977). Maggs proceeded to initiate a major investigation into the Early Iron Age of the Eastern Plateau Slopes and the adjacent East Coast littoral in an attempt to clarify these associations.

It had been observed that NC3/EIA material was fairly common at altitudes below the 1000m contour (Schofield 1935; Maggs 1973). The excavation and subsequent analysis of material from the site of Ntshekane (Maggs and Michael 1976) provided the watershed for Early Iron Age investigations in the region. The site yielded a sufficiently large and dated pottery sample to allow for a detailed description and typological analysis to be undertaken and confirmed the EIA below the Eastern Plateau Slopes within the first millennium. The radio-carbon chronology not only showed Schofield's (1948) time sequence to be flawed but also that NC3 ceramics were the oldest, not the youngest, expression within the Early Iron Age sequence. In recognising this, and the classes' antiquity, Maggs suggested the term NC3 be dropped in favour of "Natal Early Iron Age" (Maggs and Michael 1976).
In the course of the following decade several Early Iron Age sites were excavated below the Eastern Plateau Slopes. In

Transkei (Cronin 1982; Feeley 1985,1986; Granger et.al. 1985; Prins 1989; Robey 1985) the southern-most limits of later EIA settlement continue to be mapped, and current research is directed at widening the data base of mixed-farming influences on the prehistoric local environment (Feeley 1986; F.Prins: pers. comm. 1989). In Natal, projects designed both to clarify Early Iron Age settlement and subsistence patterns along the coastal plain and inland within the major drainage basins, and to provide a chronological and typological framework for the period AD 300-1000, have largely taken their lead from the pilot project initiated by Maggs in the mid-seventies (Hall 1980a, 1980b,1981; Loubser 1984; Maggs 1980b,1980c,1984b; Maggs and Michael 1976; Maggs and Ward 1984; van Schalkwyk 1986,in press; Whitelaw 1987,1988a,1988b). The results of this research have shown that settlements are restricted to a narrow range of climate, soils, vegetation and topography, and that pottery samples can, on typological grounds, be relatively dated to within one century of their corresponding chronometric ages (Maggs 1980a,1984a). Further, it is now clearly apparent that these EIA communities eschewed the higher interfluvial grasslands between the major river valleys (Hall and Vogel 1980), and consistently located their settlements in lower lying areas below the 1000 m contour level (Maggs 1984a,1984c).

Along the north-Eastern Plateau Slopes and in the Eastern Transvaal Lowveld a comparable series of excavations was conducted between the Groot Letaba and the Crocodile Rivers (Evers 1973,1974,1975,1977a,1977b,1980a,1980b,1981,1982; Evers and Vogel 1980; Meyer 1984,1986). These excavations, in conjunction with those conducted south of the Zambezi River in adjacent Mozambique (Morais et.al. 1976; Morais 1984,1988), have served to confirm the nature of Early Iron Age settlement in the east of the sub-continent, and have added substantially to a growing EIA data base.

In contrast to the research conducted in Natal, the Eastern Transvaal research has shown a far stronger cultural continuity from the first to the second millennium, and to the recent ethnographic past (Collett 1982, Evers 1981,1984,1988, Huffman 1978,1982; van der Merwe and Scully 1971). On a wider regional basis this has been true for the Northern Plateau and north-Eastern Plateau Slopes as a whole. Mason's (1962,1965) pioneer work has been elaborated upon by various researchers (Collett 1982; Evers 1974; Hall 1982; Loubser 1981,1988; Maggs 1976; Taylor 1984) and the Iron Age pre-colonial cultural sequence has now been more fully established in these regions.

Along the Eastern Plateau Slopes clarification of the cultural sequence between the early second millennium and shortly prior to the Shakan era would appear to be hampered by a noticeably lower archaeological visibility. However, Late Iron Age archaeological investigations in the region do indicate a sharp break in the ceramic sequence between the EIA and the LIA. Excavations of stone-walled settlements in the higher lying, sour grasslands (Davies 1974; Hall and Maggs 1979; Maggs et.al. 1986), of a number of iron smelting sites in the better wooded valley-bottoms of the Hluhluwe and Thukela river basins (Hall 1980c; Maggs 1982a,1982b) and a series of coastal sites (Davies 1971,1975; Hall 1981; Robey 1980), have all provided further evidence of change between the earlier and later periods. Settlements changed in both size and layout. They were not only smaller, but were also located on higher ground, comparable to the individual family homesteads of historic Nguni-speaking people (Maggs 1984c,1989). These changes are tentatively suggested to be linked to the emergence of a more complex social organisation (Hall and Mack 1983; Maggs 1989). Current research projects are directed at attempting to discern the nature of second millennium population and settlement dispersal onto the adjacent, higher altitude grasslands and, in this, to map the region's culture-history sequence more fully (Feeley 1986; Huffman 1988; Maggs 1988; Maggs et.al. 1986).

A little more than a decade and half of intensive research on the nature of the Iron Age south of the Limpopo has allowed archaeologists to produce a series of cultural sequences that, although generally agreed upon, remain open to wider interpretation. Those most germane to the ensuing arguments in this dissertation are discussed below.

On the basis of the archaeological data, a sequence of ceramics, settlement layout, linguistics, ethnographic analogy and a series of radio-carbon dates Huffman (1979,1982,1985) has challenged Phillipson's (1977) two stream hypothesis for the original movement of the Iron Age into the subcontinent. Huffman has proposed an alternative three stream model. His "Central Stream", represented by Nkope sites in southern Malawi and eastern Zambia, Ziwa sites in eastern Zimbabwe and Situmpa sites in the Victoria Falls region, is of lesser concern here, being relevant to the internal developments of the Zimbabwe cultural sequence. Huffman's "Eastern Stream" has not been contested, and forms the coastal facies of Phillipson's (1977) "Eastern Stream" and Maggs'(1980a) "first expression". This stream is generally held to be derived from Kwale ware in Kenya and is documented in our region from a range of sites below the Eastern Plateau Slopes. This phase has been argued to end with the arrival of people with Western stream ceramics in the 5th Century AD (Huffman 1979), and is referred to as the Matola Tradition (Maggs 1980a).

Huffman's (1979) "Western Stream" is, however, slightly more enigmatic. Firstly, Huffman (1982) proposes Bambata ware, from the type site in Zimbabwe, as the most probable source of all pottery expressions assigned to his Western Stream south of the Zambezi. As Bambata ware was originally assigned to terminal hunter-gatherer groups (Phillipson 1977), and more recently to vanguard Iron Age pastoralists (Walker 1983:90), this new interpretation calls for caution and further substantiation. Secondly, and of immediate relevance to this review, is Huffman's interpretation of the ceramic sequence below the Eastern Plateau Slopes.

Maggs (1980b) has argued that the "common expression" in Natal, as represented by the Msuluzi type-site (Maggs 1980a,1980b, 1980c), is derived from Matola, and has further noted the similarity between Lydenburg (Inskeep and Maggs 1975; Evers 1977b,1981,1982) and Msuluzi ceramics. This has now collectively been termed the Lydenburg Tradition (Hall 1987a). But, if Msuluzi does derive from Matola and, as has been shown, is comparable to Lydenburg, it follows that the Early Iron Age of the Eastern and north Eastern-Plateau Slopes should be wholly within the Eastern stream. This has been argued to be difficult to uphold (Evers 1981), as Eastern stream Matola sites in Natal date from AD 260-440, Lydenburg sites in the Transvaal from AD 360 - 590, and Msuluzi sites in Natal between AD 490 - 680 (Maggs 1984c; van Schalkwyk 1986). This distribution shows a north to south movement, rather than the reverse, and consequently Huffman (1982) places Lydenburg and Msuluzi within his Western stream. Along the Eastern and north Eastern-Plateau Slopes, Huffman (1978,1982) and Evers (1981,1982) argue therefore that the Matola

Tradition is superceded by the Lydenburg Tradition at around the 5th century A.D.

Throughout their range the respective EIA Western Stream ceramic expressions undergo changes through time that are, broadly speaking, contemporaneous. Evers (1988) has recently undertaken a detailed analysis of these and offers a new synthesis. On the basis of pottery style he discerns four facies within the Lydenburg Tradition. The Msuluzi facies he sub-divides into two phases; early Msuluzi, as represented by the type-site (Maggs 1980c), Ndondondwane (Maggs 1984b) and Mhlopheni and Magogo (Maggs 1984c; Maggs and Ward 1984), and dated to AD 500-700; and late Msuluzi, represented by 9th Century sites such as Ntshekane (Maggs and Michael 1976). These phases of the Natal Early Iron Age (Maggs 1984b) Evers now views as a single facies of the same ceramic tradition (Evers 1988).

Comparably, the Lydenburg facies is divided into early and late phases, although the distinction is not as clear as in Natal (Evers 1988). Early Lydenburg, represented at the type site (Evers 1982) and the sites of Plaston (Evers 1977b), Klipspruit, Langdraai and Doornkop, dates between AD 490 - 750 (Evers 1988). Late Lydenburg, as represented at the sites of Klingbeil (Evers 1980,1981) and Doornkop, dates to between AD 810 - 980. Matakoma (4th - 6th Century AD) and Broederstroom (4th - 8th Century AD) EIA ceramics have been argued to be of the same tradition as those from the Eastern and north Eastern-Plateau Slopes (Evers 1981; Huffman 1979; Maggs 1984a). On the basis of Evers' (1988) recent re-assessment of ceramics from Broederstroom (Mason 1986), Happy Rest (Voigt and Plug 1984), Klein Afrika (Prinsloo 1974), and sites from the central region of the Kruger National Park (Meyer 1986), he argues Matakoma and Broederstroom to be two further facies of the Lydenburg Tradition.

It will be apparent from the preceding overview that, in the course of the last decade, Iron Age archaeological interpretations in the sub-continent have been largely informed by the construction of regional ceramic typologies, migration hypotheses, strong environmental perspectives, and attempts to seek historical and ethnic affiliations to extant Bantu-speaking groups. This has, at least at one level of interpretation, led to the suggestion that an essentially uniform social organisation was in existence throughout the course of the southern African Early Iron Age (Evers 1988; Huffman 1982).

In a recent synthesis Huffman (1989) has placed the whole of the Eastern stream in what he now refers to as the Urewe Tradition. The Western stream, as discussed above, and including the sites of Maunatlala in Botswana (Denbow 1986), Huffman has renamed the Benfica Tradition, after the type site in Angola dated at AD 150 (Huffman 1989). Within his "migration hypothesis" Huffman (1988, 1989,1990a) has argued that these EIA streams represent the principal evidence for the initial immigration of patrilineal Eastern Bantu people into the sub-continent; a people who arrived and settled with an already established "Iron Age cultural package" (Huffman 1982). This is seen to comprise of settlement in semi-permanent villages, the production of ceramics, a working knowledge of metallurgy, agricultural expertise in the cultivation of dry land cultigens, and the possession of domestic stock, including cattle (Huffman 1970,1975,1978,1979,1982; Maggs 1980a; Phillipson 1977,1985).

Huffman (1982,1985,1986a,1986b) has argued that, within this "cultural package", cattle were central to the social, economic, and belief systems of these immigrating mixed-farming communities. This hypothesis is based on a re-reading of southern African Bantu ethnography in which cattle, and cattle holdings, have been shown to have a greater value than mere subsistence. More specifically, it has been demonstrated that not only are cattle pivotal in the ritualization of social relations, but that their centrality is also expressed in domestic architecture. Here respective residential units are arranged in a specific conformation around the centrally located cattle byre, the location of these units thus constituting on-the-ground symbols of the status of their occupants. Such status is largely established through the means of highly ritualized transactions involving cattle between members of a given community (Kuper 1980,1982).

Taking their lead from this concept of the "Southern Bantu homestead" (Kuper 1980,1982), Huffman and his colleagues have derived an analogous "Central Cattle Pattern" model that is argued to be discernable in the archaeological record (Denbow 1986; Evers 1984; Evers and Hammond-Tooke 1986; Huffman 1982,1986a,b). The minimum requirements to indicate this pattern within a given archaeological context are the location of domestic residences around a centrally situated stock enclosure and grain storage pits and elite burials located beneath the cattle byre. It is thus argued that, if such evidence prevails, the full set of social principles, as associated with the ethnographically recorded ownership and transfer of cattle, must also then be present (Huffman 1985,1986a,1986b).

Evidence for the presence of the "Central Cattle Pattern" as early as the 7th Century AD in the eastern Transvaal has been suggested (Evers 1981; Huffman 1982). Consequently, it is argued that the prevailing social organisation throughout the southern African Early Iron Age can best be explained within the cognitive model of the Central Cattle Pattern (Huffman 1985,1986a).

Such an interpretation is not without dispute. Although Huffman (1982) allows that the "Central Cattle Pattern" may have evolved in southern Africa early in the first millennium, or that it may have arrived in ready-form with the first immigrant farmers, Kuper's (1980) original model, and consequently the derived "Central Cattle Pattern" model, have been criticized as being ahistorical, and thus cumbersome, in the explanation of change apparent within the archaeological record. Whether it arrived in a ready-form or evolved locally, "it is difficult to see how such an evolution could have taken place within the rules of the cattle pattern, for its attributes form a tight, mutually dependant set" (Hall 1986:83).

Within the above argued "cultural package", the economic "package" was certainly complete by AD 500. However, the evidence from earlier sites for agriculture, livestock, and economy in general is held to be as yet inadequate to show whether the various components came into the region in 'pre-assembled' form or whether some components arrived later in some areas than in others (Maggs 1980c,1984a). Further, the concept of such an economic and cultural "Iron Age package" - one that has clearly been associated with the Negro physical type - as the vehicle on which migrating populations moved across thousands of kilometers of sub-equatorial Africa has been questioned (Hall 1984b,1987a).

Excavated and analysed skeletal material from controlled EIA contexts in the sub-continent has been argued as probable evidence for the presence of a Negro physical-type population during the first millennium (Maggs 1989). This assumption is not without debate. As these analyses have been conducted on single specimens, or at best, discrete collections of individuals, and thus not on samples representative of prehistoric breeding populations, it is maintained that until statistically acceptable archaeological samples have been scrutinized we currently know almost nothing of the physical identity of the people associated with the "Iron Age" way of life. Consequently it is claimed that, as yet, we are not in a position to imply that the prehistoric Iron Age population was "negro" (Hall and Morris 1983). Although the Iron Age material cultural record firmly evidences an agro-pastoral lifeway, one ethnographically associated in the east of the sub-continent with extant Bantu-speakers - people who are classified by some researchers as being of the "negro" physical type (de Villiers 1984:138-140), and while ..."there was probably a significant genetic inflow associated with the Iron Age, ... it is equally possible that there was greater genetic continuity between the Stone Ages and the Iron Ages than there was disparity" (Hall and Morris 1983:34). What these authors, and others (Rightmire and Van der Merwe 1976), have cautioned is that physical variability and culture should be regarded as independent variables until more precise connections can be demonstrated.

Given the present state of knowledge, Hall (1987a) argues that there is thus little definite evidence for the migration of a

"Negro" race through Africa coinciding with the spread of new languages, economies, and technologies. Rather, he contends, mechanisms of cultural drift and social interaction may better explain the inception of these, at different places and at different times (Hall 1987a:24).

As was noted above, some researchers have argued for local developments of the EIA pottery sequences, rather than changes bought about by incoming new groups of people (Maggs 1979,1980b, 1980c). Recently Hall (1987a), who like Maggs (1980b,1980c), envisages an initial immigration involving people with agriculture and metallurgy, has argued further that the subsequent changes documented in the first millennium archaeological record were largely responses by mixed-farming communities to the changing nature of social relations of production, as stock keeping took precedence over swidden agriculture (Hall 1985a,1987c).

In espousing this alternative avenue of enquiry Hall (1985a,1986, 1987a,1987b,1987c) has shown that, in moving away from technological sub-divisions, and addressing the communities concerned in the light of their productive forces and social relations, we are directed to the potential of interpreting the nature of the society at hand not as an ahistorical technological entity but rather as dynamic, interactive groups of people seeking to extract a living within a prevailing environmental setting. Such "social archaeology" does however demand "an uneasy alliance with ethnography" (Hall 1987a), and Hall cautions its use, arguing that "reading the present into an imperfectly preserved past may deny the possibility of discovering change" (Hall 1984a, 1984b).

It is not my intention in the course of this dissertation to undertake a detailed critique of these alternative interpretive models. Rather, by means of my own field-work, and in conjunction with a wealth of published data, I wish to adopt a more eclectic approach and build on these current endeavors. Such an approach, I realise, lays one open to criticism, but as Giddens (1984) has argued: "There is an undeniable comfort in working within

> established traditions of thought ... the more so, perhaps, given the very diversity of approaches that currently confront anyone that is outside of any single tradition."

He cautions however that ....

> "the comfort of established views can easily be a cover for intellectual sloth ".... but adds...." if ideas are important and illuminating, what matters much more than their origin, is to be able to sharpen them and demonstrate their usefulness, even if within a framework which might be quite different from that which helped to engender them" (Giddens 1984:xxii).

I accept therefore that, at present, the Eastern and Western stream hypothesis (Huffman 1982,1988,1989,1990) provides the most convincing explanation for the initial distribution and settlement of first millennium mixed-farming communities in the east of the sub-continent. Further, the probability that aspects of the "Iron Age package" were only adopted by mixed-farming communities at different times and at different places during the first millennium is not contested.

The concept of the "Iron Age", as a technological division specifically associated with Bantu-speaking groups in sub-Equatorial Africa, is strongly supported in the literature. Further, within the context of south-eastern Africa, the archaeological data tentatively suggests that from the first to the second millennium Bantu-speaking mixed-farming communities were part of a dynamic cultural continuum moving towards the historically recorded more complex and larger-scale societies of the 17th and 18th Centuries. Consequently, with the necessary caution, I believe that the ethnography of southern African Bantu-speaking communities, and in particular, the ethnography of Nguni-speaking groups, provides a convincing source from which to derive possible interpretations as to the nature of prevailing social relations within the communities under consideration in this study.

In trying to arrive at more adequate explanations of changes in the archaeological record, I intend to argue that these were the result of developing contradictions within the prevailing social relations of production. As Hall has commented:

> "Emphasis on the role of the relations of production redirects attention to the totality of human behavior and avoids the reductionism inherent in both approaches, which has seen a determinate role in the environment and those which have given primacy to the 'cognitive system'" (Hall 1985a:2).

In choosing to adopt such an approach I wish to test a known set of field data against the analytical model offered by Hall, and thus provide an historical and social perspective to the analysis and interpretation of first millennium mixed-farming lifeways in the Thukela Basin. In addition, I would hope to understand how the Bantu ethnographic reality of south-eastern Africa came into being. In order to pursue this avenue of enquiry, a guiding corpus of theory is required, and it is to this that I now turn.

CHAPTER 3

SEEKING AN INTERPRETIVE MODEL

As stated earlier my own research, is an attempt both to broaden and substantiate the growing regional Iron Age data base, and to elucidate further the changing nature of first millennium mixed-farming society below the Eastern Plateau slopes. The later objective, however, requires clarification.

My field work was carried out within strongly structural-functionalist parameters, and with a pre-occupation with ecologically determining factors as the driving force behind Iron Age "culture". In the light of Lewis-Williams' appeal for "southern African archaeology to go beyond its technicist and ecological phases... and ... master social theory" (Lewis-Williams 1985), I began tentatively to re-assess my excavation data, and others' published site reports, within the offered framework of historical materialism. In southern African archaeology Lewis-Williams (1982) has no doubt lead the way in directing the discipline to these newly espoused avenues of social enquiry, and he further appeals for a more perceptive use of ethnography, with particular reference to Iron Age studies (Lewis-Williams 1985).

Huffman (1981,1982,1985,1986a,1986b,1989) and his colleagues (Evers 1981,1984, Huffman and Hanisch 1987; Loubser 1981,1988, 1989; Taylor 1984) have realised this potential and have made detailed use of the ethnography of Bantu-speaking societies in their "cognitive" approach to interpretations of the Iron Age in southern Africa. However, as discussed previously, this approach is criticised as being ahistorical, and as being unable to cope systematically with change (Hall 1986,1987b). Hall (1985a,1986,1987c) in turn has proposed an alternative route, grounded on historical materialist principles, but goes further, employing theoretical procedures derived from "structuration theory" (Giddens 1981,1984). Structuration theory is built on the heritage of both structuralism and materialism, the underpinning theoretical bases of "cognitive" and "mode of production" analysis respectively. In retaining the positive features of historical materialism, whilst modifying those aspects that are deemed to be epistemologically tenuous, structuration theory has the potential to further advance the understanding and explanation of social change in the pre-colonial history of southern Africa (Hall 1985a,1986,1987c).

Whilst by no means wishing to deny the interpretive potential of the "cognitive" approach, or its contribution to a greater understanding of the pre-colonial Iron Age record, Hall's approach, formulated on a sub-continental scale, has offered further challenges. These are, firstly, to test the approach against a specific set of data in a tight regional context and secondly, to direct our thinking to new and alternative sets of questions about the pre-colonial cultural record, placing the actions of individuals as the prime movers of the historical process. This approach is opposed to the use of analytical structures that have an implied existence "above" the people and institutions that are the object of study (Hall 1986:84). This is the 'materialism' of historical materialism: it denies the supremacy of beliefs in social change (Lewis-Williams 1985:18).

At a very superficial level the historical materialist approach has been viewed with great suspicion and circumspection. Notwithstanding our current socio-political milieu, "the name of the apical ancestor of the historical materialist lineage... and the theory, [remain to some] ... as a red rag to a bull" (Lewis-Williams 1985:14). However, despite the more rabid philosophical arguments concerning its adoption, particularly the misguided belief of the adherence of <u>all</u> of its proponents to particular forms of political persuasion, the historical materialist model remains a form of social analysis, and not necessarily a political standpoint. Marx, in his research, was primarily concerned with explaining the rise of capitalism, and the workings of capitalism itself, and he therefore paid scant attention to pre-capitalist societies. This was also partly due to the fact that during his life-time (1818 -1883), little was known about such societies.

In his historical research Marx developed the basis of a sophisticated framework of social analysis. This framework offers archaeology, despite its flaws, an alternative means of addressing social forms and social change in the past: a potential to test the data generated from Early Iron Age investigations in the lower Thukela Basin by means of the analytical tools developed within historical materialism. An alternative analysis of early mixed-farming society, and social change during the first millennium, is thus possible.

The approach itself is not without its flaws, and I am well aware of the higher tier theoretical debate that prevails (Friedman 1974; Godelier 1977,1978; Hindness and Hirst 1975; Llobera 1979; O'Laughlin 1975; Seddon 1978; Spriggs 1984; Trigger 1985; Wolf 1982). However, as Mazel has argued:

> "Historical materialism is not a dogmatic grid to be imposed uncritically on any problem. Rather it provides a basic set of principles by means of which people are trying to comprehend the past and present ... Although there are differences, the tradition is not in disarray. On the contrary, there are certain basic principles shared by all historical materialists ... [and] ... this debate is viewed ... as positive and creative" (Mazel 1989:36).

Rather than becoming pre-occupied with epistemological disputes, Giddens (1984:xx) suggests that...

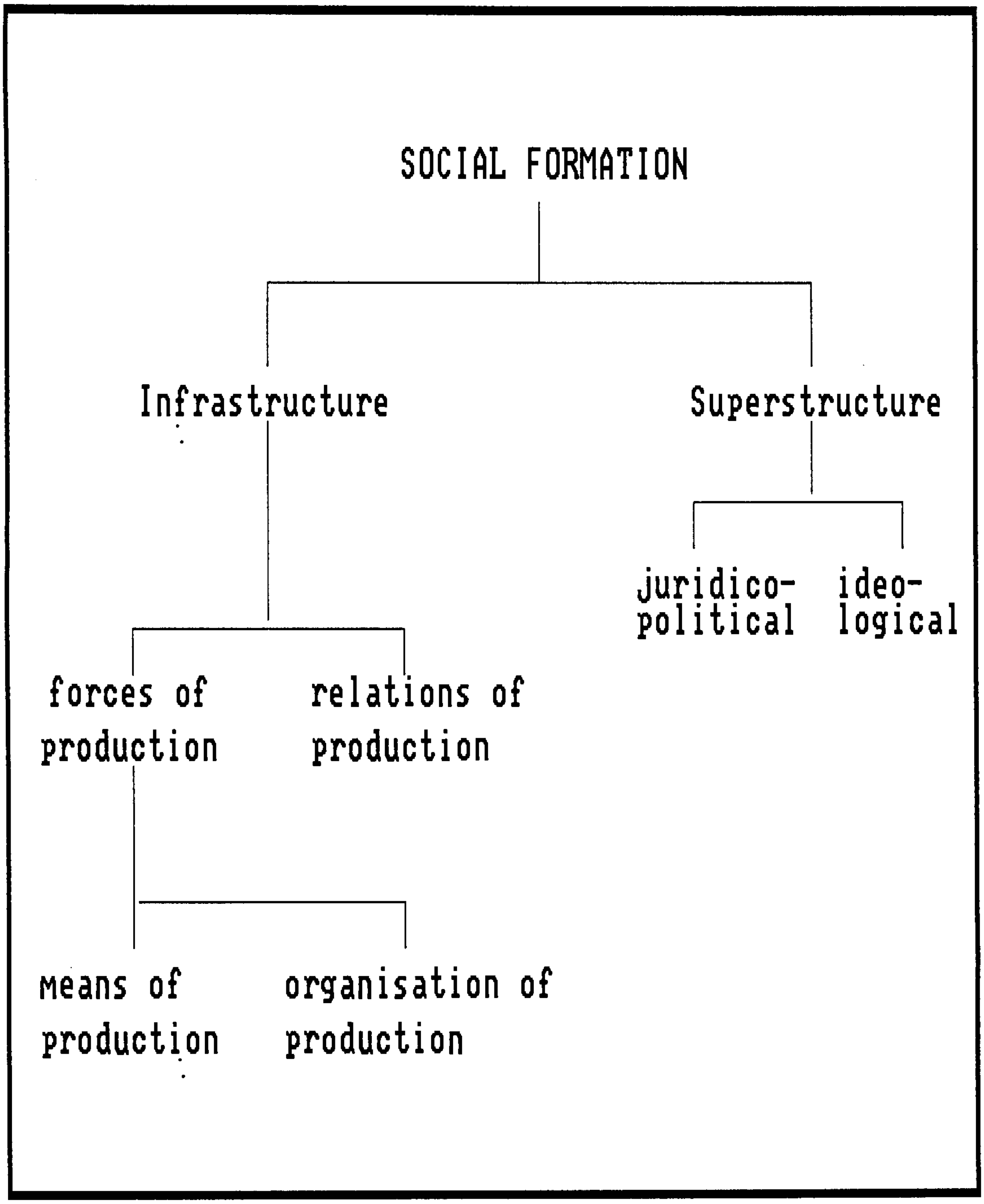

Fig.1. An Historical Materialist Model
(after Friedman 1974 : 445)

> "those working with social theory should be concerned first and foremost with reworking conceptions of human being and human doing, social reproduction and social transformation."

The historical materialist model, therefore, in helping to identify the locus of social dynamics is, like all models, metaphorical, and represents society as layered and interdigitating (Fig.1). There is an infrastructure which produces the fundamental requisites of life, and there is a superstructure which comprises the beliefs, norms and cosmology of society. These two elements, the infrastructure and the superstructure, constitute the social formation. The social formation is in itself merely a metaphorical model, and not an exact representation of society. As a heuristic device it enables one to draw useful distinctions between the inner dynamics of the infrastructure and the superstructure respectively (Lewis-Williams 1985; after Friedman 1974).

In the light of the aforementioned debates that prevail amongst proponents of historical materialism it is necessary to adopt a standpoint in order to attempt its application. In this I have drawn largely from the model constructed and argued by Mazel (1989). The central proposition is that social production and reproduction are the basis of human society, and that society is in a continuous process of change - it is dynamic in nature (Slaughter 1985). However, it is also recognised that social action may result in unintended consequences that can give rise to material effects not anticipated by the social group instrumental in influencing the changes (Giddens 1984:4-5; Shanks & Tilley 1987:116). These propositions require further explanation.

According to Marx, human beings can only reproduce themselves socially and biologically through co-operation with others. Thus, even in their individuality, people remain part of a set of wider social relations. As a result, no natural opposition exists between individuals and society. Secondly, the social formation, as a dynamic totality, is composed of interrelations between people, and between people and nature. This social totality comprises relations containing different qualities. As social production and reproduction and human subsistence constitute the foundation of society, the social relations of production and forces of production are recognised as being determinant. Consequently, the ideological and juridico-political relations [i.e. the superstructure] are ultimately determined by the productive forces, with accordant types of exchange, distribution and consumption [i.e. the base or infrastructure] (O'Laughlin 1975).

<u>Social relations of production</u> are defined as those relations people enter into to reproduce society as a social and economic unit. They encompass thus the need to determine the use made of

the environment within the constraints of the available technological possibilities; the co-ordination of individual activity in the labour process (i.e. the division of labour); the control of access to resources; and the need to determine the use and distribution of production. The forces of production comprise firstly, society's technological and environmental conditions, including the material and intellectual means which people employ to make a living from nature (the means of production); and secondly, the organisation of production, the way in which labour is organised on a daily basis (Friedman 1974).

The means of production are greater than the environment in that they include technology, and at the same time are more restricted, in that they comprise only those elements of the environment which people perceive as resources and which their technology allows them to exploit. The organisation of labour and means of production are by and large tangible and observable phenomenon and are technical rather than social processes (Lewis-Williams 1985;after Friedman 1974).

Although disagreement prevails amongst historical materialists as to precise definitions, the articulation of social relations and forces of production is seen to constitute a specific mode of production, and this is argued to be the essence of the infrastructure (or base) of the social formation (Lewis-Williams 1985).

Marx viewed the base (or infrastructure) as the determinant condition of the social formation as explained within the concept of reproduction. Social production is not only people producing, but also people reproducing the conditions of their own existence. Production therefore includes the reproduction of the means of production, reproduction of labour, and reproduction of the social relations of production (Mazel 1989:37).

Giddens (1981) is, however, critical of this notion of 'social reproduction', arguing that it is "prone to see the reproduction of society as something happening with mechanical inevitability, through processes of which social actors are ignorant...[or] to the converse...[merely] as a simple product of the skills of social actors... Such [a notion] is in fact typically concerned with the production of social life rather than its reproduction across time-space, which remain unexplicated" (Giddens 1981:64). He contends rather that "the reproduction of social systems is at every moment a contingent phenomenon which requires explanation" (Giddens 1981:64), and that "the moment of the production of action is also [then] one of reproduction in the contexts of the day-to-day enactment of social life" (Giddens 1984:26). This is central to Giddens' concept of the "recursive" nature of human social activity and is addressed in further detail below.

The 'history' of historical materialism lies in its concern with social change. This is not seen to take place as a result of a simple chain of cause and effect, or derive from a single element within the social formation, but rather from a structural property called a <u>contradiction</u> - a functional incompatibility between elements within the social formation. For change to take place, and the emergence of a new mode of production to be effected, a contradiction must exist between elements; more specifically, between the forces of production and the relations of production. Contradictions can, however, also exist within the forces and relations of production but these in themselves are insufficient to effect a change in the mode of production and, ultimately,the whole social formation (Lewis-Williams 1985:20).

Contradictions and tensions, as intrinsic features of human society, do often emerge in the dialectical working of the relationship between the social relations and forces of production. The mediation of the superstructure however, allows the process of society's reproduction to continue, despite these contradictions. It is possible that these mediating structures are in themselves contradictory, and do not bring about functional unity or consistency. Neither are the contradictions necessarily cancelled by the mediating structures. They may even allow their reproduction, frequently, in a more antagonistic manner (Mazel 1989:38).

Within the historical materialist model, Hall has differentiated three modes of production which he argues are relevant to southern African pre-colonial social formations (Hall 1985a, 1987c). Two of these modes bear relevance to this study:

1. The Domestic mode of Production:

   in which the relations of production are constituted by interactions between individuals who form domestic groups (Sahlins 1972 as quoted in Hall 1985a:2), and where..." the product of any given labour process is distributed amongst the producers and others through the intervention of determinate social relations between the individuals concerned " (Hindness and Hirst 1975 as quoted in Hall 1985a:2). From the character of these dominant relations of production follows an absence of classes, complex division of labour, or the accumulation of the product on a substantial scale by individuals or a specific segment of the community (Hall 1985a:2).

2. The Lineage Mode of Production:

   which, as in the domestic mode, realizes the social relations of production through kinship. In contrast, however, dominance (the control of surplus production) is not confined to relationships of presentation and redistribution within the domestic unit, but rather at the scale of the lineage, and between dominant and dominated lineages (Hall 1985a:4)

Although mode of production theory remains a debated issue within historical materialism, to enter this debate more fully falls beyond the scope of this work. I accept therefore that the Domestic and Lineage modes, as defined by Hall (1985a,1987c), are useful constructs in the analysis of the social formations of pre-colonial mixed-farming communities in southern Africa. On the strength of these definitions I will attempt to demonstrate that, as a consequence of changing social relations that are argued to develop within first millennium mixed-farming communities, the society was one in the process of social transformation. Within this analysis these communities are viewed as being in transformation from the Domestic to the Lineage mode.

In my theoretical approach I follow Mazel (1989), and accept that "in the dialectical relationship between social relations and forces of production, the social relations of production are ultimately determinant (Mazel 1989:38-39). This does not however imply that social relations are autonomous. On the contrary, they exist in relation to other elements in society and nature. Within this dialectical relationship the forces of production and the environment act as constraining forces, setting the outer limits to the possible variations in the social relations of production (Friedman 1974:451).

As social rather than technological processes, relations of production are, in an archaeological context, highly elusive. In attempting to solve this problem Hall (1985a,1986, 1987a,1987c) has argued that by employing concepts developed within "structuration theory" (Giddens 1981,1984), and developed further within the context of archaeological theory (Miller and Tilley 1984:1-15; Shanks and Tilley 1987), a means is provided whereby such relations can be inferred.

Structuration theory views human social activities as being recursive; that is, recreating patterns of behaviour, intentionally or unintentionally, by the very action of living them out in the present. "That is to say, they are not bought into being by social actors, but continually recreated by them via the very means whereby they express themselves as actors. In and through their activities, agents [actors] reproduce the conditions that make these activities possible" (Giddens 1984:2-3). Such behavioural regularity is further enhanced by the need for "ontological security"; the reassurance that is obtained by carrying out actions repeatedly in the same manner (Giddens 1984:xxiii).

The 'structure' of structuration theory can be analysed as sets of rules and resources recursively implicated in social reproduction. Thus, it has a dual but connected nature. In the production of social interaction, as always and everywhere a contingent accomplishment of knowledgeable social actors [agents], and in the reproduction of the social system across time and space (Giddens 1981:26-27).

Rules, in turn, involve both normative principles following from the "routinisation" (or durée) of daily life, and "signification"; symbolic orders which convey the meaning of the rules. Resources are also of two kinds: allocative resources, which stem from control of material products or aspects of the material world, and which have a role broadly analogous to materialist "forces of production", and authoritative resources, which derive from the co-ordination of activity of human agents, and are discernable in materialist "relations of production" (Giddens 1984:xxxi; Hall 1985a:12).

Central to Giddens' theory of structuration is the concept of agency. The view that human social activity is recursive returns "control" (both intentional as well as unintentional) to actors within the social system.

> " All human action is carried on by knowledgeable agents who both construct the social world through their action, but yet whose action is also conditioned or constrained by the very world of their creation. In constituting and re-constituting the social world, human beings at the same time are involved in an active interplay with nature, in which they.both modify nature and themselves" (Giddens 1981:54).

Such action is seen as the exercising of power for "to be an agent is to be able to deploy (chronically, in the flow of daily life) a range of casual powers, including that of influencing those deployed by others" (Giddens 1984:14). Power in this sense is not seen as a resource, but rather as a class of action: the exercising of power over allocative and authoritative resources, in the recursive interactions of the social system (Giddens 1984:14-16).

Such recursive social behaviour by human agents does not, however, happen in detached dimensions of space and time. The physical settings or 'place', associated with such exercising of power Giddens terms locales. Time is also a matter of positioning, operating simultaneously at several different scales: the linear time which each individual perceives as a progression from birth towards death, the "durée" of day-to-day experience, and the longue durée of institutional time - the long term existence of social institutions (Giddens 1984:35).

In order to adopt these perspectives of structuration theory in the analysis of first millennium mixed-farming social formations, the scale of agency has needed to be established. In the absence of individual characters in the prehistoric record it has been argued that an appropriate analytical unit would appear to be the "household", where such is defined as "shared tasks of production and/or consumption, regardless of whether its members are linked by kinship or marriage, or are co-resident" (Carter 1984 as quoted in Hall 1985a:14).

This concept of the "household" has been criticised, for among other things, its lack of definitional precision and its failure to deal adequately with the full variability of human behaviour. However, despite its shortfalls, it still has the useful attribute of focussing attention on what people do. This conceptualization of the household emphasizes behaviour rather than form - a "locale" at which "bundles" of activities come together as actors exercise power relations (Hall 1985a:13).

It has been argued that the concept of power and signification provide the crucial connection between structuration theory and archaeological practice (Hall 1985a). Analysis of power relations provides a method of examining the relationships between appropriate "collectivities" (Giddens 1984), such as the village, town or household, and between such groups and the allocative and authoritative resources drawn from the environment (Miller and Tilley 1984). At the same time, the idea of signification allows artefactual evidence to be used in the examination of power relations, building on the concept of "active symbols" developed by Hodder (1982,1986).

Giddens (1984) proposes that power relations are made concrete, or signified, often by the use of "material symbols". This is supported by recent ethno-archaeological studies (Hodder 1982, 1986) in which it has been shown how material culture carries symbols which are active in forming and giving meaning to social behaviour. Hodder argues further that material culture is particularly relevant to the study of power relations because...

> "...unlike much action and speech, it has duration. It lasts, and so in a very direct way it channels and organises perception and behaviour... it is through material culture and its special organisation in homes that individuals come to grasp meanings and relations in society. Material culture is itself, then, an important force in the regeneration of ideology and power. It has inherent properties which can lead to the naturalisation of power relations and authority" (Hodder 1984:as quoted in Hall 1985a:14).

The combined concepts of materialist theory, of the household as a nexus of recursive power relations, and artifacts in the active voice, as providing a set of powerful analytical tools, have been realised by Hall (1985a,1985b,1986,1987a,1987c) in the re-evaluation of pre-colonial southern African history. In the ensuing discussions I hope firstly, to test the interpretations of my own field data against these propositions advanced by Hall and, secondly, illustrate that, by applying principles from the theoretical stances described above, it is possible to move towards a more socially orientated enquiry into the nature of first millennium mixed-farming communities in the Thukela Basin in particular, and the sub-continent in general.

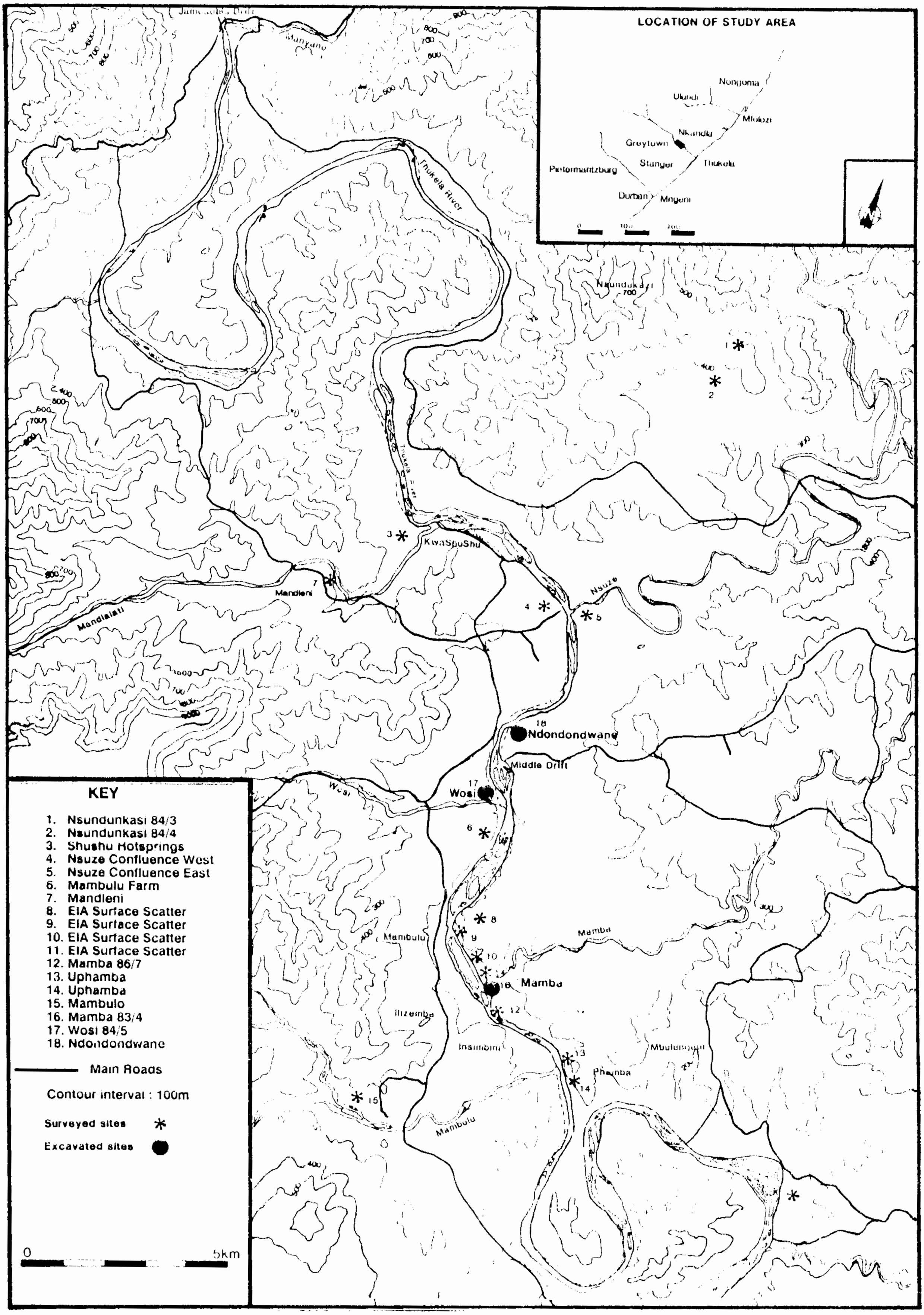

Fig.2. Lower Thukela Basin Survey Area

CHAPTER 4

THE LOWER THUKELA BASIN STUDY AREA

The field-work reported on below was stimulated by earlier investigations at the lower Basin EIA site of Ndondondwane (Fig.2). These excavations formed part of a wider programme aimed at trying to obtain greater insights into the dynamics of Early Iron Age lifeways below the south-eastern Plateau Slopes of Natal and Zululand (Maggs 1984a,1984b,1984c; Maggs and Michael 1976; Maggs and Ward 1984). Following further excavations at Ndondondwane (Loubser 1984), the latter project was extended to include a wider regional survey of a part of the lower valley basin, and the subsequent excavation of two sites, Mamba and Wosi. The EIA sites at Shu Shu Hot Springs, Nsuze Confluence, Mamba and Wosi (Loubser 1984; Maggs 1984b; Schofield 1948) were known but had not been recorded in detail. The survey relocated these, as well as evidence of 15 other first millennium settlements (Fig.2).

This survey, and the subsequent excavations, were further motivated by the intention of the Department of Water Affairs to construct a dam some 33 km downstream from the survey area. This would have resulted in the flooding of all areas below the 300 m contour within the study area (Thorington-Smith et al. 1978), an area by then known to contain rich evidence of first millennium mixed-farming settlements.

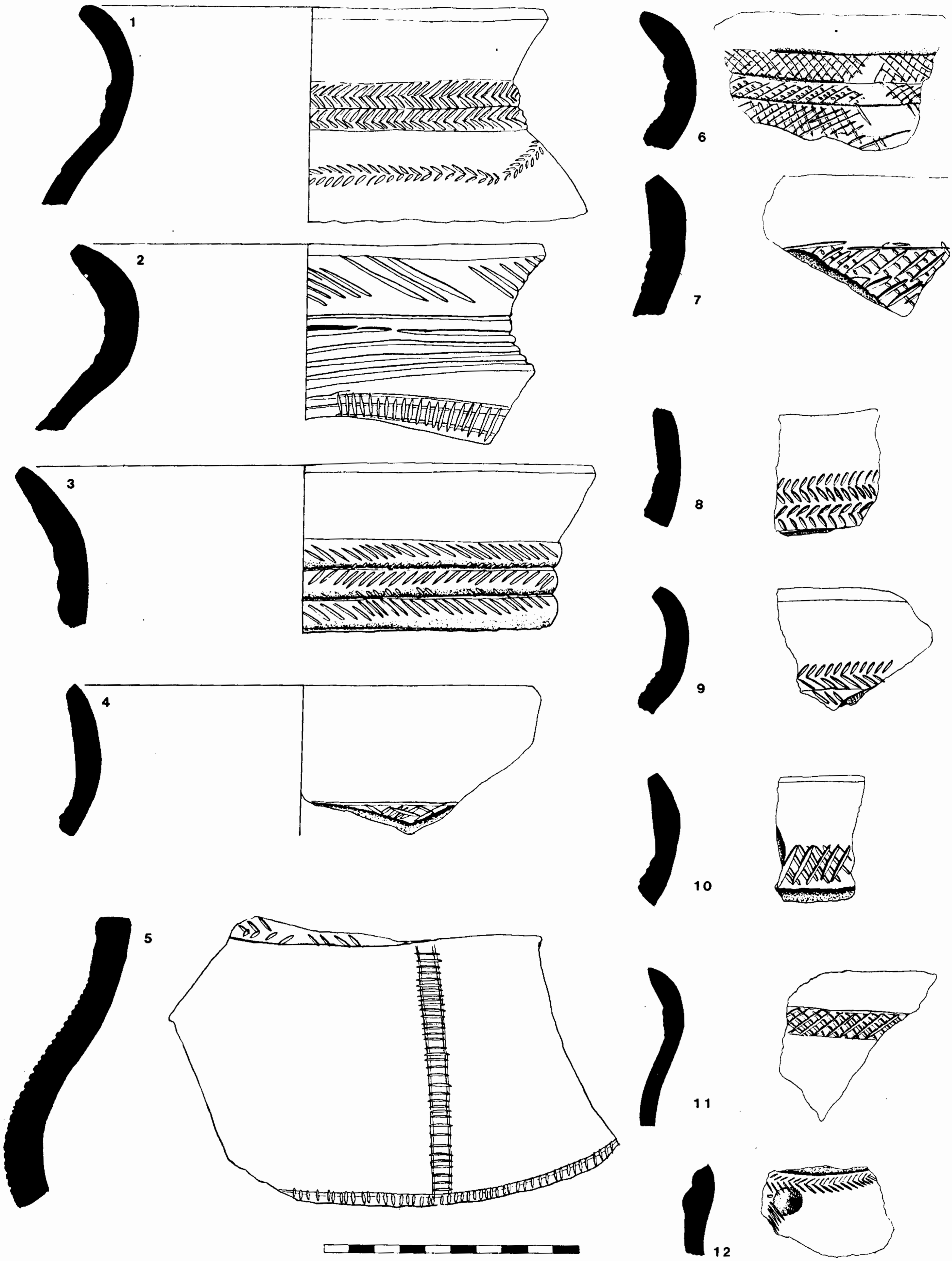

Fig.3. Nsundukazi pottery sample.
(c.f. Mamba 83/4 : Appendix 1)

The archaeological survey was conducted in the area between Jamieson's Drift Bridge in the north to the Silambo river in the south, and east-west from the Kranskop heights to the foothills of the Nkandla Escarpment, an area of approx. 400 sq.km (Fig.2). Areas searched were all below the 300 m contour and adjacent to the main Thukela river course, as this was the immediate area threatened by flooding (Thorrington-Smith et al.1978).

Sites 1 and 2, located on a minor tributary of the Nsuze River below Nsundukazi hill (Fig.2), were discovered during the construction of a small dam on this tributary. Three narrow, elliptically grooved grindstones, exposed during dam-excavation, called attention to the site. Far too much damage had already been done to the site to even warrant salvage excavation by formal archaeological methods. Mrs E.A. Voigt and I inspected the site and identified the pottery (Fig.3) as being comparable to that of Maggs'(1984b) Ndondondwane variant of the Msuluzi phase (Maggs 1980c. See also Appendix 1: Mamba 83/4). Fragmentary, but diagnostic, faunal remains were also identified as being those of domestic cattle.

Sites 3 to 14 were discovered or relocated during the surveys, and sites 15 and 16 were located after local informants, visiting the Wosi excavations, had reported comparable surface material at these locations (Fig.2). Sites 3 to 11 had all been disturbed by current and recent subsistence farming activities and only a few

Fig.4. Narrow groove grindstones and multifaceted upper grinders were always assosiated with EIA settlement evidence. Where found in conjunction with diagnostic pottery they provided innitial relative dates to the surveyed sites.

broken, distinctive narrow-groove grindstones (Fig.4), together with diagnostic, decorated pot sherds, provided evidence of first millennium occupation.

Sites 13 and 14 are located some 750 m apart on a narrow terrace above the east bank of the Thukela, 3 km downstream from the Mamba confluence (Fig.2). They appear as scatters of furnace debris and tuyere fragments, encompassing areas of approximately 20 sq. metres each, and are comparable to those excavated and analysed from the Mamba 83/4 site. Although not excavated or dated, these sealed deposits appeared to be associated with the same smelting technology and practices documented at Mamba 83/4. (See Chapter 5). Surface pottery collected on the sites was diagnostically similar to the documented Ndondondwane material (Loubser 1984; Maggs 1984b), and this was taken to be sufficient grounds to date them tentatively to the late first millennium.

Sites 15 and 16 were both badly disturbed by current agricultural practices and sheet erosion. Diagnostic grindstones and pottery fragments were the only chronological markers evident. The ephemeral nature of these briefly described sites is addressed in greater detail later.

The Wosi site (Wosi 84/5), and the two separate settlements at the Mamba confluence (Mamba 83/4 and Mamba 86/7), exhibited the greatest potential for excavation (Fig.2: sites 18, 17 and 12).

Both localities appeared to contain sealed deposits, and had been only minimally disturbed by agricultural practices in the recent past. It was decided that, given the time available, these sites should receive excavation priority.

LOCAL ENVIRONMENT

The Mamba sites are located on opposite sides of a deeply incised dog-leg bend at the confluence of the Mamba and Thukela rivers (28' 56' 35" S; 31' 02' 50" E). The Wosi site is located at the confluence of the Wosi and Thukela rivers (28' 54' 25" S; 31 01'50" E), on a colluvial spur sloping gently down to the banks of the Thukela (Fig.2). Both sites are located between 180 and 200 m a.s.l. and here the valley has a fairly gentle gradient, although the valley sides slope up steeply from above the 400 m contour. The respective sites are roughly 10 ha in extent and are located 5 km apart.

The Thukela river, the largest east flowing watercourse of the southern East Plateau Slopes, is perennial. The Mamba and Wosi rivers, as do most tributaries in the survey area, flow only in the wet season. The Mamba river rises in an outlier ridge of the Nkandla heights and flows for some 20 km through undulating countryside that is presently exposed to intensive subsistence agriculture and excessive stock numbers. Consequently the river's catchment is highly eroded and most seeplines and wet-lands have ceased to function. This, together with rapid run-off, higher silt loads and abrasive flash flooding, has deeply incised the river course, and led to its non-perennial nature. Although a much shorter river, the same is true of the Wosi. The above hydrological changes are however exacerbated in the latter case because of the steeper slope of the valley side at the source and in the catchment of this river. Wosi and Mamba's respective catchments are in areas of high precipitation - the edge of the Kranskop Divide and the Nkandla Heights respectively - but in their current degraded state stream flow is now only sporadic.

I proceed now with a synopsis of the present day environment of the study area, and a reconstruction of its nature during the first millennium. This exercise is necessary in order to place in perspective the ecology that defined the social and economic possibilities open to mixed-farming communities settling in the valley during the period under review. This is not to argue that the environment was wholly deterministic, or the driving force behind mixed-farming lifeways. On the contrary, it was the stage on which such lifeways were played out, setting the outer limits on the available interactive options, yet at the same time allowing the manifestation of new interactive options. Such new, or alternative, options were the result of continually changing ecological parameters; they themselves the consequence of early farmers' "dynamic and mutually interactive relationship with their environment" (Hall 1987a:61).

Climate

As no specific records exist for this part of the Thukela valley, it is assumed that the local climate conforms to the general patterns of this typical sub-tropical region. The study area falls within Bioclimatic Zone 10, and is semi-arid (Tainton et.al 1979). Average daily maxima vary from 22 deg.C in June to 29 deg.C in January and temperatures in excess of 35 deg.C are not uncommon. Average daily minima vary from 17 deg.C in January to 8 deg.C in July and light frosts do occur along the valley bottoms on cold winter mornings (Shulze 1982).

The average annual rainfall is between 450 - 750 mm pa. Most rainfall is received in the form of thunderstorms during the summer months with lesser showers being experienced with south westerly winds in winter. However, the main precipitation period is from late September to March. The Mean Annual Precipitation is determined at between 848 and 855 mm whilst the Annual Potential Evaporation is between 1720-1740 mm (Shulze 1982). Consequently, humidity in the valley during the wet season is generally high, ranging on average from 55% in September/October to 78% in March. These high indices of temperature and evaporation explain the reduced effect of any precipitation received, which itself is partly a consequence of the area's semi-aridity.

This is further affected by the local topography. The steep east facing slopes of the Kranskop Divide produce a marked rainshadow effect on the valley bottom. Only some 20 km to the north-east precipitation along the Nkandla heights increases to an average 1000-1200 mm p.a., as a result of the range impeding the advance of any prevailing frontal rain (Schulze 1982). Here semi-coast forest and ngongoni grassland predominate (Edwards 1967).

The foregoing climatic synopsis may appear to presume a general climatic stability throughout the last 2000 years. But although the current prevailing regional climatic pattern is extrapolated into the past, it is done with caution. Hall (1976) and others (Tyson 1986; Tyson et.al.1975) have presented evidence that indicates a relative warming of the sub-continental climate between c.200 - 1000 BP. Hall (1976) has further, tentatively correlated the growth increments in a specific Podocarpus specimen to prehistoric fluctuations in precipitation in the region. Although the latter was not a definitive study, it calls attention to the effects of regional dry and wet episodes on the possible dynamics of early farming communities' colonisation during the first millennium.

Geology

The geological formations of the region are predominantly of the Natal and pre-Natal Group and are classified within the Tugela Series of the Basement Complex (Brink 1981). Most of the material composition of this lithology is metamorphic, comprising hornblendic schists and gneisses traversed by granite veins. Amphibolites and quartzitic quaternary alluvium litter the valley floor (Du Toit 1954). Intrusive seams of gabbro, comprising of seams of titaniferous magnetite with a high concentration of vanadium (Luyt 1976), occur within 1 - 5 km of all known and surveyed sites. These are the ore-bodies that are shown below to have been so extensively exploited by early farming communities.

Micaceous talc-schist deposits occur widely in the study area, and calcrete nodules and limestone deposits commonly mark the base of the overlying soil's B-Horizon. The latter are best exposed along the under cut slopes of most river tributaries. It will be demonstrated that both talc schist and carbonate-rich pedogenic calcrete and limestone had very specific uses and applications within these early farming communities.

Copper is known to occur in the exposed syenites along rivers flowing out of the Nkandla heights (Hammerbeck 1976), but as yet no evidence has been found to suggest that it was smelted at any of the first millennium lower Thukela Basin sites.

Soils

Along the river banks and other flat areas deep, red, well-drained soils predominate. These Oakleaf form soils derive their colour from the parent material which consist of amphiboles, schists and gneisses. The soils are stable and have a high base and nutrient status. Leaching has been minimal in the semi-arid environment and the soils are exceptionally well suited to dry land agriculture, especially where drought resistant cultigens are planted (Maphumulo 1986). As has been previously noted (Maggs 1980c), such soils were specifically selected by Early Iron Age farmers for the dry-land cultivation of such cereals as Sorghum, Pennisetum and Eleusine (Davies 1975; Klapwijk 1973; Maggs 1984b, 1984c). It was at nodes of such soil occurrence that all surveyed and excavated farming settlements were located.

Vegetation

The vegetation of the valley bottom at present is indicative of an environment that is exposed to excessive over-utilization by the local rural population. Disturbed areas are dominated largely by Acacia tortilis / Dichrostachys cinerea thicket and invasive clumps of Euphorbia tirucalli and E. grandicornis. Fallow fields are quickly over-run by Croton menyhartii scrub, and the original Themeda triandra sweetveld understory replaced by sparse Urocholoa mossambicensis. "Pincushion" A. tortilis dominates the remnant grazing lands. Due to excessive scouring by the Thukela and its tributaries the riverine fringe vegetation has also been markedly changed. Reedswamp communities and the associated riverine canopy have been heavily depleted. Relic Ficus sycamorus, Syzygium spp, Salix woodii and Trichelia emetica attest to a more diverse riverine flora in the not too distant past. Cynodon dactylon has invaded the aggraded river banks and Phragmites communis reedswamps are stunted by overgrazing, abrasive river flow and over utilization by a burgeoning local population. The adjacent flat lands are conspicuous in their defoliated state, with only isolated specimens of Sclerocarya

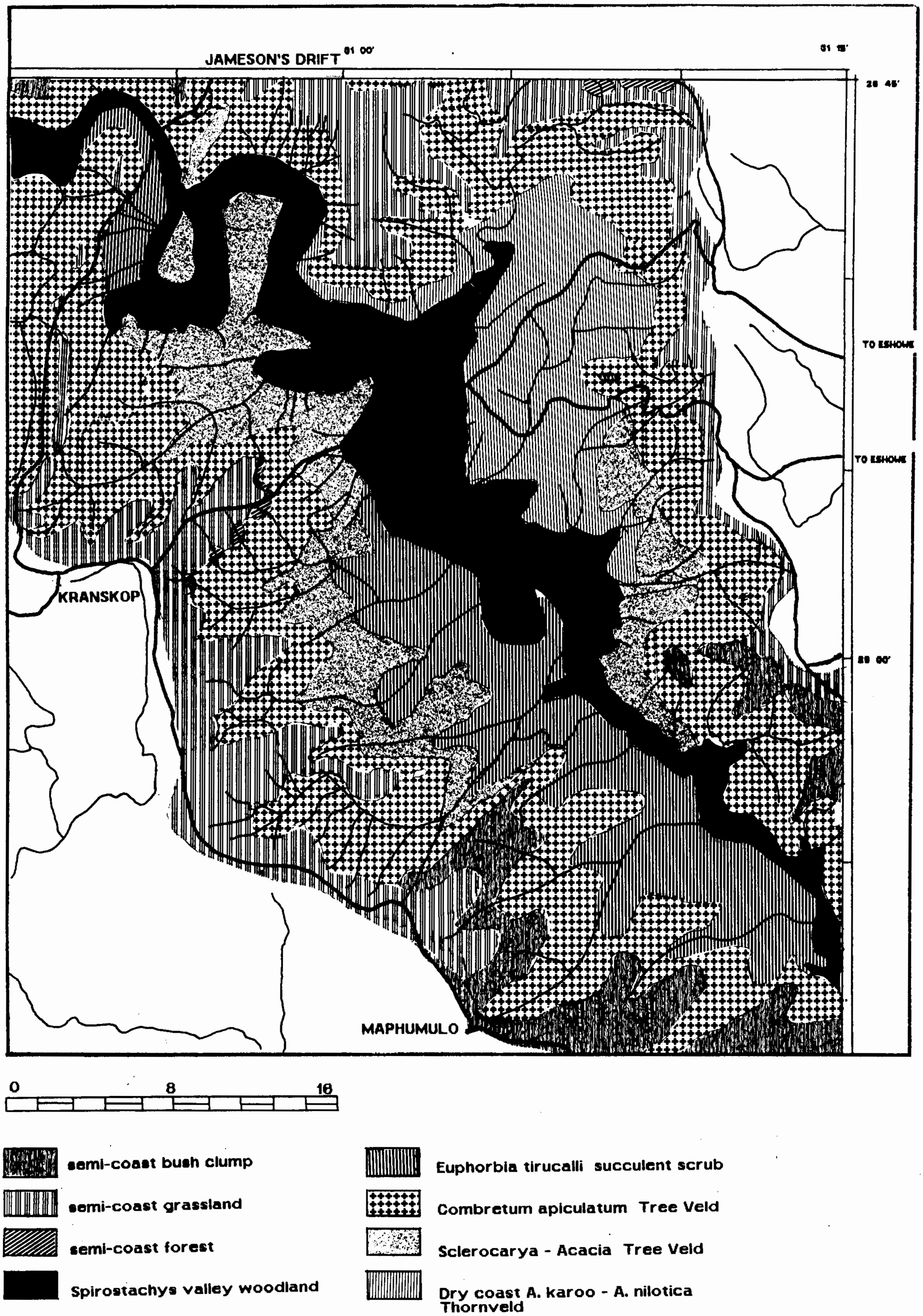

Fig.5. Vegetation map of the lower Thukela Basin
(after Edwards 1967)

birrea, Boscia albutrunca, Spirostachys africana, Acacia robusta, and on hillslopes Combretum apiculatum, surviving. The sweetveld Themeda/Hyparrhenia climax has to a large extent been replaced by a tufted, less palatable Aristida congesta / Sporobolus spp grass dominance, and browse-stunted Acacia / Dichrostachys invasive thicket (personal observations). This is a situation well known to occur when there has been selective over-utilization of sweetveld (Tainton et al. 1979).

Despite the degraded state of the floral community described above it has been possible, in conjunction with Edwards'(1967) vegetation survey of the Thukela Basin (Fig.5), to obtain an indication of the earlier habitat diversity that would have prevailed within the study area prior to the inception of excessive over-utilization. Caution must however be exercised when considering Edwards'(1967) vegetation survey of this part of the Thukela Basin.

Edwards considered the impact of Black farming communities on the local environment to have begun only with their arrival in the region in the 16th Century (Edwards 1967:54-58). Current knowledge now records this impact to have been in excess of 1500 years (Feeley 1980,1986; Hall 1981,1984c; Maggs 1980a,1980b, 1980c,1984a,1989) and, consequently, so called "climax vegetation communities" must now be viewed as those created and maintained not only by ecological dynamics, but also by long-term human inter-action on the landscape. It has been argued that, prior to the colonisation of the South Eastern Plateau Slopes by mixed-farming communities, the valley slopes and lowveld areas were covered by a more closed savannah woodland. Slash-and-burn (swidden) agricultural methods, with fallow periods, woodcutting for domestic fuel, and charcoal production for iron-smelting, were the activities that initiated the opening up of this species-diverse, closed-woodland dominance (Feeley 1980,1986; Hall 1981).

Anthropogenic fire, to bring on dry season green flushes for cattle grazing and to facilitate the clearing of woodland for crop production (Hall 1984c), the impact of large indigenous herbivores such as elephant, rhino, hippo and buffalo on abandoned or fallow fields and deserted village sites (Carr 1971; Feeley 1980) and, possibly, a higher incidence of lightening induced fires due to the increased litter load of a more open woodland mosaic, no doubt accelerated the opening up, and maintenance of, a grassland understory. It is in the light of these factors that the following vegetation reconstruction must be viewed.

Climax Riverine and Streambank Woodlands (sensu Edwards 1967) still occur on islands along the course of the Thukela, where they are protected from disturbance for the greater part of the year by high water levels. Steep-gradient tributary streams, with lower human populations in their vicinity due to a paucity of suitable agricultural land, also still support such communities (personal observation). These are remnants of the "climax community" which would have existed along the river and stream banks of this Lower Valley sub-region (Edwards 1967) during the first millennium. The Phragmites reedswamps and Ficus sycamorus Woodland represent a "postclimax" to the surrounding drier valley vegetation and, with its associated species, would have formed a canopy fringe in the zone of higher soil moisture found some 20 to 50m on either side of the Thukela and its tributaries.

Analysed faunal samples from EIA sites in the middle Thukela Basin (Maggs and Ward 1984; Voigt 1984), and the lower Basin sites (Voigt and von den Driesch 1984; Voigt and Peters 1991), have all yielded up evidence for the presence of Potamochoerus porcus (bushpig), Tragelaphus angasi (nyala), Tragelaphus scriptus (bushbuck), Philantomba monticola, Pternistis afer (red-necked francolin) and Metacatina kraussi (Land snail). These are all species known to favour closed woodland and canopy forest (McLachlan and Liversidge 1970; Smithers 1986), and their presence suggests that such forest conditions existed during the first millennium. All surveyed EIA sites occurred within 50 to 100m of this postulated canopy fringe.

The dry valley scrub in this sub-region is a complex vegetation upon a rugged topography (Edwards 1967). Within the study area there is an observable zonation of plant communities, with the most xerophytic occuring along the valley bottom and on the steep north-facing slopes south of the river.

Deciduous Combretum apiculatum Tree Veld (sensu Edwards 1967) is one of the principal communities and occurs on the shallow, stony soils of the steep north-facing slopes in the hottest, driest, most rugged and inaccessible areas. In the absence of the aforementioned over-utilisation that currently prevails, open grass fields should occur between the trees and shrubs, dominated by sweetveld Themeda triandra (cf.Edwards 1967:110). This community grades into Spirostachys Valley Woodland on the deeper soils along the flatter bottom of the valley. Under less intensive conditions of utilization the shrubs and small tree layer would be sparse; the tall tree stratum, 8 m or more high, being separated by slightly less than their crown diameter, forming a closed woodland. Themeda triandra would be dominant in the grass field layer and other tall climax grasses such as Panicum maximum and P. deustem would predominate in shade, where disturbance was absent or light (cf.Edwards 1967:111). Spirostachys Valley Woodland represents the dominant community on deep soils in the hottest and driest floor areas of the valley (Edwards 1967:111-112). It is within this latter ecotone that the first millennium mixed-farming villages were located (see Figs.2&5).

Sclerocarya-Acacia Tree Veld (sensu Edwards 1967) covers approximately 100 sq.km in the east of the study area, occuring on flat undulating topography with deep soils, between 300 and 700 m above sea level. Under conditions of less intensive utilization than at present it would be more open and the field layer dominated by heliophilous grasses, particularly *T. triandra* (cf.Edwards 1967:109-111). At lower altitudes this community grades into *C. apiculatum* Tree Veld (Fig.5). It will be demonstrated below that these ecotones would have only become productive grazing zones once the closed-woodland canopy had been opened up anthropogenically.

DISCUSSION

The more open nature of this complex vegetation in the recent historical past has been shown to be the result of at least 1500 years of farming community influence on the landscape. Its more closed nature in the prehistoric past is argued to have imposed varying degrees of constraint on the means of production within mixed-farming communities, and consequently on the postulated social relations that are argued to have been manifest (Hall 1987a) .

Hall (1981,1984e,1986,1987a) suggests that a determining factor in this regard was the most likely presence of the debilitating epizootic, trypanosomiases. Trypanosomiases is transmitted by a genus of biting and blood-sucking fly (*Glossina spp*) locally known as "tsetse". Although only limited evidence is available regarding the extent and influence of trypanosomiases in prehistoric times, archaeozoological and paleontological investigations of known vectors of the disease indicate strongly that people and animals have been exposed to potential trypanosome infection in Africa since at least the mid-Pleistocene (Lambrecht 1964). Although the present or historically recorded distributions of trypanosomiases are no indication of past presence, from the singular habits of the Glossina spp. we can specify that known "fly" zones in sub-Equatorial Africa occur below about 1200 m a.s.l., in areas of shaded, closed-canopy vegetation (Ford 1971:5; McKelvey 1973).

The well-wooded valley of the Umhlatuze river, only some 15 km to the north-east of the study area, extends eastward from below the Nkandla Heights, into the wide basin of Nkwalini. First millennium mixed-farming settlements are known to occur along the length of the upper valley, and the vegetation and soils are analogous to those within the study area, as are the temperature and rainfall regimes respectively. The very recent historical occurrence (c.1930's) of tsetse fly in this valley and its lower basin is now well documented (Du Toit 1947,1954,1959; Minnaar 1989; Pringle 1982) and consequently I believe it is feasible to argue that tsetse fly were in all likelihood prevalent within the lower Thukela Basin during the first millennium, prior to the subsequent settlement by early mixed-farming communities. Whether as a result of historically more recent regional conflict and human displacement, or of the late first-millennium fission of larger valley-bottom settlements (see Chapter 8), the apparently anomalous re-occurrence of "nagana" in the region was in all probability the result of initial scrub-encroachment onto less intensively utilised areas, and the later succession towards sufficiently shaded habitats suitable for the sustaining of viable tseste-fly populations.

Indeed, between June 1990 and July 1991 a campaign was waged by State Vetinarians against a "nagana" outbreak emanating from the "cordon-sanitaire" adjacent to the Hluhluwe-Umfolozi Game Reserve Complex in Zululand. This cordon had been depopulated in the 1950's to provide a buffer zone against the spread of Corridor Disease and other epizootics between domestic cattle on adjacent farm lands, and game vectors resident within the Game Reserve Complex. In the absence of intensive natural-resource utilization by local people within the buffer strip, and within the adjacent game reserve, the succession towards closed-canopy woodland has developed to an extent that viable tsetse fly populations are again being supported. The implications of this working-hypothesis are discussed in greater detail later.

Historically, only two species of fly, G. brevipalpis and G. pallidipes, are known from the Eastern Plateau Slopes of the sub-continent. Both species occur in wooded savanna although G.

brevipalpis is more common in thicker gallery forest, closed woodland and in relict secondary forest patches (Du Toit 1959). Neither species is known locally to carry the trypanosome responsible for "sleeping-sickness" in humans, but are both major vectors of the trypanosome "nagana", which affects cattle and other domestic stock (Ford 1971). Given the foregoing environmental synopsis, and the known historical presence and influence of the above Glossina spp. in the region, it seems reasonable to conclude that first millennium human populations in the lower Thukela Basin were probably not affected by the presence of these flies, but that "nagana" must have exerted a major influence on the ability of the early mixed-farmers to raise and keep domestic stock.

The postulated closed-canopy woodland environment of the early first millennium would have constituted prime "fly country", and thus animal husbandry, and consequently domestic stock numbers, would have been significantly curtailed - this prior to the landscape being transformed by human action to a more open woodland-mosaic, and in such reducing the prevailing "fly" habitat. The mechanisms involved in these transformations will be enlarged upon in the course of ensuing discussions.

Fig.6. Mamba 83/4. Surface scatter of furnace debris.

CHAPTER 5

MAMBA EXCAVATIONS

MAMBA 83/4

Mamba 83/4 (Fig.2. No.17) was re-located during the survey previously described, and is conspicuous by the large quantities of surface debris derived from iron smelting and by the subsequent post-smelting dismantling of clay furnaces (Fig.6). Three broken, elliptical narrow-grooved grindstones found on the surface of the site were the first indications that the iron smelting activities probably dated to the first millennium (See Fig.4).

In an attempt to ascertain the nature and extent of the deposits over the site three test pits were initially sunk. Test Pit One yielded only a small collection of weathered pot sherds, the underlying soil proving to be culturally sterile. Test Pit Two and Test Pit Three, however, revealed deposits of some significance. After further investigation these proved to be extensive; light grey loose-matrix deposits, and were initially thought to be ash dumps. These are discussed in further detail below.

As the major part of the site was covered in exceedingly thick and almost impenetrable Dichrostachys / A. tortilis thicket attempts to locate further surface features were seriously hampered. To facilitate access I therefore cleared two 5m wide

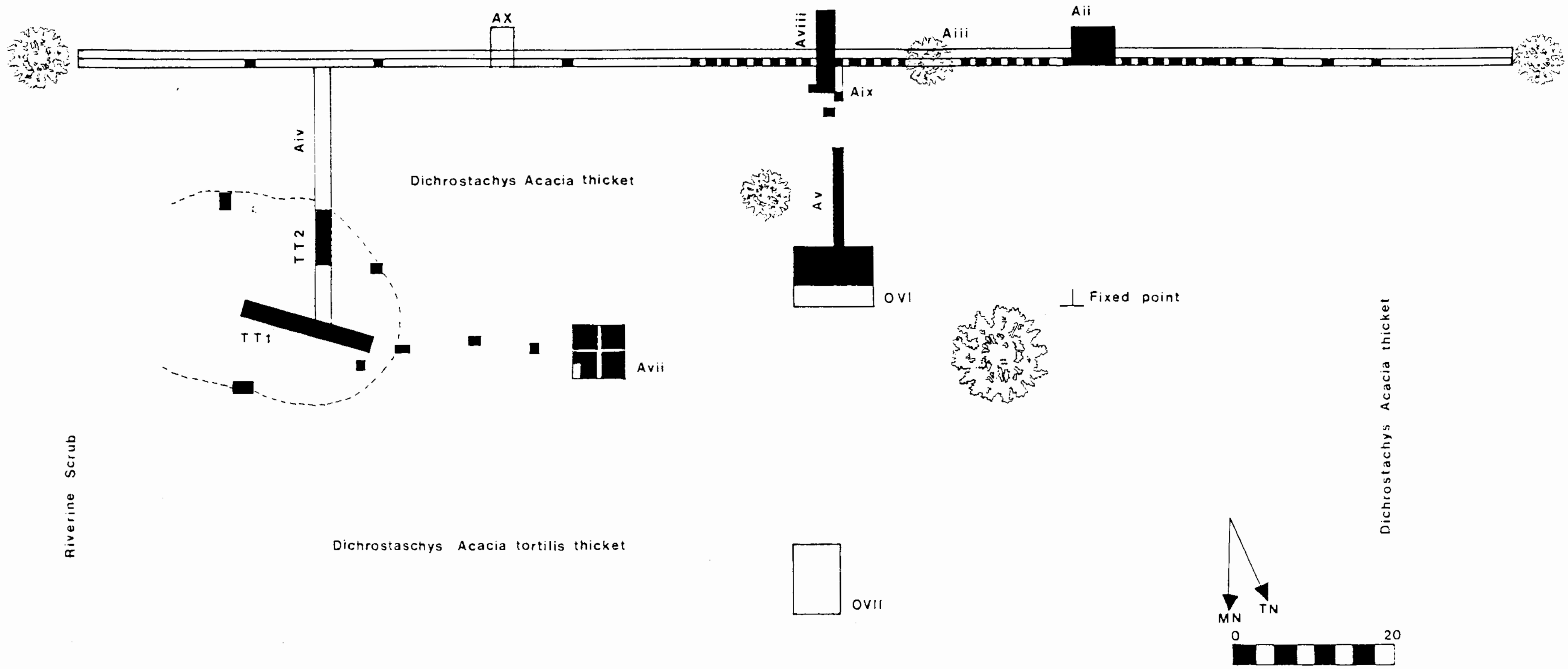

Fig.7. Plan diagram of excavations at Mamba 83/4. Shaded blocks indicate areas excavated.

transects, orientated respectively N-S and E-W from a fixed point (FP), across the site. Only after all the visible surface features on the approx. 8 ha. site had been mapped and gridded within specific excavation areas (A), were further excavations initiated (Fig.7).

Oven I and II

Oven I (OV I) and II (OV II) represented the two largest accumulations of discarded iron-smelting debris (Fig 7). As they both appeared to consist of similar material it was decided only to excavate OV I (Figs.8 & 9). It became apparent during excavation that no stratigraphy existed and the deposit was consequently removed in 10 cm spits. The deposit extended to a maximum of 30 cm below the surface and consisted of homogeneous accumulations of discarded smelting debris. No furnace features were located but the furnace debris were sieved and sorted for analysis.

The contents of the dump comprised mainly of fragments of furnace wall and clay tuyere, many vitrified at their distal ends. Slag, bloom and discarded ore pieces were scattered amongst the debris. Granite river-cobble manuports, many broken and showing signs of hammering, were associated with the other lithic material, which were all heat spalled and had conchoidal fractures. Scattered bone fragments within the dump matrix, as well as carbonate rich

Fig.8. OV I prior to excavations.

calcrete nodules and limestone chunks, suggested the use of fluxes during the smelting process.

Bone flakes were selected from the deposit for C-14 dating on the bone collagen. Bone was selected because of the paucity of suitable charcoal in the deposit, and because smelting-charcoal may well have been derived from heartwood, which would have provided an older and skewed date to the deposit. The dating results are discussed in greater detail later. It was felt that sufficient material for analysis had been obtained from OV I, and OV II would only provide a repeat sample, with limited supplementary information. For this reason OV II was not excavated.

Area II

Area II (A II) came to our attention after investigating the occurrence of a small surface scatter of manuports and utilised river cobbles in a clearing within the surrounding thorn thicket. A one metre test square revealed cultural debris extending to a maximum depth of 30 cm below the surface. A 5x5 m square was laid out to control excavations along one metre wide trenches through the deposit. No stratigraphy was discernable and consequently the accumulation was excavated in a series of 10 cm spits. The overburden extended to a depth of 10-15 cm before the presence of cultural material became apparent. The overburden was cleared and sieved to ensure that no relevant material was being lost. It

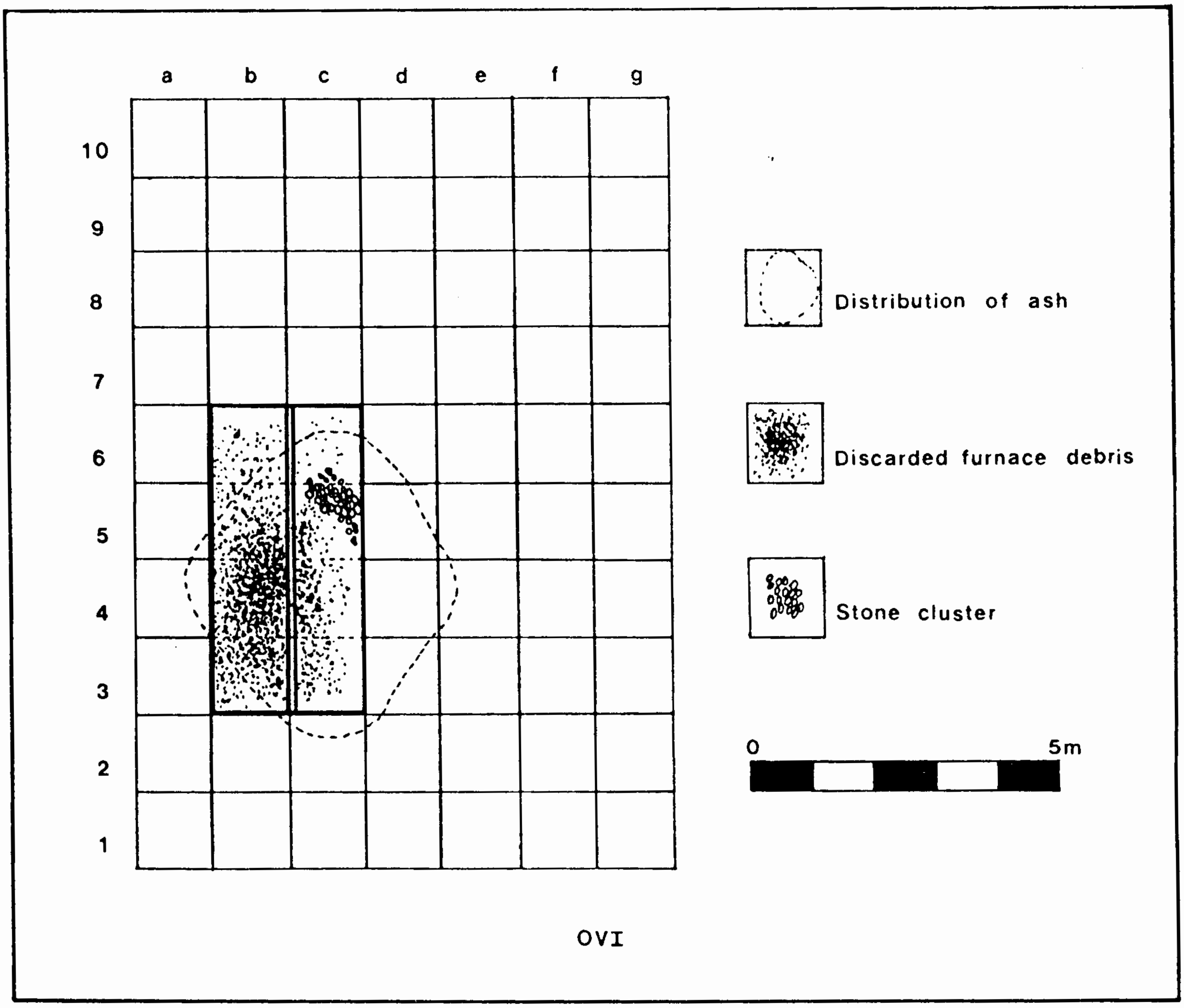

Fig.9. Plan diagram. Excavation of OVI

proved to be largely sterile. The extent of the dump was then ascertained by removing as much of the constituent ashy-soil matrix as possible and leaving the larger pieces of cultural debris (bone, stone and pottery) in situ. There was a fairly marked delineation between the ashy dump matrix and the sterile soil surrounding it. A II was no doubt a dump for domestic rubbish for, after complete excavation and sieving, it yielded the richest pottery and bone sample of the entire site. Cattle and ovicaprine bones were identified during excavation and a detailed faunal analysis has been undertaken (Voigt and Peters 1991). This, and the ceramic finds, are discussed later.

Two samples for C-14 dating were taken. One was charcoal associated with pottery fragments, the other miscellaneous bone flakes, both from within the dump matrix at the 30 cm level. Bone samples as well as charcoal were submitted for dating as insufficient contextual charcoal was obtained during the excavation of A II. The series of dates from the site is discussed below.

The Other Areas

As the material in A II appeared to extend further to the west, a series of alternate one metre squares (A III) was excavated along a western transect for a distance of 20 m (see Fig.7). Although a little cultural material, in the form of weathered pottery fragments and an upper grindstone, was exposed, the deposits

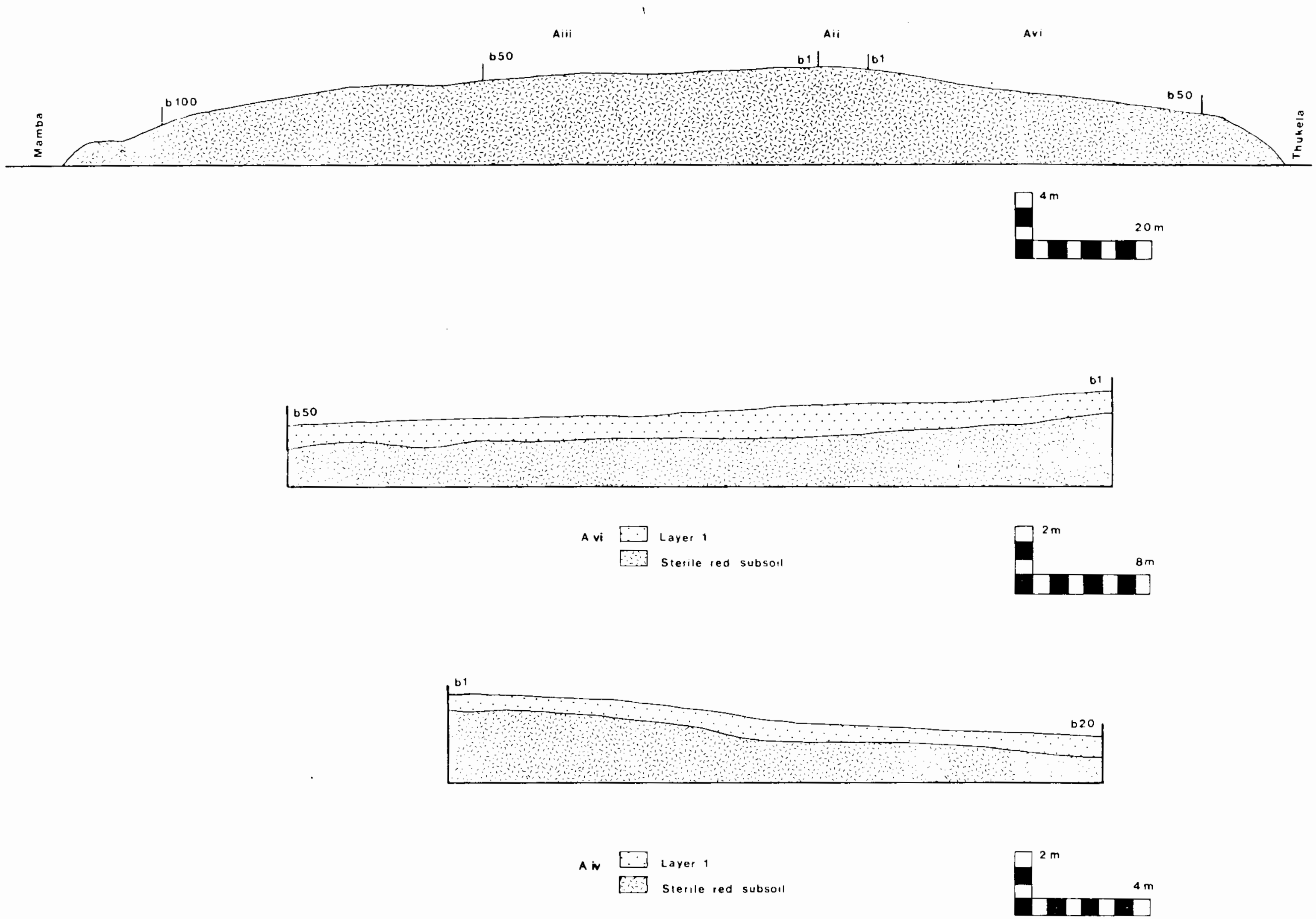

Fig.10. Cross sections and profiles of Mamba 83/4.

tended to be sterile. This material was located between 20 and 30 centimetres below the surface and is in all likelihood the result of bioturbation. However, no features or living areas associated with the dump could be found.

In order to gain further access to the site a second and third transect were cleared. A III was extended east for a further 100 metres, and A VI was demarcated along a 50 m transect to the west of A II (see Fig.7). Alternate metre squares were excavated along both transects down to 30 cm in an attempt to expose any buried features. Once the series of test squares had been extended, the dearth of stratigraphy over the entire site became clearly evident. The site is covered by a 20 - 30 cm overlay of grey brown soil which changes to red-brown at the original occupation level and extends downwards into a sterile red soil. Stratigraphy in the form of discernable occupation horizons is absent (Fig.10). However, further activity areas did become apparent as the site was systematically cleared, and the sterile overburden removed.

Area IV was extended due north of the A III/A VI transect to intersect the original Test Pit Two. To try and ascertain the full extent and nature of this light grey, loose-matrix deposit, Test Pit Two was extended and referred to as Test Trench 1. Test Trench 2 was then similarly excavated, as well as a series of test squares and augerings (see Fig.7). The area of deposit is some 25x30 m in extent, with a slip-off slope down the bank of the Mamba River. The currently deep-incised profile of the Mamba stream and its observed lateral back-cutting suggests that the stream-course has changed its profile through time, and consequently undercut the original periphery of the deposit resulting in the slip-off. Bone samples from the base of Test Trench 1 were submitted for C-14 dating and the results are discussed collectively later.

Whilst extending the series of test squares along A III an apparently random scatter of stones were exposed at the 30 cm level, within the cultural horizon of squares 25 and 30 respectively. In square 30, 25 cm below the current surface, a rough circle of friable baked clay was exposed. Further excavation exposed a roughly circular feature, some 70 cm in diameter. The sides, 65 - 70 mm thick, extended up 10 cm from the apparent base. After removing the soil from the interior of the structure and brushing the surface, a compact accumulation of ash and friable charcoal flecks was observed. Excavating through this it appeared that the structure had been constructed at ground level, with little or no preparation, as no hollow or similar excavation was apparent.

This was further supported when A VIII and A IX were opened, to determine whether any other features were associated with the exposed structure. These proved to be a number of flat river

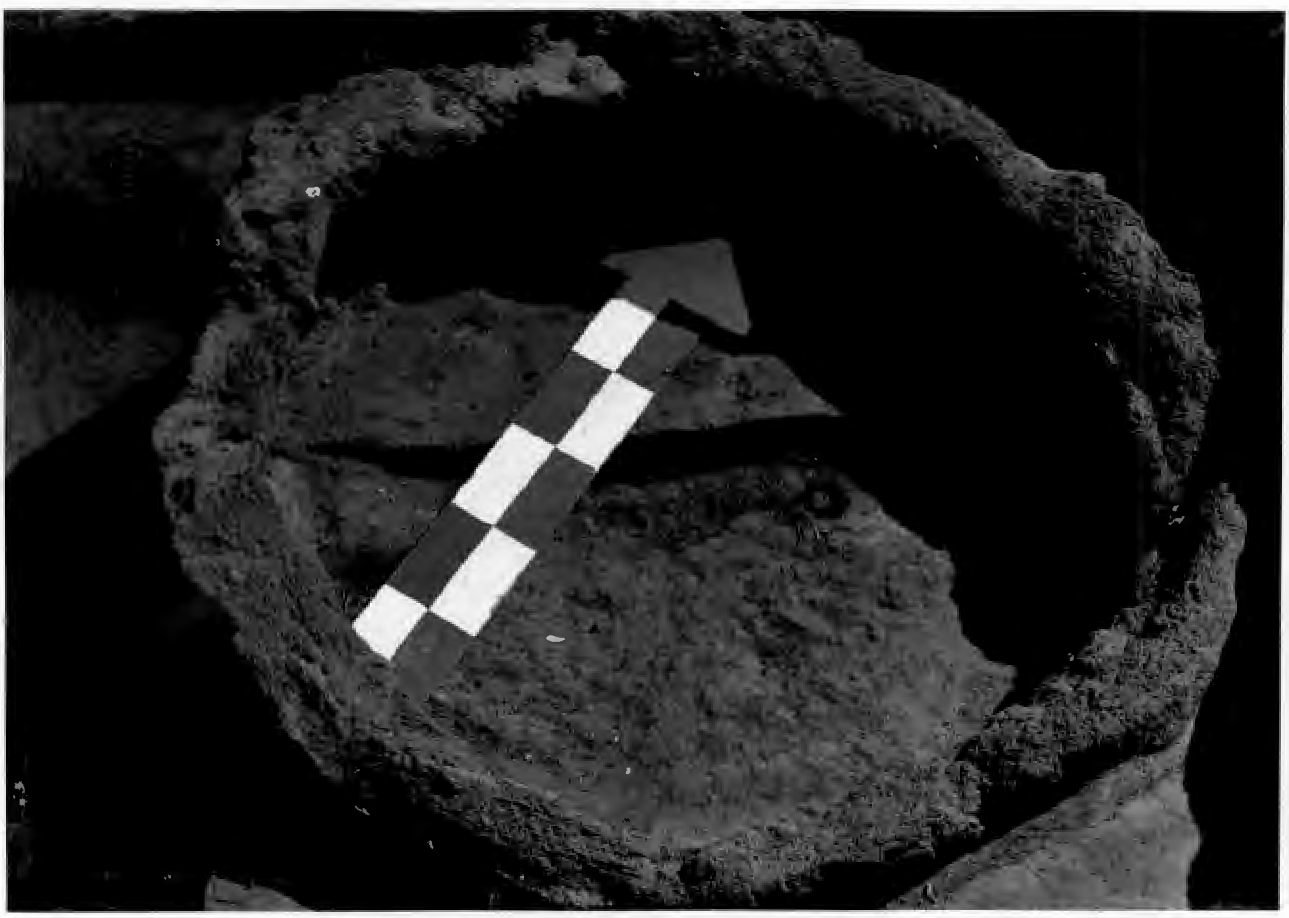

Fig.11. Excavated furnace base.

stones, scattered in no apparent pattern around the base level of the structure. Comparison of the wall thickness of the structure and the thickness of furnace-wall fragments excavated in OV 1 suggests that the structure is the base of an iron-smelting furnace. The scatter of flat stones may have been functional in supporting, and holding in place, the proximal ends of tuyeres between the bellows and the entry ports to the furnace. As no entry ports were discernable at the base of the furnace it is suggested that these were located a short distance up the side, and that the tuyeres were angled slightly upwards into the furnace. The Mamba furnace base is currently the only one yet excavated from the first millennium in this region (Fig.11).

Area V was subsequently excavated as a metre wide trench from OV I towards A IX (Fig.7) to determine whether any associated features existed between the furnace base and the dumped smelting debris. No indication was forthcoming, the deposit proving to be sterile in the intermediate area.

Area VII

Whilst auguring for the periphery of the light-grey loose-matrix deposit we struck a grey powdery soil containing compact white nodules and clay accretions, some 25 m to the west of Test Trench 1. A one metre test pit sunk into this occurrence indicated a hard, clay compaction below the powdery grey-soil overlay. Two E/W and N/S orientated metre-wide trenches were excavated from the test pit to ascertain the extent of the compaction. Subsequent metre-wide parallel trenches were excavated with baulks until the entire feature had been exposed. After excavation it became apparent that the clay compaction varied in thickness around 5 cm, and covered an area of some 4x5 m. In places it had eroded away to expose the sterile red substrate. Four post-holes were present along the periphery of the compaction, and along the north-west edge, 25cm below the surface, an accumulation of pottery, bone, and broken, polished and utilized river-cobbles was exposed. This accumulation extended well into the grey-soil upper layer, and bone sampled from here was submitted for C-14 dating.

Fragments of friable daga (compacted construction clay), none showing thatch or sapling impression, were scattered along the periphery and within the grey-soil upper layer. The powdery nature of the upper layer suggested ash, and that the original structure had been fired. However, the associated unburnt bone in 3c, and the observable lack of charcoal, did not indicate high-temperature burning (cf.Friede and Steele 1980). Preliminary results on soil samples submitted for analysis indicate cattle dung in association with the clay compaction (T.Huffman: pers.comm.1990; Huffman 1990b; Robinson and Huffman, in prep). The available evidence suggests that the grey-powder upper layer may be derived from dung and that the feature was a dung-smeared floor with an associated perimeter of upright poles.

Test Trench Three

Test Pit Three was originally sunk approximately 150 m to the north-west of the main concentration of deposits at Mamba, to investigate a second light grey, loose-matrix deposit of some 30 metres in diameter. A 1x10 m trench (Test Trench 3) was later excavated through the deposit from the test pit, to its base, 20 - 25 cm below the current surface. It was found it to be of the same nature as the deposit in Test Trench 1 and 2. Bulk samples submitted for analysis suggest that these deposits are dung rather than ash, and the remains of old cattle-byres. This was ascertained by the phytolith content and the frequency of phytolith fragmentation observed within the analysed samples. The low frequency of fragmentation of phytoliths in the Mamba samples most likely reflects the dung of cattle, rather than ovicaprines. Phytolith fragmentation in small-stock dung deposits is characteristically higher as a result of the finer feeding habits of these animals. Further, the samples contained a high frequency of grass hairtips, elongated forms, and variations of dumbbells, characteristic of the panacoid tribe of grasses (Huffman: pers. comm. 1990; Huffman 1990b; Robinson and Huffman, in prep). Apart from the dung deposit at Ndondondwane 82/3 (Loubser 1984) this is the only other documented occurrence of first millennium cattle-byres in the Thukela Basin.

Whilst excavating Test Trench Three a raised mound of furnace debris, roughly six metres in diameter and standing approximately

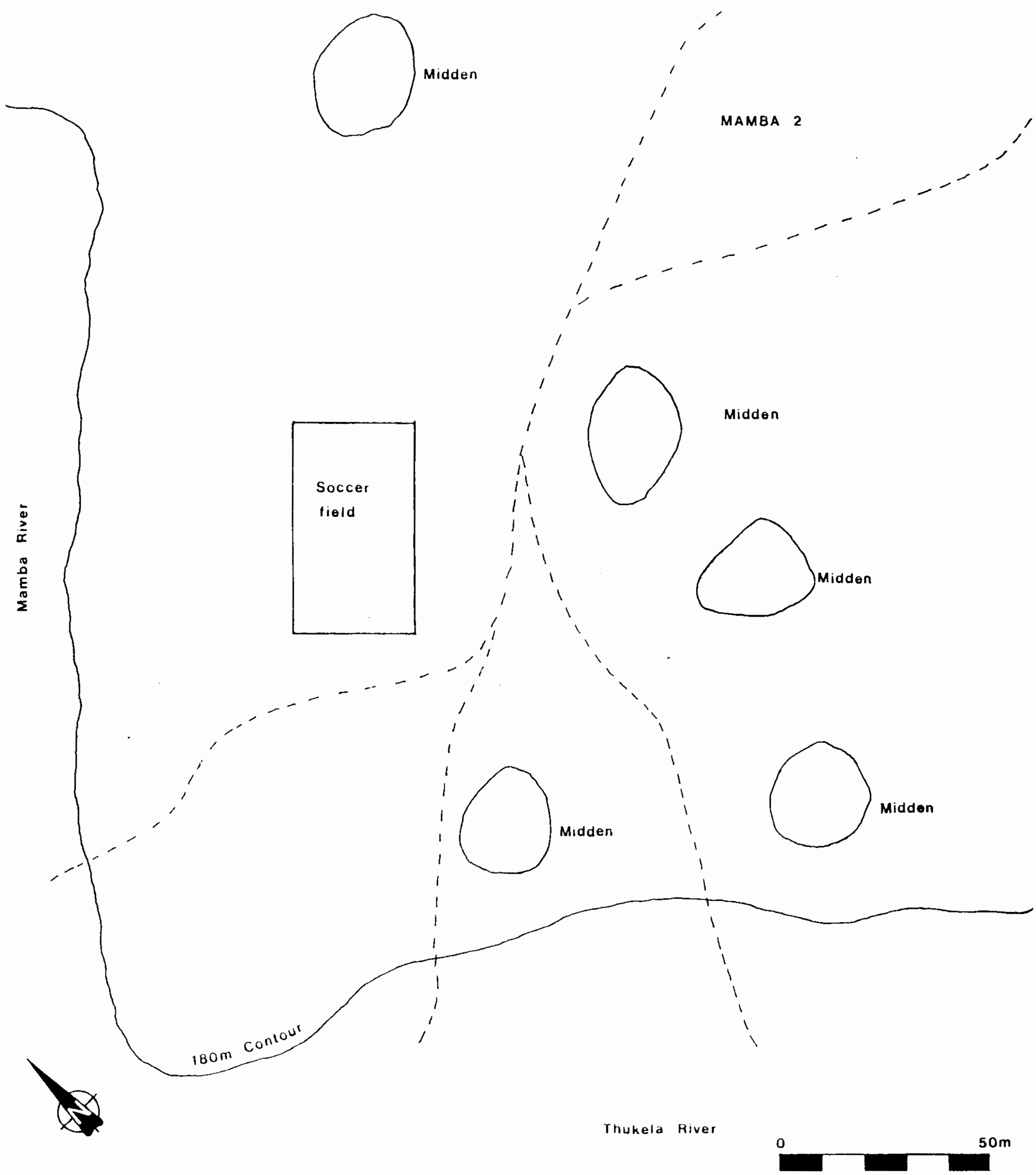

Fig.12 Plan diagram of Mamba 86/7.

half a metre above the current surface, was located some 20 m south of the periphery of the dung deposit. Time did not permit for the excavation of this feature, or the obtaining of suitable samples for dating. However, the greater accumulation of furnace debris than at OV I and II suggests a more extensive period of smelting at this locale. Pottery sampled both from amongst the furnace debris, and from within the dung deposit, was comparable to that found in A II and A VII. This suggested contemporaneity of these features to those on the rest of the site.

MAMBA 86/7

On the south bank of the Mamba tributary, below its confluence with the Thukela, a colluvial spur extends downslope from a hill, known locally as uPhamba. Directly west, on the opposite bank of the Thukela, lie the hills iLizembe and Insimbine (Fig.2). Intrusive titaniferous magnetite seams within these hills have been truncated by the course of the Thukela and large quantities of ore lie scattered on the talus slopes. Slag and ore samples submitted for analysis from the sites, and the ore-body respectively, exhibited comparable titanium content, confirming the local origin and source of iron ore for the smelting activities conducted at these Mamba sites (H.M.Friede: pers.comm. to T.Maggs 1985).

On the colluvial spur leading down to the confluence of the two rivers five middens were located during reconnaissance (Fig.12).

These middens, 20-25 m in diameter, stand roughly a metre above the current surface and comprise cultural debris including slag, pottery, bone and broken, elliptically grooved grindstone fragments. A collection of surface material was made during the initial survey, but during later analysis it was clear that the ceramic sample differed from that at Mamba 83/4. The site was subsequently revisited in 1987 and a test pit, 80 cm deep to sterile base, was sunk on the largest midden in an attempt to obtain more diagnostic material.

An assessment of 30 rim sherds, two reconstructed vessels, and 10 bowl fragments (Appendix 1) indicated the material to be comparable to that from the 7th Century AD Msuluzi type-site (Maggs 1980c) and the 6th Century AD occupation at Wosi (see Wosi 84/5: Appendix 1). On the basis of these correlations it was assumed that these deposits dated to an earlier, probably 6th to early 7th Century occupation.

Scatters of flow-slag and ore-fragments, tuyere pieces and broken furnace blocks on and around all of the located middens indicated the presence of iron smelting activities at the site. However, the absence of large scale furnace-debris dumps suggested that these were not of the same magnitude as those observed at Mamba 83/4. The implications of this rich local ore body for the resident farming communities at both sites is discussed later.

THE FINDS

Pottery

To facilitate the comparison of other EIA ceramic assemblages from the region with those described here and below, the system of analysis developed and refined by Maggs (Maggs and Michael 1976; Maggs 1980c,1984b; Maggs and Ward 1984) was employed. Analysis of the Mamba 83/4 assemblage was based upon 19 reconstructed pots and 18 bowls, all vessels being derived from deposits that date from the mid 7th to the late 8th Century. This analysis is detailed in Appendix 1.

Miscellaneous Finds

Two ceramic discs, roughly 8 cm in diameter were excavated from the midden debris in A II. These were body-sherds that had been ground to a near circular shape (Fig.13). Maggs (1980c) has reported similar discs from the Msuluzi site but provides no interpretation as to their possible function. Recently Morais and Silva (n.d.) have documented contemporary pottery manufacturing techniques from Mozambique. They describe the use of comparable clay discs as "wheels" in the coil method of pottery manufacture. It is possible that these discs may have been destined for similar use at Mamba 83/4. However, the absence of any noticeable wear on their rotational bases suggests that even if this was their possible function, the discs were never put to use. Their interpretation remains thus speculative. A single fragment of sculptured ceramic mask (cf.Loubser 1984; Maggs 1984b) came from the same deposit and is discussed further in relation to similar finds at Wosi 84/5 in the following Chapter.

Four baked pottery beads, roughly one centimeter in diameter and one to one and a half centimeters in length, each with a hole through its length, were sieved from the matrix of A II. The holes suggest that the beads were strung and they may quite possibly have served as body adornment (Fig.13).

Forty seven shell disc-beads were sieved from A II and A VII. These all appeared to be derived from terrestrial Acatina spp. although the total absence of OES beads is not confirmed. Two ground Cypraea shells from Mamba 83/4 (A II), and a single specimen from Mamba 86/7, were the only marine shells recovered that also appeared to have served as body adornment. The presence of these, and other marine species, would appear to indicate coastal contacts of some nature, the sea being only some 60 km as the crow flies downstream from the Mamba confluence (Voigt and Peters 1991). The significance of this is returned to in later discussion.

Six LSA hornfels flakes and two broken bone points were sieved from within the smelt-debris at OV I and three bone link-shafts were obtained during the excavation of the midden-matrix of A II (Fig.13). This close association of typical LSA material with the EIA material would indicate LSA San interaction with the communities at Mamba (cf.Maggs 1980c,1984a,1989; Mazel 1989a,1989b). The postulated nature of this interaction, and its implications for the early mixed-farming communities resident in the lower Thukela Basin, is discussed later.

IRON PRODUCTION

Ten of the visibly largest pieces of furnace fragment excavated from OV I (average 1880cc) were measured for thickness. These varied according to the apparent location of the fragments in the furnace structure, the thickest pieces being presumed to have derived from the lower parts of the furnace where they would have provided a supportive base for the upper structure. The fragments all exhibited a shallow curved shape and five of the samples retained finger impressions from when the furnace had been shaped. The thickest fragment showed no evidence of vitrification and thus the least exposure to optimal heating. All other fragments showed signs of excessive heating on their concave surfaces in the form of either marked oxidation or actual vitrification of the clay. It is probable that this sample formed part of the thickened lower base of a furnace, below the level of the tuyere ports. As Prendergast (1983) has shown, the greatest heat is draft-generated where the tuyere ends lie within a furnace. It would appear thus that the greatest heat was generated in the middle parts of the furnace, and not near the bottom, as the thinner, probably middle and upper-furnace fragments consistently exhibited the greatest heat exposure. Even in the absence of any evidence of tuyere ports on these excavated furnace fragments, it is presumed that these would have been present (cf.Loubser 1984).

Attempts to reconstruct a furnace from the fragments excavated at OV I were unsuccessful. The furnace debris appeared to be derived from more than one dumping episode, and the residual material was too fragmented and widely scattered to permit any feasible reconstruction. The mean measurement of the furnace fragments (69mm) did however correspond closely to the measured thickness of 70 mm for the excavated furnace base in A III. This, together with the curved shape of the fragments, argues for an open-topped structure that may have stood roughly 1 m high. This assumption is substantiated by Loubser's (1984) attempts to reconstruct the size and shape of the contemporaneous EIA furnaces at Ndondondwane 82/3, although his attempts were by no means conclusive. Loubser (1984:25) reports as follows for Ndondondwane:

" a. According to the scatters of furnace daga, there were at least three furnaces operating in different parts of the site, either concurrently or sequentially.

b. The brick-like blocks from the furnace debris heaps have a lump texture with smooth interior surfaces striated by deep finger impressions. A crust of glassy slag is attached to the interior side of most blocks.

The slag crust is thickest nearest to the tuyere entry ports.

c. We reconstructed the furnace after numbering the in situ daga blocks. Two clusters of moulded tuyere entry port blocks came from opposite sides of the furnace rubble heap. Blocks from within each cluster joined firmly, but did not fit blocks from the opposite cluster. This indicates the presence of two entry ports. Each entry port had an exterior diameter of 9 cm, widening to an internal diameter of 10 cm. Two blocks in the vicinity of one of the tuyere ports had interior slag lining their convex sides. This indicates that the entry port area had a spout-like shape.

d. Knowing that all of the 250 000 cc of excavated furnace daga in the mound area came from the arc of individual blocks ... and that the furnace had a maximum diameter of one metre ... and hence a circumference of roughly 3 m, the furnace wall height would be slightly over a metre above ground level: (wall height = 250 000 cc / 70 mm x 3 m)."

Thirty tuyere pieces, complete in cross section and greater than 50 mm in length, were selected for analysis. Two thirds of the sample are distal-end pieces, the remainder intermediate sections. It appears that in length, the tuyeres were proximally flared (cf.Maggs 1980c:132-133) and tapered towards their distal ends with a constricting bore. None of the pieces could be fitted

Table 1.

Tuyeres: bore and wall thickness in mm.

<u>bore</u>	smallest	mean	largest	std. deviation	n
Msuluzi	26	47	60	9	23
Ndondondwane	-	36	-	-	4
Mamba	20	30	40	3,5	30
Mabhija	28	37	50	6	31
<u>thickness</u>					
Msuluzi	9	14	19	3	23
Ndondondwane	-	18	-	-	4
Mamba	17	20	38	4,1	30
Mabhija	19	30	38	4	31

together to ascertain the actual lengths of tuyeres, as no complete, matching proximal ends were uncovered. Comparing proximal fragments with the lengths of sections and distal end pieces, it was clear from the degree of heat exposure that much of the length of the tuyeres lay in, or close to, the actual furnace charcoal-bed (cf.Prendegast 1983:32). Tuyeres were seemingly discarded after each smelt as all the distal ends exhibited marked vitrification and heat distortion, and in some cases slag run-back was evident within the distal bore of the tuyeres. Tuyere sections exhibited oxidation to a red-brown colour in the clay, from the high temperatures they were exposed to, and also the reduced atmosphere induced within the tuyeres during the smelting process.

Proximal fragments were noticeably buff in colour and exhibited the least degree of heat exposure. The presence of striations, irregularities, and leaf-node impressions along the bore of the tuyere pieces suggested they were individually moulded around a scraped stick core. It is assumed that these were then left to dry before being fired, in all likelihood in the same manner as clay pots were dried and fired. This assumption is based on the nature of the proximal fragments analysed which, on inspection, appear very similar to the excavated pottery in texture and degree of firing. Tuyere pieces excavated at Msuluzi Confluence were apparently also fired before use (Maggs 1980c,1982b).

Table 2.

*Thermal characteristics of slags from Natal EIA sites
(Temperatures in deg.Celsius)

Site	start of melting	fully molten (flow)
Mamba 83/4	1370	1515
Wosi 84/5	1342	1525
Msuluzi 77/30	1350	1490
Magogo 80/1 (Muden)	1360	1483

* determinations by Dr.A. Hejja, Dept. of Metallurgy, University of the Witwatersrand.

Comparing the Mamba tuyere fragments with those excavated at Ndondondwane 82/3 (Loubser 1984), mean bore and wall thickness measurements compare well. These are tabled together and compared with samples from Msuluzi Confluence (Maggs 1980c) and the LIA site of Mabhija (Maggs 1982b). See Table 1.

Although the Ndondondwane sample is small and may appear inconclusive, the EIA tuyere-fragment samples are appreciably thinner than the LIA Mabhija sample. This contrast lends support to Maggs'(1982b) observation that different smelting traditions appear to be prevail during the Early and Late Iron Ages respectively.

Slag and Ore Analysis

As discussed above, ore was freely available from the local titaniferous magnetite deposits only 1-2 km south of the site. Iron ore samples from this source, and out of the excavations themselves, together with excavated slags, were submitted for analysis. The titanium content of the Mamba slag (7,19% TiO_2) confirms its local origin, and the slag samples fit well within the range of other Iron Age slags analysed (See Table 2). The values fit well into the range found for 30 Iron Age slags sampled (flow 1420 deg.C - 1520 deg.C), but are not indicative of the top temperatures obtained in the smelting procedures. (H.M. Friede: pers.comm.to T.Maggs 1984).

The thermal characteristics of the Mamba slag samples (Table 2) are slightly lower than those obtained for analysed slags from the eastern Transvaal Iron Age sites at Phalaborwa (van der Merwe and Killick 1979), and suggests the addition of carbonate rich fluxes (D.Miller: pers.comm.1990). Pedogenic calcrete nodules were excavated from within the furnace debris in OV 1, and their source in the local environment has been described. These, and the associated bone fragments amongst the furnace debris are in all likelihood the fluxes that were employed during the smelting process (cf.Voigt and Peters 1991).

Preliminary results of analyses on Iron Age slags have suggested that a single basic iron-smelting technology during the whole of the southern African Iron Age may have been in existence (Friede et.al. 1982). However, as stated above, Maggs (1984b) has on technological grounds argued that differing smelting traditions appear to prevail between the respective periods. There may well have been, however, a basic technology, with refinement in technique through time, and with the responses of individual groups of smelters to differing qualities of locally available ores.

DATING

In order to facilitate comparisons with the series of dates published for other contemporaneous EIA sites in the region (Maggs 1980c,1984b; Maggs and Ward 1984), and in the light of the current revision of the calibration curve for the Southern Hemisphere (A.Fuhls: pers.comm. 1990), the following dates obtained for Mamba 83/4, have not been calibrated:

OV I : Pta-4164: 1170 +- 60 BP: ad 780 (bone collagen).

A II : Pta-4114: 1300 +- 50 BP: ad 650 (bone collagen).

Pta-4093: 1390 +- 50 BP: ad 560 (charcoal).

TT 1 : Pta-4137: 1300 +- 50 BP: ad 650 (bone collagen).

A VII: Pta-4132: 1290 +- 50 BP: ad 660 (bone collagen).

The series of dates indicate that the site was occupied between the mid 7th and late 8th Century (statistical mean 1290 BP: ad 660). Although the ad 560 charcoal date (Pta-4093:1390 +-50 BP) from A II is statistically correct, it may have been derived from heart-wood and thus may be pre-dating the actual occupation of the site (A.Fuhls: pers.comm. 1990).

DISCUSSION

The noticeable absence of stratigraphy over the entire site argues for a single period of occupation. This is further borne out by the uniformity of the analysed pottery sample, where no stylistic shift is discernable. The pottery has been shown to be closely affiliated to that from Ndondondwane (Loubser 1984; Maggs 1984b), dated at circa. ad 760; and the dates obtained for Mamba

83/4 are thus a further corroboration of the Ndondondwane variant of the Msuluzi phase (sensu.Maggs 1984b) prevailing in the Thukela Basin during the course of the 8th Century.

An informal analysis of the small collection of pottery from Mamba 86/7 indicated a close affinity to the formally analysed sample at Wosi 84/5 (See Appendix 1). This would seem to indicate a separate, probably 6th to early 7th Century occupation on the opposite bank of the Mamba River; an occupation that seems to have been at least partly motivated by the rich and easily accessible magnetite deposits located close by. The location of settlements at Mamba 86/7 and 83/4 respectively was further certainly influenced by local environmental factors suitably supportive of a mixed-farming and iron-producing economy. The sites are typical of the period ad 500-800; being fairly densely occupied settlements some 8-10 ha in extent (Maggs 1980c), located here on, or close to, agriculturally productive Oakleaf-type colluvial soils (Maphumulo 1986), within closed-canopy Spirostachys Valley Woodland.

Analysis of the faunal samples from Mamba 83/4 has shown a preponderance of cattle (approx. 67% of sample) over ovicaprines and, in this category, sheep are present in greater proportions to goats. A range of indigenous fauna is also present (Voigt and Peters 1991). The sweetveld understory of the Spirostachys Valley Woodland and adjacent Sclerocarya - Acacia Tree Veld would have provided more than adequate grazing and browse for cattle and small-stock. Thus agricultural subsistence was arguably the prime means of production, supported by hunting and in all probability gathering within the local environment. The associated tree species of the Spirostachys Valley Woodland would have further provided an abundant supply of hard-woods for charcoal production, a prerequisite for the documented iron-smelting activities at the two sites.

The increased intensity of iron-smelting activities observed at Mamba 83/4, as opposed to those apparent at Mamba 86/7, are indicative of a shift in economic practice. During the earlier occupation at Mamba it would appear that iron production was limited in scale, and probably served little more than the domestic requirements of the resident community. However, during the later occupation, the scale of production is seen to increase, suggesting that a surplus of iron was then being produced. The implications of this are returned to in later discussion.

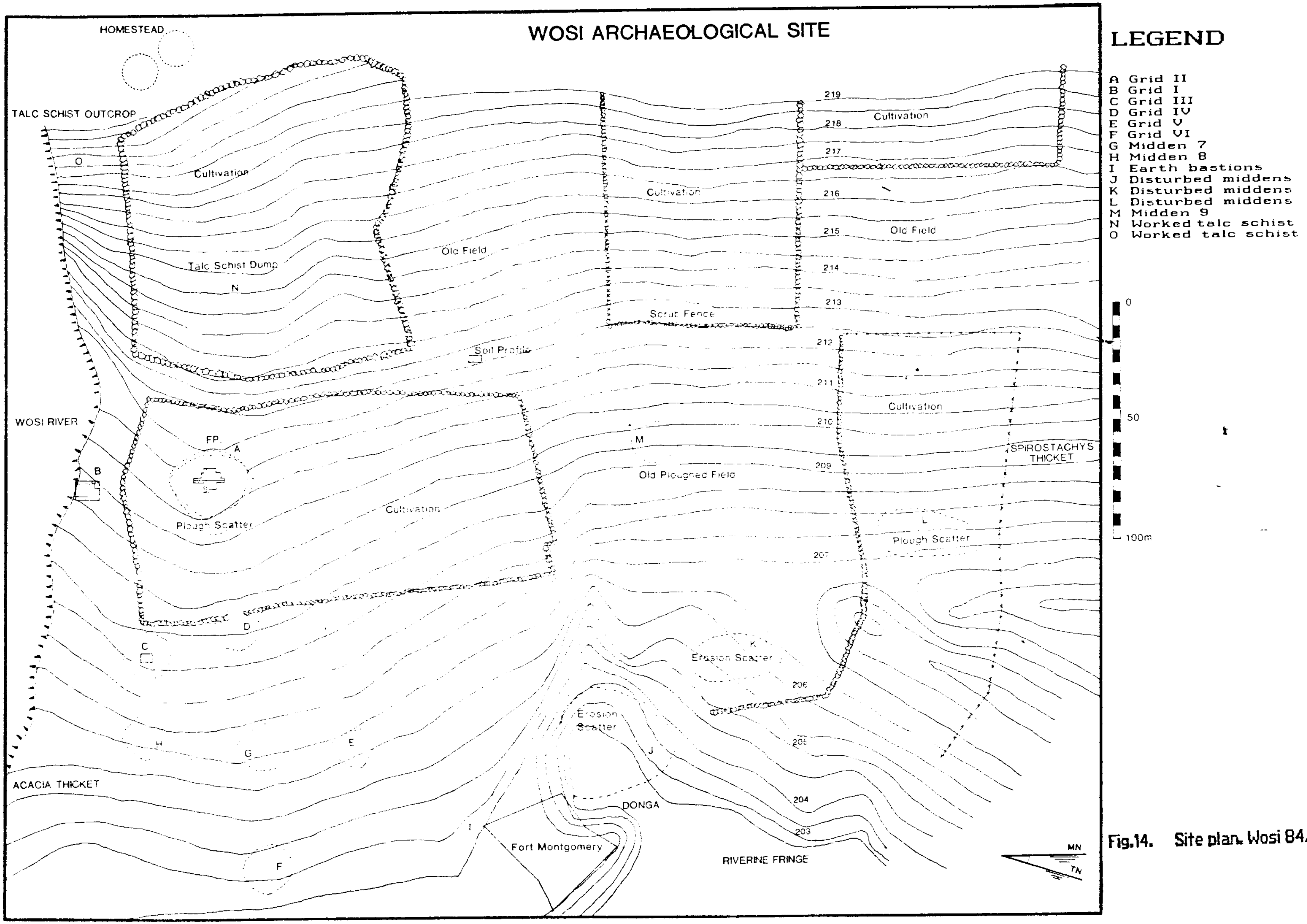

Fig.14. Site plan. Wosi 84/5.

CHAPTER 6

WOSI EXCAVATIONS

Wosi 84/5 (Fig.2. No.18) was rediscovered during field surveys undertaken in 1983 (Loubser 1984). The site extends over some 10 ha and is largely covered by dense *Croton menyhartii* scrub and clumps of *Euphorbia grandicornis*. Half of the site (5 ha) is, or has been, under cultivation and consequently many features in these cleared areas have been disturbed. The most outstanding features on the site are a series of middens which appear to be randomly scattered over the area (Fig.14).

Initially 22 middens were surveyed but at the final count only 11 could be described as relatively intact. The remainder were too disturbed or plough scattered to allow their size and extent to be accurately determined and no indication of the settlement lay out could be determined. The middens are accumulations of cultural material within an ash-soil matrix and stand up to 1 m above the current ground level. They are conspicuous by their associated surface scatters of pot sherds, broken grindstones, slag, utilised talc-schist pieces, and other material-culture debris. The entire site was surveyed and the individual middens mapped (Fig.14). Each excavated midden was covered by a square metre grid orientated N/S on the magnetic declination of the theodolite and the following grid-convention adopted:

G: Grid; Q: Quadrant; T: Trench; Square: a; Layer: 1

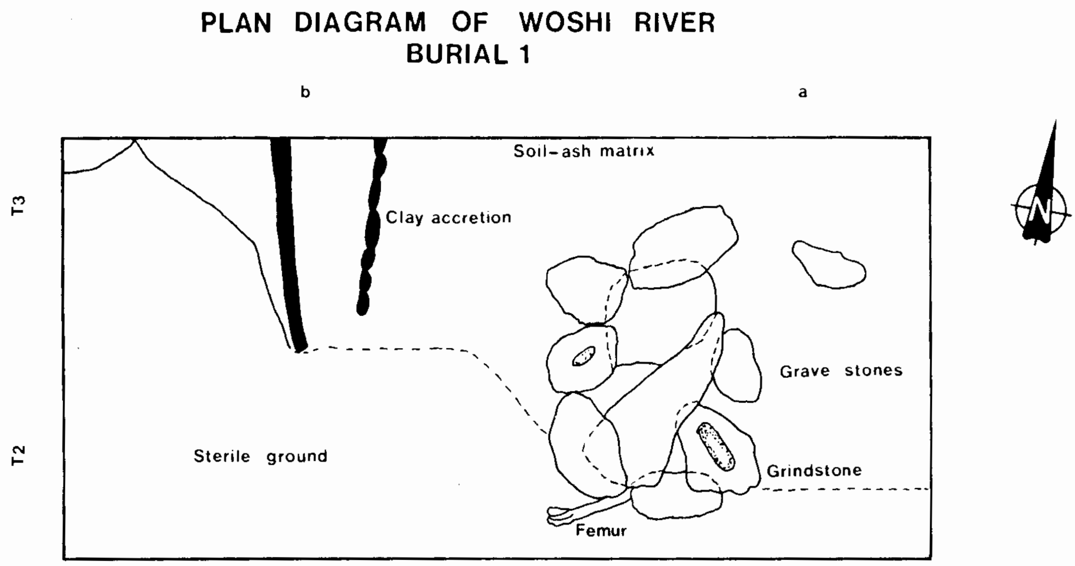

Fig.15. Plan diagram of burial 1.

Six middens were excavated (designated Grid I - VI) in the time available and it was felt that a representative sample of material was obtained.

Grid I

Excavations on the site were initiated at Grid I, when a human burial was observed to be eroding out of a pathway leading up out of the Wosi River. A slumped pile of broken grindstones, bored talc-schist cobbles and other utilised stone manuports marked the surface of the original grave, and this was given the designation Burial One. The surface of the grave appeared to be contained within the lower six square metres (T2 and T3, a, b and c) of a slumped midden deposit. However, after removal of the surface scatter, it became apparent that the burial was confined to only two grid squares in T2 (a and b). (Fig.15). Excavations were initiated where a limb long-bone was observed protruding from the side of the slumped grave-fill. Further excavation exposed other limb-bone fragments, and in association with these, a number of randomly scattered parietal skull fragments, ribs and vertebrae. A femur protruding out from below the stone-packing was associated with these other fragmentary skeletal parts, but erosion had removed the major portion of the skeleton and no complete skull was present. Although the grave had slipped downslope, it appeared that it had been dug into the midden deposit subsequent to its accumulation, and the rock filling packed over the burial. Due to the slumped and badly disturbed

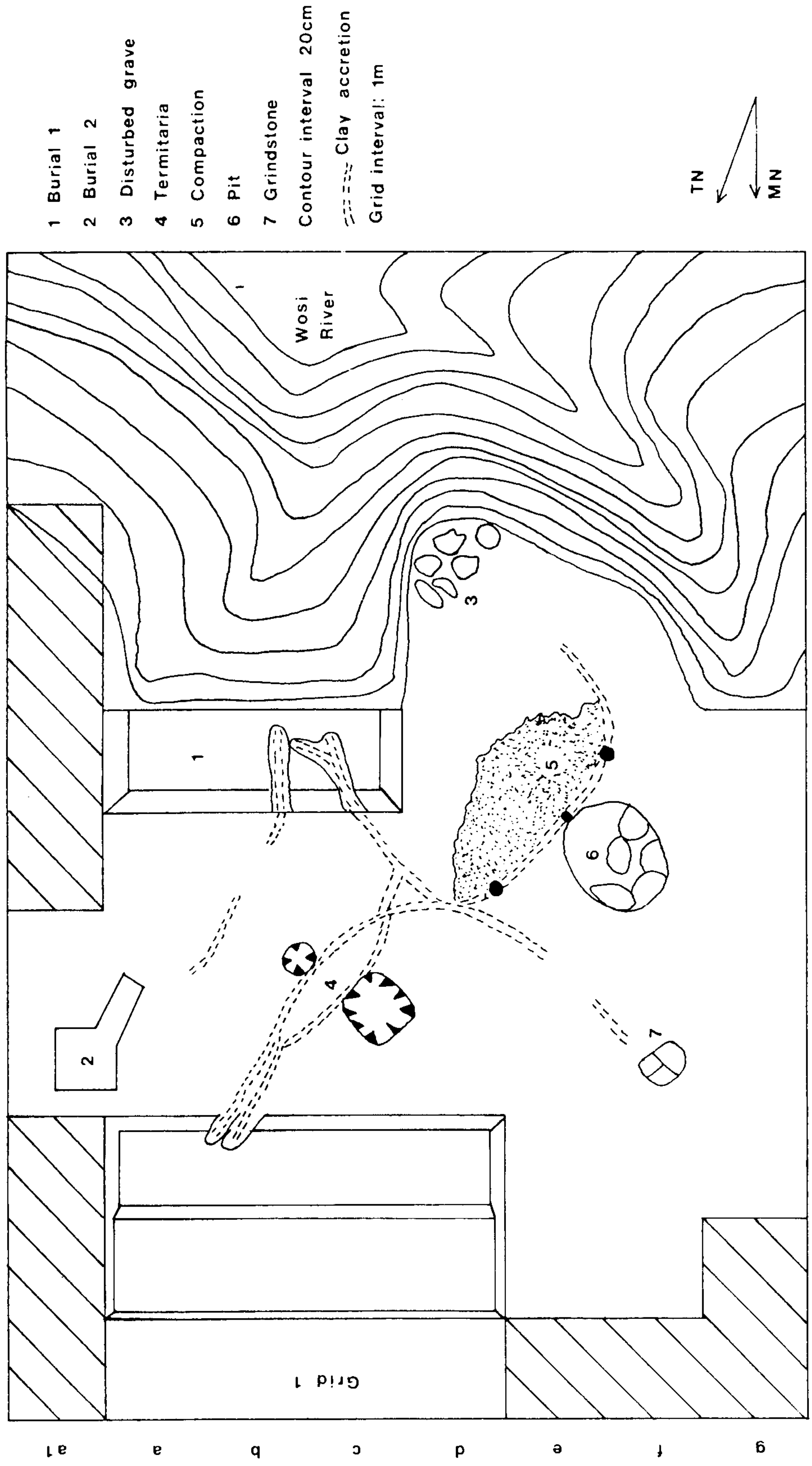

Fig.16. Plan diagram of Grid 1 excavations.

nature of the grave, the position of the body at the time of burial could not be ascertained.

Immediately adjacent to the lowest stone packing associated with the burial, and at the same level, were two curvilinear parallel sections of clay accretions (Fig.15). These extended backwards into the ashy-soil matrix of the midden and we consequently decided to extend the grid to determine more fully the nature of the deposit and any associated features. Grid I was subsequently extended to encompass an area of 72 sq.m of which 50 sq.m were ultimately excavated (Fig.16).

Trench 4 was first excavated in 10 cm spits to ascertain if any stratigraphy was apparent. The midden was overlain to a maximum of 20 cm by high humic content, dark red-brown Oakleaf soil. Below this was a grey/brown soil, the ashy-soil matrix of the midden. At maximum the midden was 45 cm thick and extended down onto a sterile red sub-soil (Fig.17a). It was visibly apparent that Trench 4 was the point of inflexion of the slump of the midden (Fig.17b). It was evident from the observation of past stream courses and flood levels that, through time, the Wosi river has extended its banks laterally and, in the process, undercut the midden deposit. This had resulted in slumping, with a consequent downslope movement and loss of a major portion of the midden content. The upper layer (1) comprised scatters of miscellaneous pot sherds, weathered bone fragments and utilised

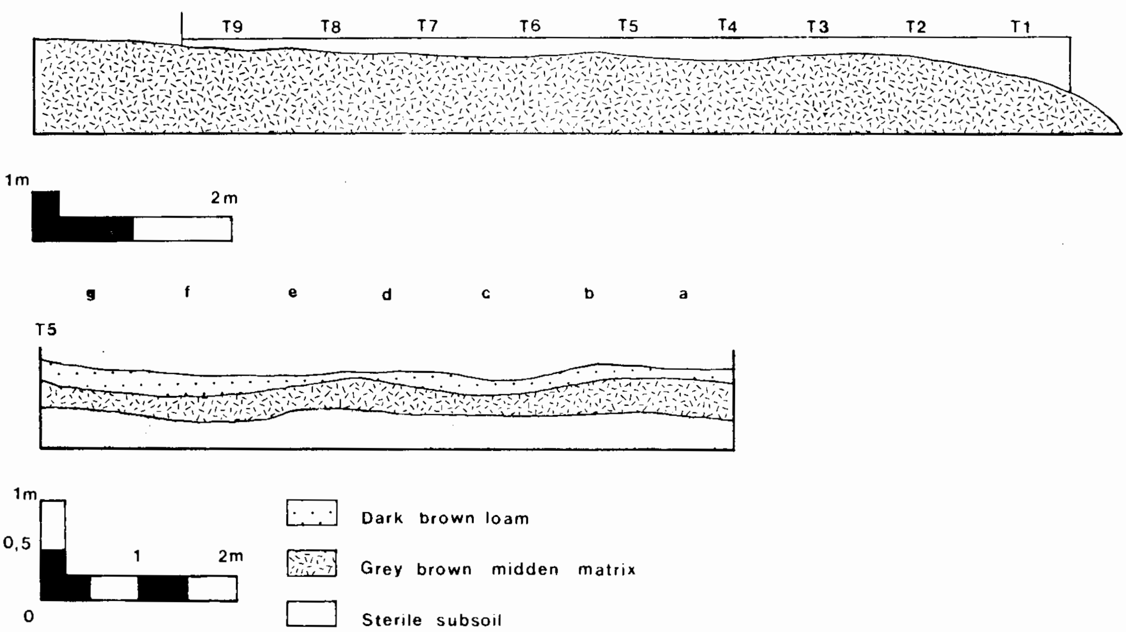

Fig.17. Cross section and profile of Grid 1.

river cobbles. The lower layer (2), comprising the actual matrix of the midden, contained the richest deposits and the best preserved pottery and faunal remains (Fig.18). Marked biotic activity was observed extending down well into the culturally sterile base.

The upper layer of the midden was removed over 50 sq. m and sieved for small finds. The lower layer was then excavated to sample the contents of the midden. Although the actual periphery was not ascertained, the drop-off in midden content on all edges of the grid indicated that the excavated area comprised the major portion of the residual midden. Removing the actual matrix exposed a number of features at the base of the midden (Fig.16). The clay accretions exposed in Trench 3 (b and c), when excavating Burial One, were located and tracked to their extremities. Their parallel and curvilinear track was strongly suggestive of some man-made feature yet initially they appeared not to conform to any particular pattern. However, the exposing of a pit and a larger area of raised and compacted clay (Features 5 and 6: Fig.16) clarified the problem. The pit, 100 cm in diameter and 125 cm deep (Fig.19) was associated with a section of parallel clay accretion that contained approximately 1,5 sq.m of hard clay compaction. The compaction was more granular than the surrounding matrix and noticeably harder. Three post holes were exposed along its periphery. It is suggested that these accretions are indeed hut floor peripheries emanating from

Fig.18. Midden matrix : Grid 1.

consecutive building episodes. A charcoal sample taken from the compaction at the 30 cm level was submitted for C-14 dating with the following result:

Pta.4094: 1290 +- 50 :ad 660.

The contents of the pit indicated purposeful filling as the major constituents were broken grindstones, pottery and culturally associated stone manuports. At a time when the pit fell into disuse it was apparently filled. Subsequent to this the locale became a dump site, with an inevitable build up of the midden residues.

Whilst excavating the midden matrix in Trench 6 we exposed a badly crushed and compacted human cranium and mandible. Further excavation revealed a compacted burial situated at the base of the midden matrix (Burial 2, Fig.16). The skeleton was disarticulated and tightly compacted within the matrix, and even after full exposure appeared only as an amorphous mass of friable bone fragments. A fragmented but diagnostic pot and a large bowl fragment were positioned over the burial, which extended 10cm into the underlying sterile base. All attempts to excavate the grave as a unit failed. Poor preservation resulted in the bones being too friable to be removed from the matrix in a whole state, but all the recovered fragments were submitted for analysis. It has been ascertained that the individual was a juvenile of some three years of age at the time of death (Morris 1990). It did

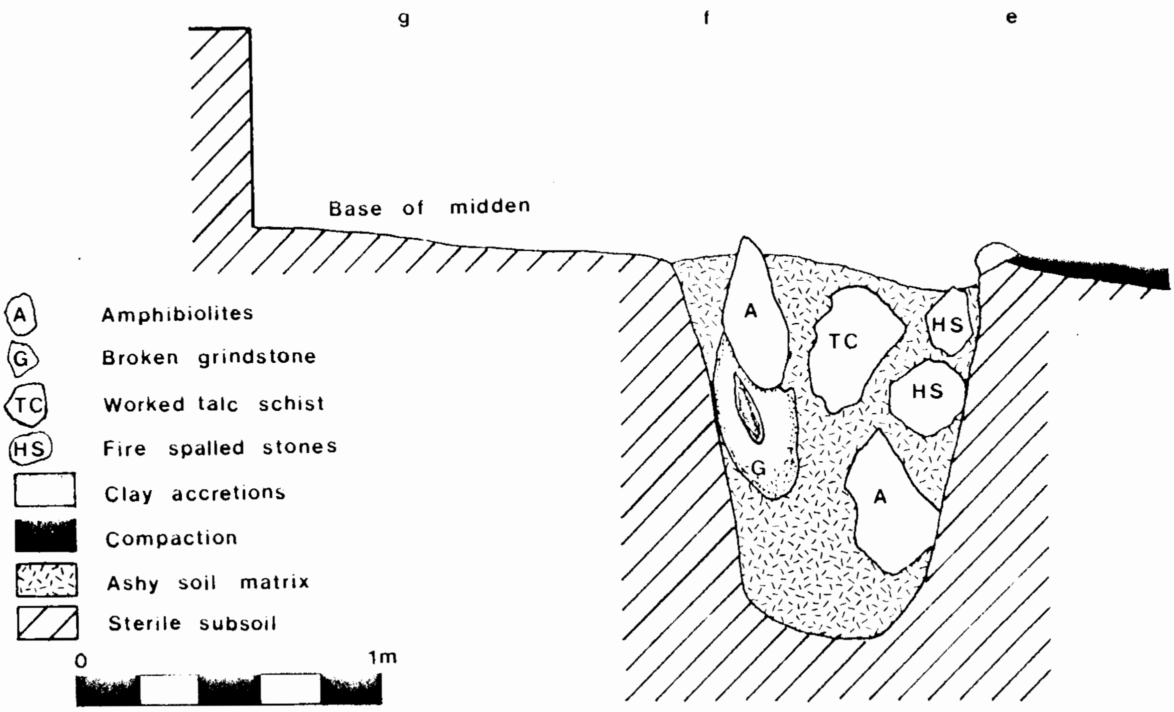

Fig.19. Section. Pit 1. Grid 1.

appear however that the individual had been buried within the accumulated midden deposit, rather than prior to its build up.

Grid II

This is the most extensive and the largest of the 11 intact middens at Wosi 84/5. It stands approximately two metres above the current base level and is roughly 675 sq.m in extent. This necessitated dividing the grid into quadrants to facilitate lateral expansion of the excavations (Figs.20&21). Two tests squares (T1 f ;T2 e) were opened to determine the nature of the deposit. Layer 1 was a dense brown soil matrix containing highly fragmented pottery sherds, broken stone manuports, utilised micaceous talc-schists pieces and broken bone. Layer 2 was a grey-brown ash-soil granular matrix containing well preserved faunal remains, more complete pottery and fewer stone artifacts. The best preserved bone, stone and shell artifacts recovered from the test squares were sieved from layer 2.

Trench 1 through Q1 and Q4 was then extended and it became evident that the stratigraphy was consistent over the whole midden. As further deposits appeared to exist at the base of layer 2, further test squares were sunk and the original base level determined at a depth of 114 cm. Two further layers (3 and 4) were discerned. Layer 3 was a fine, light grey-brown ashy soil with a higher incidence of pottery, worked schist and utilised stone than in layer 2. Layer 4 was close to the original base

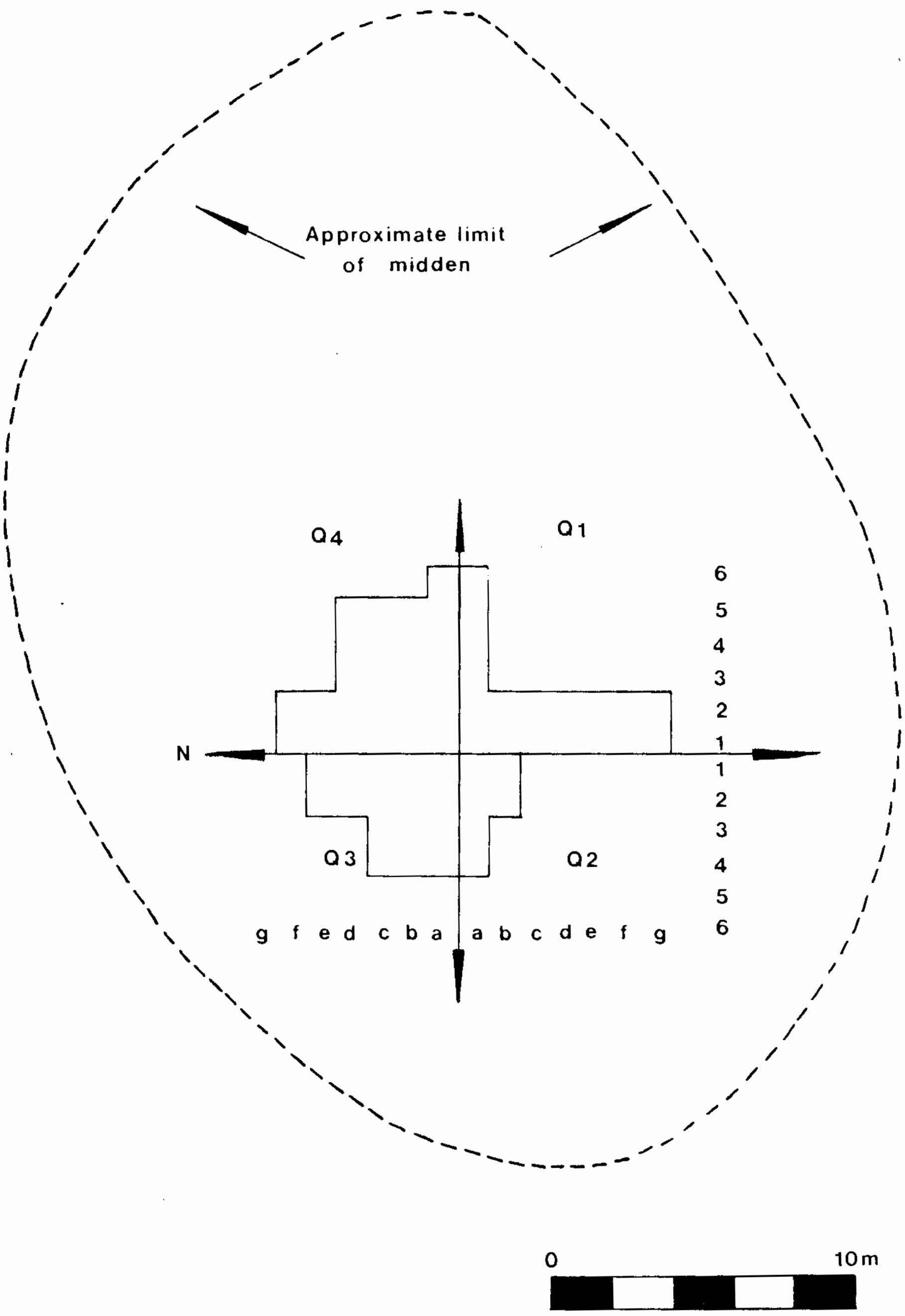

Fig.20. Plan diagram. Grid II.

level and occurred as a darker brown matrix, more granular, and conspicuous by the presence of numerous ash lenses and pockets of charcoal flecks. Here the bone fragments were smaller and mostly adiagnostic, pottery sherds scarce and highly fragmented, and the layer terminated on a sterile base level of dark brown soil interspersed with calcrete nodules (Fig.22&23).

Lateral excavations were then extended over 70 sq.m to sample the contents of the midden and determine whether any features were present. Much rootlet and invertebrate activity was noticeable, the presence of termitaria and termite activity being particularly prevalent in the lower two layers. The midden appeared to have accumulated in two episodes and functioned largely as a dump site for domestic debris as no features were exposed. The initial deposits were on a natural rise on the immediate local topography, and it was evident that debris were discarded on the downslope of the rise.

The dearth of larger artifacts, the highly fragmented nature of the bone remains and the relatively greater admixture of original substrate soil, ash and charcoal pieces suggest that domestic sweepings were the main constituents of the initial accumulation in layer 4. Layer 3 contained less of the attendant granular substrate and had a higher ash content. It further consisted of a greater concentration and quantity of a variety of general cultural debris. It would appear to represent the end of an

Fig. 21. Excavations at Grid II.

occupational phase. Layer 2 is analogous to layer 4 and appears to mark the inception of a second period of occupation. The contents of this layer were clearly derived from general domestic and occupational debris and the noticeably ashy matrix has resulted in exceptionally good bone preservation. Layer 1 represents the terminal occupation associated with the midden. It is conspicuous by the massed amounts of worked and discarded lithic material at the surface, which are concentrated on the flattened upslope of the midden.

Three charcoal samples from the test pit in Grid II were submitted for dating:

Pta-4095: Q4 T1 layer 2 : 1270 +-60 B.P. (ad 680)

Pta-4100: Q4 T2 layer 3 : 1460 +-50 B.P. (ad 490)

Pta-4104: Q4 T1 layer 4 : 1430 +-60 B.P. (ad 520)

These dates, together with the date of ad 660 from the base of Grid I, suggest two periods of occupation at Wosi; an initial occupation in the early 6th Century, and a second occupation in the late 7th Century. This was made tentatively apparent on site by the pottery samples. Grid II pottery showed many affinities to pottery from the 7th century Msuluzi site (Maggs 1980c), yet the pottery sampled in Grid I was somewhat reminiscent of Ndondondwane (Loubser 1984; Maggs 1984b) and Mamba 83/4. These stylistic shifts are discussed later. The apparently anomalous date in Grid II, layer 3, can be explained by the noted biotic activity in the bottom layers. Termite and other invertebrate

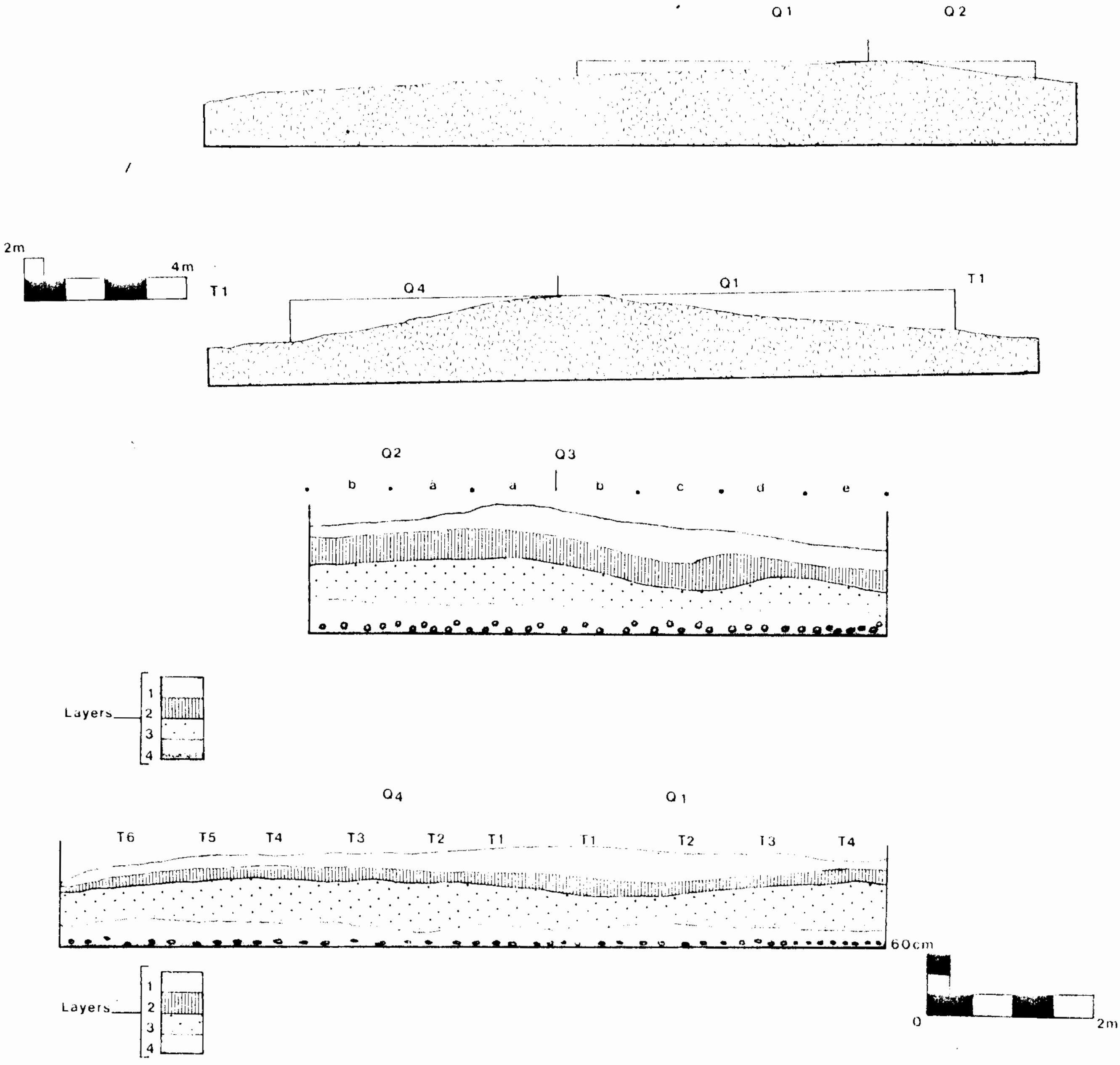

Fig.22. Cross sections and profiles of Grid II.

activity could have quite feasibly resulted in a date reversal. Statistically, taking note of the respective standard errors, it would appear that layers 3 and 4 are in fact a single accumulation, and represent the earlier occupation of the site; Grid I and Grid II, layer 1 and layer 2, representing the later and terminal occupation. For purposes of analysis layer 3 and layer 4 were combined as a single unit initially, whilst layer 1 and layer 2 were considered individually. However, once having established that a shift in pottery expression through time was apparent, Grid II was considered as a single sample in the comparative analysis of the pottery undertaken for the site as a whole (See Appendix 1).

During the lateral excavations in Q4 a whole pot, with a rock placed over the mouth, was exposed in Trench 2 (e; 2). Further excavation exposed a human femur, tibia and fibula extending out of the wall of the square in layer 2. Removing the matrix in Trench 1 and 2 (e and f, 2) revealed an entire skeleton associated with the pot (Burial 3, Fig.24). The individual had been buried within the midden matrix during the time of its accumulation as is attested by the undisturbed, in situ pot. The top of the pot was located 26 cm below the surface in layer 1 and the burial at 57 cm. The pelvic bones rested at 80 cm below the surface. The body appeared to have been placed on its side in a flexed position with the arms wrapped around the drawn up legs. The skull rested forward onto the rib-cage and the burial faced

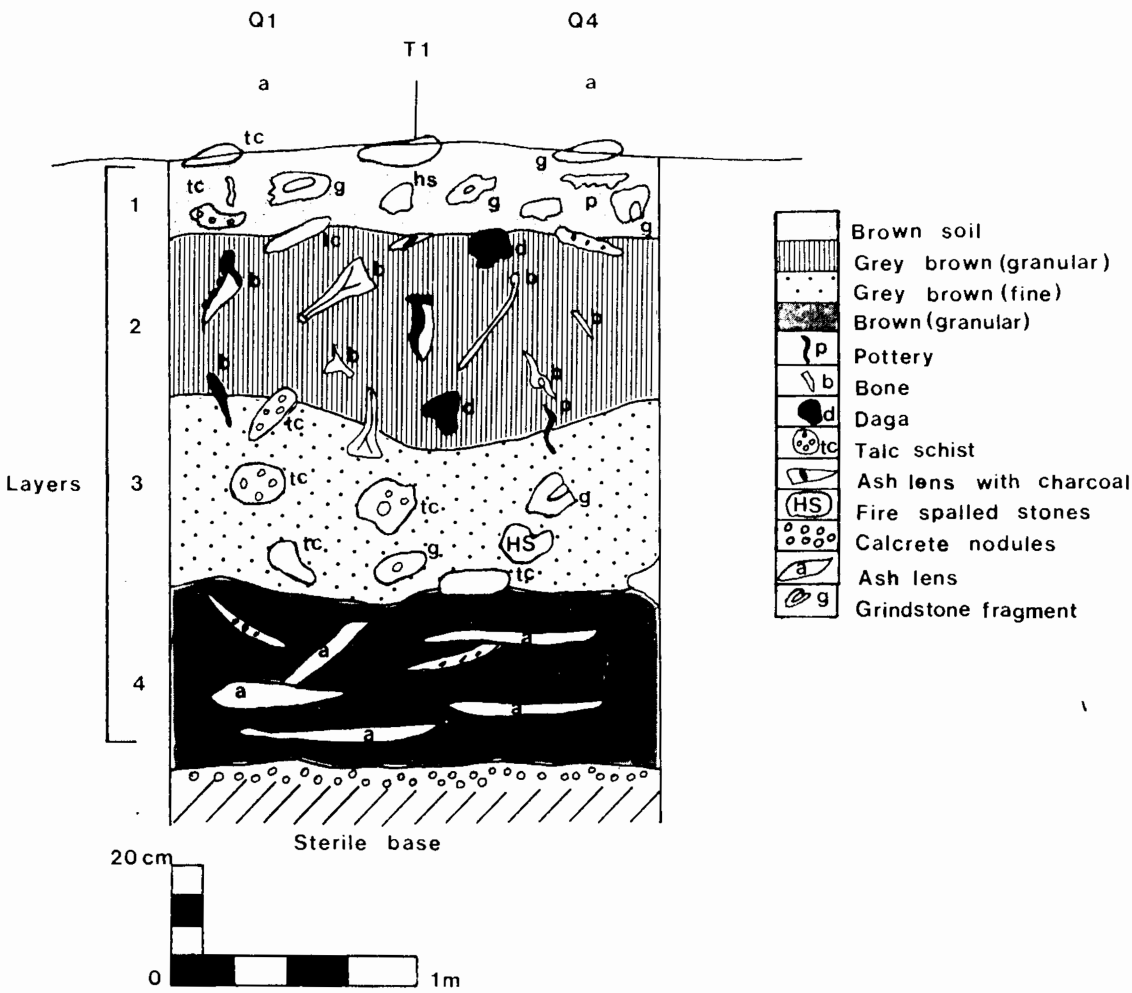

Fig.23. Section. Test pit. Grid II.

north-east. It has been determined that the individual was a juvenile of some two and a half years of age at the time of death (Morris 1990).

Grids III - VI

Four further middens were sampled in an attempt to ascertain their association and contemporanity to the respective periods of occupation at Grid I and Grid II. The stratigraphy and taphonomy of the other excavated middens was analogous to that of Grid I, and layer one and two of Grid II, and indicated that the former had apparently accumulated in a comparable manner. Grid III was sounded within a 2x3 m grid and yielded a small but diagnostically significant pottery sample (see Appendix 1). Albeit that the reconstructible vessel sample is small (n=8), the pottery shows marked affinities to that from Grid I and it would seem likely that Grid III dates to the terminal occupation of the site.

At 88 cm below the current surface what appeared to be the sterile base of the midden was reached. Whilst brushing this clean we exposed a rough circle of packed stone, comprising pieces of broken lower grindstone, heat-spalled hearth stones, and broken cobble grinders. Further excavations revealed a pit, 70 cm in diameter, sunk below this purposely placed stone accumulation. The pit matrix comprised a noticeably grey ashy soil with a high concentration of charcoal flecks. Excavation

Fig. 24. Burial 3.

through the first 15 cm yielded no other cultural remains, and it appeared that the pit had been purposely filled with hearth sweepings.

At the 19 cm level the top of a large, upright pot was exposed. Further excavations revealed this to be a broken vessel, the base fragments being entirely absent. Stylistically the vessel has a rare shape, having a marked shoulder emphasis (see Appendix 1:Fig.8), and was executed in a red-brown clay with a "biscuit-fired" appearance. These two characteristics are significant in that, stylistically and in its execution, the vessel differs from the bulk samples excavated at the site (See pottery descriptions: Appendix 1). Consistent external blackening below the shoulder would seem to indicate that the vessel had been used as a cooking pot.

Within the ashy matrix immediately below the pot a large cluster of bovid bones was recovered. Below these, the pit-fill retained its ashy nature, a number of lenses being discernible during excavation. Other domestic debris, in the form of miscellaneous pot sherds and bone fragments, were, however, more prevalent. This was further substantiation of the pit having been purposely filled during a number of separate dumping episodes.

At 95 cm below the top of the pit a second whole vessel emerged. It stood upright and its base had been purposely removed, a neat

Fig. 25. Whole pot with purposely removed base.
Pit 2 : Grid III.
Scale 1 : 3.

round aperture being present (Fig.25). This vessel was associated with an accumulation of small-bovid bones, clustered below the pot. Further excavation revealed the pit to be bag-shaped in profile, terminating at a depth of 150 cm, the fill retaining a consistent nature throughout (Fig.26).

The pottery samples derived from Grids IV - VI were closely comparable to those from Grid II. This was borne out in the course of formal analysis (Appendix 1: Table 6), and it would appear that they are most probably associated with the earlier occupation of the site.

As the surface debris on all 11 middens was noticeably of a similar nature, and the samples retrieved from Grids III - VI repetitive, excavations were terminated at this stage. The remaining middens and plough disturbed scatters were only noted and plotted (Fig.14).

THE FINDS

Pottery

As for Mamba 83/4, the pottery analysis undertaken on the Wosi assemblage follows the system originally devised by Maggs and Michael (1976). The results of this analysis are detailed in Appendix 1.

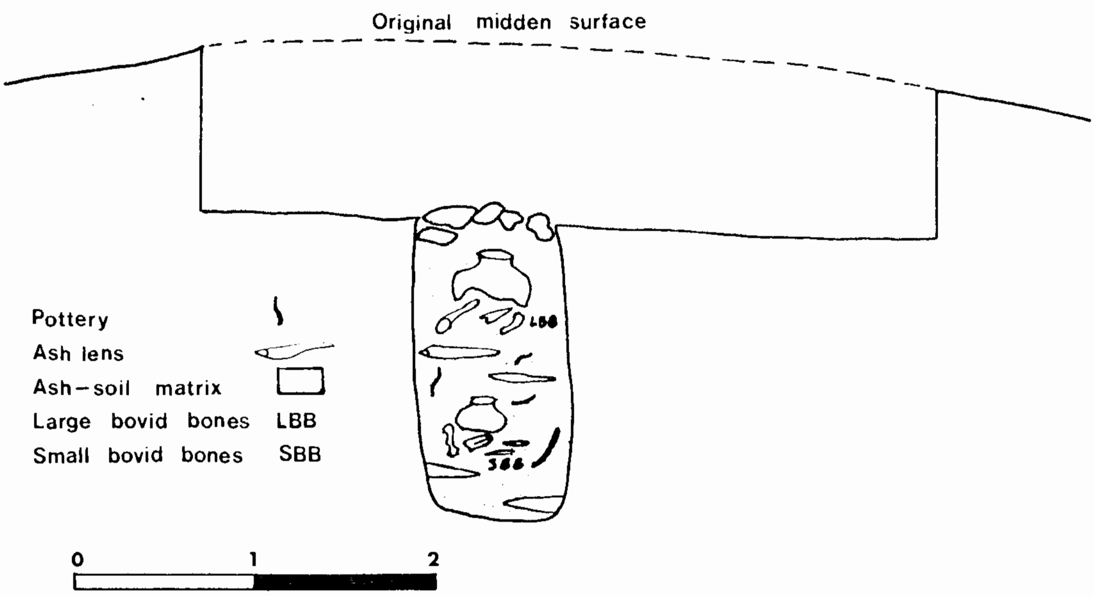

Fig.26. Section. Pit2 : Grid III .

Other Ceramic Items

In Grid II, layer 2, a number of pieces of hollow clay sculpture were uncovered (Fig.27). Although none could be fitted together, individual pieces showed marked similarity to the comparable finds at Ndondondwane (Loubser 1984; Maggs 1984b) and Mamba 83/4. These included an extending mouth-part (beak) with teeth, distended eye pieces, a scarified eye-brow and an ear-lobe. A corded circular piece appeared to be from the supporting base of the sculpture. A broken clay horn of the same order of size as the other fragments suggests that some sculptures were horned. These sculptures appear to have been therianthropic in form, and are reminiscent of the hollow head sculptures excavated at the Lydenburg head site (Maggs and Davidson 1981). Interpretations of their function in past society remain, as yet, only speculative. Solid clay sculptures included a number of fragmented and roughly executed human-like figures, and a complete modelled clay bullock from Grid VI (Fig.28).

Beads, Shells and Pendants

A total of 1742 shell disc-beads were excavated from Wosi 84/5 (Table 3). Of the identifiable beads, those manufactured from <u>Metachatina</u> shell predominate, which is suggestive of this genus being common in the past local environment. As discussed previously, this land-snail species cannot survive in direct sunlight, and favours a more shaded environment. Its greater prevalence on the site thus lends further support to the

Table 3.

Total occurrence of shell disc-beads from Wosi 84/5

M. kraussii	A. immaculata	Achatinid (indet)	OES	TOTAL
344	127	1035	236	1742

Fig. 27. Clay mask fragments from Grid II. Layer 1.

postulated more closed nature of the earlier first millennium vegetation (cf.Maggs 1980c:83). Whole Achatina and Tropidofera shells excavated from within the various middens matrices are not necessarily part of the archaeological deposits. These terrestrial snails are known to burrow into soft damp locations during the dry season, and this is the more likely explanation for their occurrence (cf.Voigt and Peters 1991).

Bead fragments of both the Acatinids in various stages of production were found on site but all ostrich eggshell (OES) material was either complete or broken by use and wear. OES beads were thus apparently not manufactured on site, but derived from an outside source. As has been noted elsewhere (Maggs 1984b, 1989), the local dry-valley bushveld would have in any case not been a suitable habitat for ostriches.

Ornamental marine shell was excavated from both Grids II and III. Most were pieces of Perna perna, but one Fissurela natalensis and 10 estuarine Nassarius kraussianus were also identified. A drilled and smoothed scoop on a Turbo sp. fragment was identified from Grid I. These, and the Cypraea sp. shells from the Mamba sites, indicate a possible network of coastal contacts; a factor that is discussed further in the ensuing Chapters.

A range of bored micaceous talc-schist beads and pendants (Fig.29) and six iron beads were recovered from Grid II and Grid

Fig. 28. Clay bullock. Grid II. Layer 2.

III. The iron beads are 1mm wide strips of flattened iron that have been wound to from a circle and then crimped. These are the only iron artifacts to have been recovered from the site. Four clay beads, comparable to those excavated at Mamba 84/5, were sieved from the midden matrix in Grid II (2).

Modified Stone

Regionally characteristic narrow-groove grindstones and their attendant multi-faceted upper grinders (Fig.30) were a common occurrence on the site. These were not confined to surface scatters only, but were found in abundance within the midden matrices as well. The excavated upper and lower grindstones were usually broken and appeared as discards. As described above, these were also observed as bulk fill in the pits that were excavated. Conversely most surface finds were whole and probably derived from the abandonment of the site.

The large micaceous talc-schist outcrop occuring on the western edge of the site (Fig.14) appears to have been extensively utilised by the inhabitants of Wosi. Apart from the personal adornments illustrated (Fig.29), over 75% of the excavated talc-schist showed signs of having been worked. This usually took the form of conical borings into the inner matrix of the schist pieces. It would appear that the talc schist was being ground and removed as a powder. This, with its constituent mica content, suggested its use as a shiny talcum powder, perhaps for cosmetic

Fig. 29. Micaceous schist jewellery from Wosi 84/5.

purposes. The large volume of residual multifaceted lumps, with their attendant conical borings (Fig.31), did not appear to have any functional application.

There are a number of in situ borings and engravings on the talc schist outcrop itself. These took the form of various pecked patterns on the flatter rock surfaces, two large conical borings, some 120 mm in diameter at the surface and 180mm deep, and an apparent "mankala" game-board. This comprised a checker-board series of shallow borings in an 8x4 configuration with three hollows at the one end (Fig.32). Their contemporaneity to the Wosi site cannot, however, be conclusively proven.

Worked Bone

The worked bone implements recovered at Wosi 84/5 (Fig.33) conform to those found at other EIA sites in the region (cf.Maggs 1980c,1984b; Maggs and Ward 1984). The presence of bone link-shafts and points similar to those from LSA and contemporary San hunting kits is of interest. Viewed together with the presence of OES beads, and the hornfels microlithic flakes occurrent on the site, further evidence is provided for the suggested mixed-farmer/hunter-gatherer contacts of the middle and later first millennium (Maggs 1980c,1989; Mazel 1989a,1989b). This is discussed in greater detail later.

Fig. 30. Narrow groove grindstones and upper grinders.
Surface finds. Wosi 84/5.

Iron Smelting Residues

No large iron-smelting debris dumps were located during the excavations but two furnace fragments (+-2000cc by volume) were found within a plough-scatter of EIA material in the north-east corner of the site. Small quantities of flow-type slag and numerous fragmented tuyere pieces were recovered whilst sieving the respective middens, and a lump of furnace-bottom slag with a "coral reef" appearance was excavated from layer 2 in the midden matrix of Grid II.

Slags submitted for analysis (Table 2) show the Wosi samples to have a high manganese content (5,2% Mn_3O_4), as opposed to the high titanium content (7,1% TiO_2) of the Mamba slag samples (H.M. Friede: pers.comm.to T.Maggs 1985). This indicates that the Wosi ore was different in origin and thus not obtained from the titaniferous magnetite deposits at Mamba, but rather from another source closer at hand. Surface-exposed magnetite deposits were encountered on the south bank of the Thukela immediately opposite the Wosi site during the field-survey, and these are the most probable source of the iron-ore utilised at the site.

Miscellaneous Human Remains

Apart from the human burials described above further human skeletal remains were retrieved from the faunal samples during the sorting for formal analysis. Diagnostic parts of a juvenile (+- 3-4 years) were obtained from Grid III, and foot-bones of two

Fig.31. Conically bored micaceous talc schist.

individual adults were retrieved from Grids III and VI respectively. The tibia of a neonatal child was also found in the testpit sample of Grid VI (Morris 1990).

DISCUSSION

The dating and taphonomy of Grid II, viewed in conjunction with the layout and nature of the other middens on the site, suggest that Wosi was a multi-component site with two periods of occupation; one in the early 6th Century and a second, later occupation, in the mid to late 7th Century. These dates are in accordance with other Msuluzi-type sites in the region (Maggs 1980c, 1984c; Maggs and Ward 1984) and confirm the Msuluzi phase of the EIA in the region between AD 500 - AD 700.

The Wosi pottery sample is significant in that an observable shift in stylistic expression is apparent between the two periods of occupation. Early Msuluzi phase pottery (Evers 1988; Maggs 1980c) is present in the earlier occupation and occurs again in an unchanged expression in the initial later occupation. However, during this later occupation it changes significantly, becoming more closely affiliated to the pottery described from Ndondondwane (Loubser 1984; Maggs 1984b), although many characteristics of the earlier expression are retained.

No apparent evidence is present of a change in any other existing material cultural expression nor any suggestion of an influx of

Fig. 32. In situ talc schist borings. Wosi 84/5.

new groups of people. The observed shift in stylistic expression would thus appear to have occurred in situ and over a relatively short period of time. The earlier and initial later occupation pottery at Wosi is comparable to the informally analysed sample from Mamba 86/7, and confirms the apparent occupation of this site probably during the 6th and later 7th Centuries. The later occupation pottery samples are in accordance with those from Mamba 83/4, although the latter have been shown to have an even greater affinity to the material described from the Ndondondwane type-site (Maggs 1984b).

Analysis of the Wosi faunal remains (Voigt and Peters 1991) shows that domesticates provided the bulk of meat consumed at the site. In this category ovicaprines predominate over cattle, with sheep being far more common than goats. Samples derived from later occupation contexts, those associated with pottery having affinities to Ndondondwane, tentatively indicate a relative increase in cattle numbers. The indigenous fauna identified in the samples are all woodland-savanna and forest species (Smithers 1986). The range of edible species, and their low percentage occurrence, indicates unselective hunting practices and infrequent consumption.

The site is further typical of the period (cf.Maggs 1984a,1984b, 1984c), located as it is on good arable colluvial soil, in an environment that would have provided year-round sweet-veld

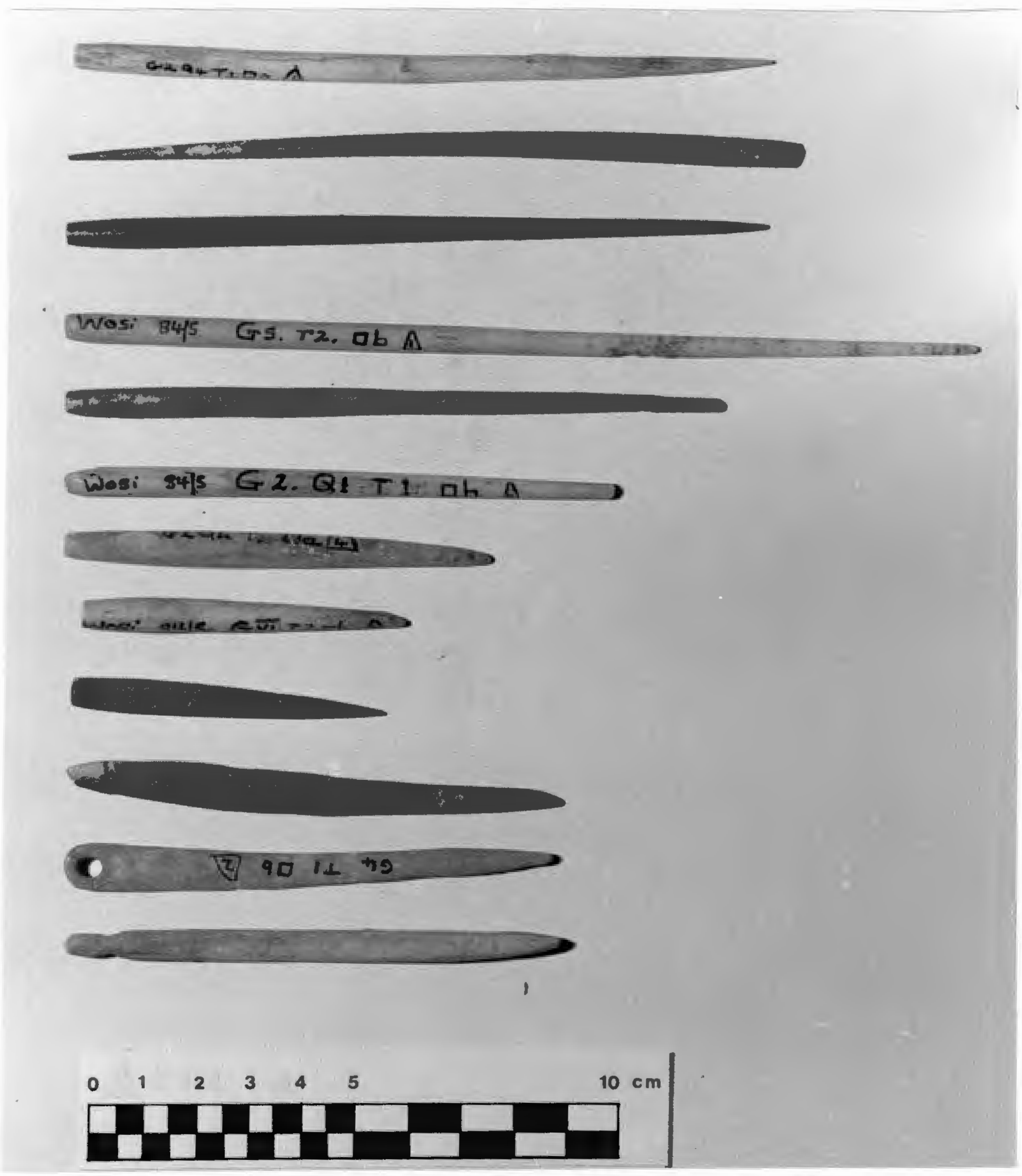

Fig. 33. LSA - type worked bone points.

grazing for live-stock and adequate timber for fuel and construction. The markedly lower occurrence of iron smelting residues observed at Wosi, as opposed to those present at Mamba 83/4, suggests an absence of excessive surplus production for wider ranging trade and that production was limited to local and domestic requirements only. However, the amassed quantities of micaceous talc-schist within the respective middens does suggest that this raw material was being processed in apparent excess of immediate local requirement. It is possible that talc powder may have constituted part of a range of various other trade items from the site. The noted contextual presence of LSA artifacts on the site suggests that the nature of this trade was probably barter between San hunter-gatherer groups and the resident mixed-farmers (Mazel 1986,1989a,1989b). The possible implications of this are addressed in the course of ensuing discussions.

CHAPTER 7

SUBSISTENCE AND SETTLEMENT

The earliest settled mixed-farming communities of the lower Thukela Basin have been shown to have consistently located their villages on deep colluvial soils within the Spirostachys Woodlands along the flatter bottomlands of the valley (Schofield 1948; Loubser 1984; Maggs 1984b; van Schalkwyk 1986). Villages were some 8-10 ha in extent and, as has been postulated from analogous village sites in the middle and lower Basin, were inhabited by possibly several hundred people, living in a fairly dense pattern of settlement for prolonged periods of occupation (Maggs 1980c,1984a,1984c,1989). On the basis of radio-carbon dates and, particularly, stylistically similar pottery samples, it is suggested that contemporaneously inhabited villages within the study area were probably located a few kilometers apart at similar pedological nodes (cf. Chapter 4: 46-47).

This nodal location pattern is argued to have been an attempt by these individual communities to maximize their productive means within the prevailing local environment (Maggs 1984a,1984c,1989). The consistent location of settlements near productive soils was a function of a need to produce adequate supplies of dry-land dietary grain staples and pulses for domestic consumption. Cultivation within the Combretum/ Sclerocarya Woodlands, located on the adjacent rocky slopes and steeper aspects away from the valley bottom, would have been less productive. These areas are also known to have a far lower soil-moisture content and nutrient sustainability than the lower lying colluvial soils (Maphumulo 1986). As described earlier, the latter are exceptionally well suited to dry-land agriculture, especially for the cultivation of the first millennium cultigens of Sorghum, Pennisetum and Eleusine (Maggs 1980c,1984c; Maphumulo 1986).

It was probable that, given the postulated population within each village, clearance of the closed Spirostachys Woodlands in a zone around each village was rapid. This would have been partly a consequence of ongoing domestic fuel and construction timber requirements and, more particularly, of swidden clearance for crop production. This contention is not proposed as unique to the lower Thukela Basin, a comparable scenario having been previously posited by Martin Hall for first millennium mixed-farming communities in the lower Umfolozi and Hluhluwe river-valleys of Zululand (Hall 1981,1984e).

However, the extent of this latter clearing would have been curtailed by the limited availability of "suitable" patches of colluvial soil, immediately located around the respective village locales: "Suitable" soil in the sense of "preferred soil for agriculture". It can be further argued that, in opening up and "taming this wilderness", farmers would have found it useful to keep their fields close to their villages. This would have provided security against crop predation by wild ungulates and graminivorous birds, whilst reducing the time needed to travel to and from fields in the daily round of domestic activity.

Such cleared "community-islands", spaced a few kilometers apart, were in all likelihood created within the valley bottom closed-woodlands during the late fifth and early sixth centuries, during the formative years of settlement (cf.Hall 1981:170-176). Given the vagaries of climate within this semi-arid environment and the cyclical occurrence of drought (Hall 1976; Shultze 1984; Tyson 1986), grain production would have been a risk-loaded and tenuous practice. Wet season hoe-cultivation could have produced little more than sufficient for staple domestic consumption. Due to the inevitable loss from rot and pests, storage or accumulation of the harvest would not have been practically possible for at best, more than a season or two (Sansom 1974). Hall (1985a,1987a,1987c) has consequently proposed that such a lack of adequate storage was arguably the greatest disincentive to surplus production.

Although the production of grain staples was arguably the basis of this mixed-farming economy, analysis of the faunal remains indicates that the major source of animal protein was derived from the slaughter of domestic stock. Hunting and snaring of indigenous game were also certainly practiced, but the range and low frequency of species in the faunal remains suggest that this was unselective, and that the consumption of venison was infrequent (Voigt 1984; Voigt and Peters 1991; Voigt & von den Driesch 1984).

Cattle, sheep and goats have been identified at all sites, although their relative frequency of occurrence changes through time. Analysed samples from sites occupied between circa.AD 500-700 show a significant predominance of ovicaprines over cattle, and within the former class, sheep are more prevalent than goats. At sites post-dating the middle of the eighth Century, cattle numbers are seen to increase significantly, relative to the numbers of ovicaprines (see Voigt and Peters 1991). This trend is now well documented throughout the Thukela Basin during the first millennium (Maggs 1980c, 1984b; Maggs and Michael 1976; Maggs and Ward 1984; Voigt 1984; Voigt and Von den Driesch 1984) and, as proposed earlier (Chapter 4), is possibly explained by the presence of trypanosomiasis.

In areas of known tsetse fly infestation, African stock-keepers are knowledgeable as to the potentially debilitating effects of "nagana" on their herds and flocks. In southern and East Africa, the comparatively low levels of immunity in cattle suggest that, over a long period of time, people may have devised strategies to prevent their animals being exposed to the bites of tsetse flies (Ford 1971; Jones 1984). Thus the argued creation of cleared "community-islands" within the closed-woodland environment of the Thukela Basin could have potentially provided a limited series of "fly-free" locales within which livestock could have been run. However, the size and grazing potential of such locales would have been dictated by the extent of the cleared settlement areas, and consequently initial cattle numbers would have been curtailed (cf.Hall 1981).

It is worth noting here that the analysed samples of dung from Mamba 83/4 contained a high frequency of grass hairtips, elongated forms, and variations of dumbbells, characteristic of the panacoid tribe of grasses (Huffman: pers.comm.1990; Huffman 1990b). The extant Panicum grass species occurring within Bioclimatic Zone 10 are all shade-loving, and are known to proliferate in zones immediately below the canopies of trees. Where trees are dense, it may occur as the only grass species of any palatability (Tainton et.al. 1979). If the analysed samples are indicative of a species dominance in the past environment, then further support is provided to the closed-woodland hypothesis, where closed-woodland is argued to be the prevalent vegetation cover in the regions' valley-bottoms during the early first millennium (Hall 1981; Feeley 1986).

Although the resistance of sheep and goats to the effect of "nagana" are less well known, small stock appear to be less frequently attacked by tsetse fly, and may be more resistant (Murray et. al. 1979:6). A more wooded environment would have further benefited these browsing species, indigenous hairy sheep being known to browse as readily as goats when suitable grazing is not available (E.A. Voigt: pers.comm.1990). In addition sheep may have been able to outcompete goats. Being mixed feeders they would have benefited by the initial woodland clearance, not only because of an increase in grazing, but also because of their potentially lower exposure to "nagana" in cleared, fly-free zones. Conversely, goats would have remained at higher risk to tsetse fly exposure whilst needing to seek adequate browsing within the adjacent closed-woodland.

Thus whilst the local environment remained relatively closed small stock, and particularly sheep, would have predominated. Cattle numbers could only have begun to increase at a stage when the extent of woodland clearance was sufficient to have created wider "fly-free" zones and, within these, a sustainable grass sward, capable of high intensity grazing.

Within this scenario animal husbandry was a tenuous practice in the early years of settlement. Factors such as a high infant mortality of livestock in an alien environment (Voigt 1980,1984; Voigt and Von den Driesch 1984) and the everpresent risk of predation and disease would have limited these communities' ability to build up herds or flocks (cf.Hall 1981,1986,1987a).

It is unlikely that levels of surplus stock production could have been maintained in such an unfriendly environment and, in the early years of settlement, egality at the level of livestock ownership also probably prevailed between neighboring villages, and between households within respective villages. This interpretation contrasts markedly with the "cognitive" school of analysis (Huffman 1982,1985,1986a,1986b) where, within the Central Cattle Pattern, the role of livestock is perceived to have been integral to the first millennium Iron Age social formation from the outset. If, however, the posited "egality of livestock ownership" is upheld, and the environmental evidence would appear to support this, then the significance of livestock and the social relations informed by livestock ownership would have been very different to those associated with the Central Cattle Pattern. Essentially, in their inability to produce and sustain a surplus production of livestock, first millennium mixed-farmers in the Thukela Basin were, in Giddens'(1984) terms, denied access to the "power" potential of both an <u>allocative</u> and an <u>authoritative</u> resource (cf.Hall 1986:84-85).

This lack of surplus production is the basic tenant of Hall's (1985a) Domestic Mode model. Whilst not conflating gatherer-hunter and grain-farming modes of production, he argues that the social relations within surplus-lacking social groups may be more similar than different. Developing his ideas out of "hxaro" networks amongst egalitarian San bands (Wiessner 1982), he postulates that comparable "grain-ties" can be modelled amongst early farmers (Hall 1985a,1987a,1987c).

Considering the above limitations on the surplus production and accumulation of grain and livestock, and the need to accommodate potential crop failure or harvest loss, reciprocity networks are a logical mechanism to counter such eventualities. By lending out seed-grain, or sharing a successful harvest with those in misfortune, allegiances are set up in a system of social insurance. Such reciprocity will not only work to counter the misfortune that may be experienced by a household, but also promises a measure of help when the respondent is in a situation of need. Repeated assistance to individuals, households or villages could have led to a situation of mutual obligation.

In Giddens'(1984) terms "power over" is now incipiently bought to bear. Here individuals, or households, can potentially be manipulated to realise needs or requirements beyond mere reciprocity to the subsistence requirements of the obligator. Given such circumstances of obligation, this could be postulated as the germ of attempts by individuals within village communities to break out of bonds of reciprocity and exert "power over". Grain crops are thus, within this scenario, potentially both an allocative and authoritative resource, symbolically expressed by their distribution in highly decorated ceramic containers (Hall 1987a), and in an increasing ability to secure "rights-in-people" (Hall 1986).

However, as has been argued, in the opening years of valley-bottom settlement, environmental constraints were a social leveller. The omnipresent risk of total crop failure and stock loss, and an inability to accumulate surplus production in the long term, would have denied the possibility of such "power" becoming pervasive. Egality, at least at a subsistence level, was thus maintained and households and villages probably remained bound together by balanced relations of reciprocity.

CHAPTER 8

OF TOOLS AND TRADE

Most 6th to 8th Century mixed-farming settlements within the Thukela Basin have yielded evidence of iron smelting (Loubser 1984; Maggs 1980c,1984b; Maggs & Michael 1976: Maggs & Ward 1984; van Schalkwyk 1986). However, in contrast to the markedly increased intensity of production observed at the late 7th to mid-8th Century site of Mamba, in the lower Basin (Chapter 5), the quantities of iron smelting residues at most of the other recorded sites suggests that the scale of iron production was limited, and probably only of a sufficiency to have realised the immediate domestic requirements of the respective settlements (cf.Maggs 1980c). The observed increased intensity of production is arguably then indicative of a surplus production, in excess of local domestic requirements. This suggests an economic shift within the hitherto existent means of production which, I propose, was the probable consequence of developing trade between the settled, mixed-farming communities of the region.

If the essential self-sufficiency of pioneer mixed-farming communities is accepted, then the presence of ostrich egg-shell beads and LSA stone and bone artifacts on these sites suggests that such surplus production was probably initially stimulated through the medium of intensifying exchange alliances with mobile San gatherer-hunter groups.

Such cross-frontier alliances and clientships between gatherer-hunter and farming communities have been widely reported in the ethnography (Hodder 1982; Lee 1972,1979; Turnbull 1959; Woodburn 1968; Yellen 1984). Within the Thukela Basin, Mazel (1989a,1989b) has suggested that the occurrence and patterning of recovered material culture remains historically associated with gatherer-hunter groups on first millennium mixed-farming community sites (Maggs 1980c,1984b; see also Chapter 5&6:this volume), and the presence of farming community decorated pottery and iron ore in gatherer-hunter shelters (Mazel 1989a), are indicative of alliance networks rather than clientship and that the social and economic relations between the two groups were probably both equitable and without antagonism. This contention is further supported by tentative evidence of hunter-gatherer occupation, of at least the central Thukela Basin, intensifying only after the settlement of the basin by Iron Age communities (Mazel 1989a:141-142).

Arguably then, within first millennium mixed-farming contexts, resident farmers may have obtained items such as ivory, venison, wild-animal skins and ostrich egg shell beads in exchange for iron goods, cereal crops, water-tight gourds and possibly talc powder: Items that were either not easily procured by sedentary mixed-farmers within their immediate local environment, or not readily available to gatherer-hunter groups in their more mobile round of economic production. If such amicable interactions intensified in time, they may have initially stimulated a limited degree of surplus production in response to an increasing demand for iron goods.

Such a trade hypothesis has previously been argued for the 7th Century Msuluzi site in the central Thukela Basin (Maggs 1980c). The recorded presence of LSA material culture remains at Ndondondwane (Loubser 1984; Maggs 1984b), Mamba (Chapter 5) and Wosi (Chapter 6) suggests that comparable trade alliances were probably in practice in the lower Basin as well. However, the observed increase in iron production, when viewed in conjunction with the documented increase in large-stock holdings in settlements at around the 8th Century, precludes the argument that trade was solely with non-sedentary gatherer-hunter groups.

The presence of marine shells on most excavated Early Iron Age sites (Maggs 1980c,1984b; Maggs & Ward 1984; see also Chapter 5 &6:this volume) provides possible insights into a more plausible explanation for this increased scale of production. Marine shells indicate coastal contacts. Potentially, through the initial intensification and widening of trade alliances with mobile LSA San groups, other mixed-farming communities, known to have been resident along the adjacent coastal plain (Maggs 1984a,1989), were drawn into increasingly wider social networks and contact. Suitable iron ore sources along the coastal littoral are scarce, and when present, are known to be of lesser quality than those occurrent within the incised river valleys of the interior (Hall 1981; R.Maud: pers.comm. 1990). It is therefore possible that once these wider networks had been established, superior quality iron implements were then traded with other ore-impoverished mixed-farming communities, resident down-valley and along the coastal plain.

Such a scenario is possibly supported by a wider interpretation of the faunal analyses from the lower Basin sites. The predominance of cattle in late 7th and early 8th Century EIA faunal samples in the Thukela Basin is in contrast with the 6th and early 7th centuries, where domestic faunas are dominated by ovicaprines (Maggs 1980c:140-145; Maggs & Michael 1976; Voigt 1984; Voigt and Peters 1991; Voigt and Von den Driesch 1984). I would argue that, by the 8th Century, some mixed-farming communities in the Thukela Basin were possibly trading iron implements for livestock and, on the strength of the faunal analyses, suggest that this livestock investment was predominantly in the form of cattle.

However, given the constraints of the environment, the herding of larger cattle numbers would have been problematic. In this regard it has been argued that ongoing swidden agricultural practices, the continuing exploitation of local timber for construction and domestic fuel, and annual anthropogenic fires to induce "green-flush" grazing would have resulted in an increasing thinning of the closed-canopy woodland (Hall 1981,1984c). Intensified charcoal production, to sustain the increase in iron production, would have rapidly accelerated clearance of the local woodland environment (cf.van der Merwe and Killick 1979). Such intensive and sustained resource utilization conducted around the respective settlements would have resulted in the replacement of this woodland with a more open vegetation structure, in all likelihood a mosaic of open woodland and savanna grassland. This in turn could have provided increasingly larger shadeless and 'tsetse-free', grass-sward islands. Within the now thinned-out surrounding woodlands an increasing potential for cattle production in the immediate local neighbourhood was thus created. Incremental cattle numbers may thus initially have been the result of intensifying trade transactions and, in time, the consequence of a growing ability to breed and sustain larger herds in a progressively more stock-friendly environment.

In time, increasing human population and the noted increase in large-stock holdings would have begun to place increasing pressures on the available resource base associated with larger village locales. During the course of survey a number of smaller settlement locales were encountered. These were all some 4-5 ha in extent and were relatively dated by the presence of diagnostic late first-millennium pottery and typical, elliptically grooved EIA grindstones (see Fig.4). All these sites exhibited a far lower occurrence of cultural discard, relative to the larger

(8-10 ha) sites surveyed.

Further, the Wosi site has been shown to have been re-occupied in the late 7th Century after an earlier occupation in the early 6th Century and, at the Mamba confluence, the settlement shift from one bank of the tributary junction to the other between the 6th and 7th Century was arguably a consequence of a need to gain access to new productive soils, while still retaining access to the rich local ore-body. Although the smaller settlement at Ndondondwane (+- 4 ha) appears to have only experienced a single period of occupation, the wealth of cultural material on the site suggests that this occupation was of a fairly intensive nature (Loubser 1984; Maggs 1984b). In contrast, all the other 4-5 ha sites encountered during the survey exhibited a far lower occurrence of cultural discard, which suggests smaller resident populations, and much shorter periods of occupation.

Nodes of productive soil within the Basin are confined to tributary junctions and colluvial slip-off slopes along the major drainage courses, and are consequently limited within the landscape. Such "preferential soils" do not however have an indefinite or long-term productivity, and the site shifts described above were in all probability a response to decreasing fertility and the subsequent decrease in sustainable crop yields. In time, increasing population must have placed increasing access pressures on these nodes of "suitable" soils, and they would have consequently reached levels of settlement and productive saturation. As an increasing number of the larger nodes of preferential settlement were abandoned, and subsequently left fallow to recover their productive capabilities, new, less "preferred" locations would have had to have been sought.

I argue, therefore, that the smaller, less intensively settled sites described above were a response to such increasing saturation. Smaller, marginal nodes of "suitable" soil were then appropriated by smaller groups in order to maintain the known means of primary production. However, such smaller nodes, with their inherently more limited resource base, would not have been able to sustain their resident populations for extended periods of time, and this would have resulted in a consequent need to move settlements more frequently.

It would appear that access to the limited number of larger nodes, and their inherent productivity potential, reached levels of saturation around the middle of the 8th Century. These smaller settlement nodes are possibly then indicative of an initial stage of community fission in response to such saturation. Increased competition for these productive nodes and their associated resources was feasibly then a mitigating factor in this posited scenario of fission. The postulated consequences of such fission and settlement replacement in terms of the archaeological record is returned to in later discussion.

The mid-8th Century site of Ndondondwane has also produced evidence of a relative increase in the proportion of cattle over ovicaprines. Furthermore, the intensive production of ivory bangles at the site is the earliest yet recorded in the southern African Iron Age (Voigt and Von der Driesch 1984). Within the foregoing trade hypothesis it could be argued that such manufacture was the response of a community seeking to expand their participation in trade. Thus the increasingly wider social networks proposed above may have been supplemented by craft-specialist communities seeking to supply their products to wider lying communities.

Arguably, at sites such as Mamba and Ndondondwane, increasing trade opportunities allowed their populations to obtain supplies of grain staples from beyond their immediate village catchment. Having appropriated a source of wealth, invested increasingly in livestock, such communities were probably less stressed by decreasing soil productivity. Although their immediate local environment was probably increasingly more stock-friendly, stock keeping was not without its inherent risks. A solution to such risk could have been achieved by lending out animals to other stock-impoverished groups in need. The farming out of their livestock to residents of other smaller settlements would not only have lessened the likelihood of total loss to pestilence or disease, but would also have placed receivers of stock in increasing positions of obligation to the owners of larger herds and flocks.

Smaller communities, fissioned off by productive necessity from the larger village agglomerations of earlier settlement, along with the potential power of people with increasing stock holdings and wider access to trade, must have resulted in increased contradictions within the hitherto prevalent social relations of production. The postulated outcome of such contradictions is returned to in the concluding discussions.

CHAPTER 9

PEOPLE; POTS AND PITS

Most analyses of ceramics in southern African Iron Age studies have been exercises in establishing stylistically discrete time-markers (Maggs 1980a, 1984a), inferred language groupings (Evers 1983,1984), group affiliations (Evers 1988) or ethnic boundaries, traditions and migration routes (Huffman 1970,1979,1980,1982, 1988,1989). More recently, it has been argued that the "span" of similarly decorated ceramics dated to the first millennium below the eastern Plateau Slopes is incompatible with a "tribal" or "ethnic" model of a shared social system, but consistent rather with a model of extensive networks of shared obligation and reciprocity (Hall 1985a,1985b,1986,1987a,1987c).

My own analysis of ceramics from the lower Thukela Basin EIA sites made use of the method developed and refined by researchers in the region (Maggs 1980c,1984b; Maggs and Michael 1976; Maggs and Ward 1984) and was employed primarily to facilitate a regional comparison of stylistically and chronologically similar ceramic samples. This aim was adequately realised, and clearly, the Mamba and Wosi ceramic samples fall within the early Msuluzi phase of the Lydenburg Tradition (sensu Evers 1988). Further, I have been able to demonstrate both finer, and more subtle shifts and transitions in ceramic expression, within and between assemblages, dated at circa. 500-800 A.D. (Appendix 1).

The above methods of analysis, being primarily exercises in typological ordering, have not provided wider explanations for these shifts in ceramic expression. Where recognised, they have been described as sufficient merit for further typological subdivision (Maggs 1984b:78), or ascribed to "..temporal differences between the sites".. and "..trends within one facies" (Evers 1988:78).

In recognising these shifts in ceramic expression as being contemporaneous to the now documented gradual increase in large-stock holdings throughout the Thukela Basin (Maggs and Michael 1976; Voigt 1980, 1984,1991; Voigt & von den Driesch 1984) Hall has proposed an interpretation that views these shifts as a possible response to the changing nature of prevailing social relations (Hall 1986,1987a). I will attempt, therefore, in the light of the adopted analytical model, to build on these propositions.

As previously discussed, Hall has suggested that in the context of first millennium farming villages, a system of signification through ceramic design was in place and further, that by exchanging cereal products in vessels similarly decorated with potent unambiguous symbolism, householders would simultaneously signify and re-affirm their mutual connectedness (Hall 1987a:71). Thus it could be argued that highly decorated pots, with a predominance of full-neck and upper body decoration [so diagnostic of circa. AD 500-700 Msuluzi phase ceramics (sensu Maggs 1980c)] occur during the earlier stages of settlement when, in the absence of larger stock holdings, social relations based on grain-reciprocity bound households and villages together in networks of shared obligation and reciprocity. Seen in this context, such highly decorated pottery, persistent over a span of some 200 years, may well be reflecting the "high price of innovation" in the face of environmental and agricultural uncertainty in the semi-arid lowlands of the Thukela Basin (cf.Hall 1987a:70-72).

The ethnography of extant Bantu-speakers in south-eastern Africa is consistent in recording women as being the cultivators and guardians of grain and grain products (Bryant 1929; Gluckman 1935; Hammond-Tooke 1974; Hunter 1936; Junod 1927; Krige 1965; Sansom 1974; Schapera 1946), and they thus constitute the major production units within respective households. As bearers of children they are the means of reproduction of the means of production (the labour force). In exercising authority over the use and distribution of the products of production women can also be seen as pivotal in the reproduction of the social relations of production. Thus, within first millennium communities that are argued to be so closely bound by a system of reciprocal relations based on cereal production, women, I would suggest, must have played a central role in the reproduction of these intrinsic social relations.

Evidence for such gender relations during the first millennium, I would argue, are tentatively forthcoming from the archaeological evidence (see Chapter 6). The ubiquitous occurrence of pits, bottomless pots, and often associated indications of sacrificial practices, now known from these first-millennium sites (Maggs 1989), can possibly be ascribed to associated gender roles in the past. Pits, dug initially for grain storage, are often later filled with specific domestic debris, defunct household artifacts, and, at times, human burials (see Maggs 1980c:121). These associations may well reflect a strong symbolism and "ritual binding" (after Hodder 1982) of primary production, social and biological reproduction, and household well-being, ritualised through the agency of animal sacrifice (see Chapter 6, and Maggs & Ward 1984:111-113), and the specific discardment of household debris within "locales" (sensu Giddens 1984) specifically associated with the roles of women in these communities.

In further pursuance of this argument I very tentatively propose that a closer scrutiny of recorded first millennium human burials associated with mixed-farming communities may be revealing. I freely admit that the evidence to support the following propositions is flimsy, that the sample of burials is to small, and that the idea is only speculative. However, in striving to impart social analyses on the archaeological data, such avenues of enquiry are warranted. As and when further data are forthcoming, the validity of the proposition can be tested.

The Wosi skeletal material described in Chapter 6 (see also Morris 1990), when viewed in conjunction with that excavated at the middle Basin sites of Msuluzi, Mhlopeni and Magogo (Maggs and Ward 1984) would appear, at least tentatively, to conform to an apparently consistent pattern of burial. Individuals were buried in a flexed position facing east to north east in contexts all associated with specific domestic household artifacts and specific household debris. Whether these burials were located in middens or pits, they appear to conform to the foregoing trend. The deceased are here associated with artifacts and the residues of domestic labour, staple-food production and preparation, household maintenance and also, by virtue of the presence of neo-natal and child mortalities, with biological reproduction. Such specific burial associations may possibly then "signify" (sensu Giddens 1984) and reflect roles and status in past society: Symbolically and subliminally, by the association of the deceased within specific 'women's-space' - ("locales") - women in the community were accorded their status as reproducers of the means of production, and as reproducers of the relations of production. Their "power" in Giddens'(1984) terms. Further, such "signification" by means of burial location may have served to provide ontological security to the "longue durée" of the community.

Thus in early first millennium farming communities, where it is postulated that social relations of production were inextricably bound into the production of grain crops and where allocation and distribution were in all likelihood by means of the highly decorated ceramic containers so ubiquitously occurrent in the archaeological record, it is possible that women constituted a pervasive nexus of "power" in the reproduction of social relations. However, if patriarchal social relations prevailed, as they do in extant Bantu-speaking societies in the region, such "power" was probably suppressed by the juro-political dominance of men. In these circumstances such pervasive "power" would have constituted a latent contradiction between the sexes. This I suggest may have been symbolically countered by women in these communities, in the <u>further</u> appropriation of the "symbolic capital" of ceramic expression. Here, highly decorated ceramic containers in daily application, may have served as a medium of silent discourse between women (cf.Hodder 1982); a discourse of reaffirmation of their pivotal role in the reproduction of reciprocal social relations (cf.Hall & Mack 1983), and in maintaining the "longue duree" of the social formation (cf.Giddens 1984).

In the foregoing vein I offer an alternative interpretation of the role and function of hollow-head clay sculptures now known from a number of sites in the lower Basin (Loubser 1984; Maggs 1984b; Chapter 6, this volume). These all appear to have been therianthropic in form and, although larger in size, are reminiscent of the sculptures discovered at the Lydenburg Heads site in the Eastern Transvaal (Inskeep & Maggs 1975; Inskeep & von Bezing 1966; Maggs & Davison 1981). Their role and function in past society have been widely speculated upon, and are generally ascribed to some form of ritual practice.

Their occurrence in comparable EIA contexts on other Eastern Transvaal sites (Evers 1981) and, recently in Transkei (Prins 1989) have been put forward as evidence for chiefdom-organised initiation schools within their respective regions of occurrence. Although I do not wish to debate the possibility of a more centralised political organisation here, if this was their supposed function, I argue that they should then only be present on specific sites within a region, where the centrality of local political power can be demonstrated. This has not been the case.

Rather, such sculpture fragments are now known from a number of sites below the Eastern Plateau that date to between AD 500-800. Their varying therianthropic form is suggestive of some form of symbolic portrayal of group affiliation or 'totem' allegiance. Further, their execution in clay, and decoration with the "unambiguous potent symbolism", similar to that applied to other ceramic household containers, suggests a possible association with primary food production and the associated organisation of labour within the prevailing means of production. If the arguments relating to a society whose relations of production are bound into a system of reciprocity alliances can be upheld then these figurines may have functioned within specific rituals relating to crop production and harvest, basic sustenance, and general community well-being.

At certain times of the year a larger labour force would have been necessary, either to prepare fields for planting, or to harvest the season's crop. At times of such social co-operation, whether between households within respective villages, or between neighbouring settlements, work parties may have culminated their co-operative responsibilities in ritually prescribed activities such as feasting, drinking and dancing. Such activities, and associated rituals, are widely recorded in such contexts amongst extant Bantu-speaking peoples (Gluckman 1935; Hammond-Tooke 1974; Junod 1927; Krige 1965) and analogous activities and rituals may well have been performed in the past. Such group-participant activities, serving as mutual re-affirmations of bonds of shared obligation and reciprocity, were thus possibly conducted through the medium of 'totemic' therianthropic figurines, iconically associated with concepts of bountiful harvests and general community well-being.

In concluding this chapter I return to a discussion of the observed shifts in ceramic expression now documented in the EIA of the Thukela Basin. As discussed earlier, these shifts have been shown to be contemporaneous to a relative increase in cattle numbers. The full-neck and upper-body decoration of pots, dating to circa. AD 500-700, shift by the 8th Century to expressions where decoration becomes largely confined to bands in the lower neck, and body decoration is seen to become increasingly rare.

As posited by Hall (1987a:72), I believe this may herald the inception of a change in the nature of previously prevailing social relations. Such changes, it can be argued, were bought about by an increasing ability of individual homesteads and communities to accrue greater stock holdings, in an increasingly more stock-friendly environment. Further, the postulated later shift of some households to smaller nodes of settlement, and their resultant dependance and obligation to members of larger settlements, is a deviation from the hitherto existent order. This may well have had a bearing and influence on changing the nature of prevailing social relations.

Thus it is argued that, as allegiances were set up with livestock, social relations based on comparably risk-laden "grain-ties" may have declined. The ability of some households to accrue more stock than others as such accrual became an increasingly safer investment, meant that egality between individual homesteads would have diminished, and certain households may have possibly then begun to achieve greater positions of dominance over others. Concomitantly, households running livestock on behalf of others were being placed in increasing positions of obligation. In Giddens'(1984) terms, "power over" such households was now bought to bear. As such growing inequality, and greater obligation, began to pervade the wider community, the hitherto acknowledged system of ceramic signification is seen to wane. Within the arising new order livestock rather than ceramics became the principle mode of signifying relationships between homesteads and wider communities and, potentially, of power over people (cf.Hall 1987a:72).

CHAPTER 10

SOCIETY IN TRANSFORMATION

The foregoing discussions of first millennium mixed-farming lifeways suggest that village communities, at least during the formative years of settlement, were in all likelihood kin-based and exogamous. The relations of reciprocity and inherent egality between neighbouring villages and between respective households within respective villages accords with Hall's (1987a,1987c) Domestic Mode model. However, in people's growing ability to "tame the wilderness" such egality has been seen as increasingly waning. Further, the ability of certain village communities, or households within such communities, to have begun successfully to produce a surplus of grain staples may well have served to place less successful communities or households in growing situations of dependance and obligation. Under such hypothetical circumstances a perception of the "power" potential of such dependance and obligation could arguably have been realised . However, as previously argued, the vagaries of climate and the constraints of the local environment, and the inability to store surplus agricultural production, precluded such successful communities or households from rising to positions of being able to impose any "power" over those in obligation.

Concomitantly, widening trade alliances could feasibly have exposed an increasing number of people to the "power" potentials of the accumulation of surplus production: that is, production beyond mere subsistence. This could have given rise to growing situations of inequality between households within given communities, and between respective communities in social interaction.

Such a contradiction within the prevalent social relations would have resulted in growing tensions within society as egality waned in the face of an increasing ability of some people to hold others in unequal bonds of obligation. Further, the more "stock-friendly" local environment may well have allowed the accrual of surplus livestock to some people. Others, denied access to "preferred" nodes of production and subsistence, hived off to use less productive nodes in an attempt to maintain the earlier means of production.

Such fission, seen in the light of a growing reduction in larger village-node productivity, may arguably have led to increasing scrub encroachment of the previously cleared, closed-canopy woodland environment. This could have taken place as these large village sites were abandoned and left to lie fallow. Concomitantly, the impact of larger nucleations of people on their immediate local environment would have decreased; this as smaller nucleations, extracting from the local environment at a relatively lower intensity, became more widely distributed in the landscape. A possible consequence of such scrub-encroachment, as described in Chapter 4, was possibly the re-establishment of habitats suitable for tsetse-fly, and an increasing threat to the perceived "power" potential of large scale livestock production.

In order to maintain access to the associated "power" of increasing stock production, and to ensure the "durée" of the new social order, people moved away from the dwindling productive potential of their hitherto supportive domestic locales to settle more "friendly" environs. The tantalizingly elusive Iron Age archaeological record within the study area, post-dating the end of the first millennium, suggests that this was indeed the case. The historically recorded nucleated homesteads of Bantu speaking mixed-farmers along the south Eastern Plateau Slopes suggests that such a movement was probably out of the valley bottoms, with settlement subsequently taking place along the higher altitude ridges and along the interfluves between the major river valleys (cf. Hall 1981).

Such settlement location had a number of consequences. The soils associated with such steeper gradients leach out more rapidly than the colluvial soils of the valley bottoms (Van der Eyk et. al. 1969; Maphumulo:pers.comm.1986). Thus, at one level, the historically recorded smaller clusters of nucleated homesteads, and their associated closely adjacent fields actually had a lower medium-term grain production potential, in contrast to the larger valley-bottom settlements of the early first millennium. Smaller, scattered homesteads, with their inhabitants imparting a lesser burden on the environment, were thus possibly a consequence of strategies developed to sustain basic primary production.

However, the unsustaining nature of these interfluve areas in the medium to long term also required that individual homesteads had to be moved to newly productive locations more often. Such mobility would have precluded the build up of extensive archaeological deposits. Further, unless partly constructed of stone, their location along steeper gradients and within zones of higher run-off and greater erodibility, would render them susceptible to rapid decay. This most feasibly explains their low archaeological visibility.

Lastly, the selected higher altitude settlement locations would have further placed resident farmers closer to, or within, relatively scrub-free higher grazing potential grasslands. This in turn would have directly benefited their ability to run and manage increasingly larger numbers of livestock; livestock which came to play an increasingly more central role in the signification of social relations.

Such a scenario is in accordance with Hall's (1985a,1986, 1987a,1987c) proposed Lineage Mode Model and heralds the emergence and consolidation of a new social formation amongst the regions mixed-farming communities (cf.Hall 1981; Hall & Mack

1983; Hall & Maggs 1979; Maggs 1980a,1982a,1982b,1984a,1988, 1989). Here, on the basis of both a growing archaeological and historical data base, the evidence suggests that ...

> "... the inhabitants of the ... region (below the Eastern Plateau Slopes) lived in numerous, small-scale political units which varied in size, in population and in political structure. In size they ranged from a few hundred to several thousand square kilometers, and in population from a thousand or fewer individuals to several thousand or more. In structure, they varied from chiefdoms in which the ruling chief exercised a lightly-felt "managerial" and ritual authority over the people who recognized his rule and paid him tribute, to aggregations of chiefdoms, or "paramountcies" as they may be called, in which the dominant chief's power was to a greater extent based on the organization and deployment of physical force.
>
> Chiefdoms were made up of a fluctuating number of local communities which were themselves composed of shifting clusters of homesteads. Ties of neighbourhood, of kinship (real or fictive), of clientship, and of marriage operated to bond communities, while at the level of the chiefdom a measure of political cohesion was provided through acts of accumulated tribute from chief to favoured or politically important adherents.

> Non-political ties tended to cut across political boundaries, and communities and chiefdoms alike were generally fluid and unstable entities, enlarging, splitting, forming and reforming, sometimes peacefully, sometimes violently, as members quarrelled over access to material resources and to the sources of power. (Wright and Hamilton 1989:57-58, parentheses mine).

In the foregoing discussions, by focusing on communities of mixed-farming people in social transformation, I have striven to provide an historical perspective to the later first-millennium archaeological record. This has been to reiterate my conviction that the society in question was dynamic in nature and in a continual process of change. By the opening centuries of the second millennium the nature of society at hand had been radically transformed.

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APPENDIX 1

POTTERY ANALYSES

MAMBA 84/5

Analysis of the Mamba 83/4 assemblage is based upon 19 reconstructed pots (Table 2) and 18 bowls (Table 5), all vessels being derived from deposits that date from the mid 7th to the late 8th Century. To facilitate the comparison of other EIA ceramic assemblages from the region with those described here and below, the system of analysis developed and refined by Maggs (Maggs and Michael 1976; Maggs 1980c,1984b; Maggs and Ward 1984) is employed. The respective pot and bowl characteristics employed (Table 1 and 4) and their attendant attribute combinations (Table 2 and 5) are shown below. Comparisons with the Ndondondwane assemblage (Maggs 1984b) are detailed in Tables 3 and 5.

TABLE 1

Pot Characteristics

NECK SHAPE / PROFILE
1. Pot with relatively straight, everted neck and well defined point of inflection.
2. Pot with curved everted neck.
44. Upright neck.

DECORATION POSITION
8. Whole of neck.
9. Upper neck.
32. Lower neck.
10. Body/neck junction.
11. Just below (attached to) body/neck junction.
12. On body (not attached to) body/neck junction.

MOTIFS
14. Band of several horizontal grooves.
15. Band of oblique hatching.
16. Two or more bands of oblique hatching.
34. Band or bands of even cross-hatching.

MOTIFS cont/
35. Band or bands of uneven cross-hatching.
17. Band of horizontal and oblique or vertical cross-hatching.
24. Band of alternate parallelograms, hatched.
21. Band of interlocking rectangles, hatched alternately vertically and horizontally.
19. Band of interlocking triangles, hatched.
20. Band of alternate (pendant) triangles, hatched.
37. Band or bands of opposed hatching <u>without</u> intervening groove. Two such bands form a herring bone pattern.
38. Band or bands of opposed hatching <u>with</u> intervening groove.
39. Cord effect, where a band is thickened to stand out in relief.
25. Quadrilaterals hatched. Pendant from body/neck junction or on body.
40. Quadrilaterals cross-hatched.
41. Applied decoration - bosses or strips.
28. Vertical row or rows of impressions.
29. Curvilinear motifs.
48. Burnish.

TABLE 2

Matrix of Mamba 83/4 pot attributes.
Column and row numbers refer to list of characteristics
Attribute totals and % of sample appear at the end of each row.

	2	44	32	10	11	14	15	16	34	37	38	39	41	28	48	<u>Tot</u>	%
2	-															11	58
44	-	-														8	42
32	9	5	-													14	74
10	2	1	-	-												3	16
11	-	3	1	-	-											3	16
14	1	-	-	1	-	-										1	5
15	-	2	1	-	-	-	-									2	11
16	5	-	4	1	-	-	-	-								5	26
34	4	5	6	1	-	1	-	-	-							9	47
37	-	1	1	-	-	-	-	-	-	-						1	5
38	4	2	4	1	-	1	-	1	-	-	-					5	26
39	5	4	8	1	1	2	5	1	3	-	-	-				9	47
41	-	1	1	-	-	-	1	-	-	-	-	-	-			1	5
28	-	1	-	-	-	-	-	-	-	-	-	-	-	-		1	5
48	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	5

These data show that, as with the Ndondondwane assemblage (Maggs 1984b) a large number of pots (42%) have upright necks (Table 3 & Fig.1), a characteristic that differentiates these assemblages from the earlier Msuluzi phase (Maggs 1980c). Its affinity to this early period is however indicated by the majority of vessels (58%) retaining a curved everted neck profile, and body shape is consistently spherical to subspherical (Fig.2:1,2).

TABLE 3

Attributes of pots from [MBA] Mamba 83/4 compared with [NDO} Ndondondwane (Maggs 1984b).

Attribute No.	NDO (c.750 AD)	MBA (c.660 AD)
2	67	58
44	29	42
8	19	-
9	2	-
10	-	16
32	79	74
11	2	16
14	10	5
15	26	11
16	-	26
34	45	47
17	2	-
24	10	-
19	2	-
37	12	5
38	7	26
39	7	47
40	2	-
41	-	5
28	-	5
48	7	5
n =	43	19

In contrast to the Ndondondwane assemblage there are no examples from Mamba 83/4 with completely decorated necks (Table 3). This was noticeable even on neck sherds that could not be reconstructed to whole vessels. As in the Ndondondwane assemblage decoration is confined mostly to the lower neck in the form of bands of even cross-hatching (Fig.1 & Fig.2:1,2,3). Certain inter-site differences are apparent (attributes 16, 38 and 39) and include the greater use of bands of oblique hatching, cord effect and bands of opposed hatching with intervening grooves. Only some 10% of the diagnostic sherds exhibited body decoration on the vessels. None of these could be sufficiently reconstructed to ascertain conclusively the shapes or profiles of the whole vessels. Body decoration occurs in the form of ladders, hatched parallelograms, applique strips, pendant triangles and interlocking panels of various shapes (Fig.2:4-8). Nearly all the pots are decorated, only one of the 19 being plain. Only one pot showed black burnishing, this characteristic being rare, even amongst the adiagnostic body-sherds and those diagnostic sherds not selected for analysis. For the purposes of analysis and comparison bowls are considered separately to pots, as detailed below.

TABLE 4

Bowl Characteristics

1. Subcarinated, thickened
2. Subcarinated, not thickened.
11. Subcarinated just below the lip.
12. "Msuluzi Bowl". These have a very distinctive shape, including a deep carination and a constriction towards the base.
3. Hemispherical.
19. Small, wide mouthed.
20. Wide mouthed.
4. Subspherical.
5. Lip profile rounded.
6. Lip profile flattened.
7. Lip profile tapered.
8. Groove or flute on lip.
18. Lip emphasis - external, internal or flared.
9. Horizontal groove below "carination".

10. Horizontal row or rows of individual impressions, usually along a groove.
13. Row of impressions on lip.
14. Band of grooves, hatching or cross-hatching.
15. Two or more bands of grooves, hatching or cross-hatching.
16. Panel infilled with hatching, cross hatching or other grooved motif.
17. Burnish including red or black.

TABLE 5

Matrix of Mamba 83/4 bowl attributes

Column and row numbers refer to list of characteristics
Attribute totals and % of sample appear at the end of each row and are compared with Ndondondwane (Maggs 1984b).

	2	3	19	20	4	5	6	7	8	14	17	10	Tot.	[MBA] %	[NDO] %
2	-												2	11	19
3	2	-											13	72	28
19	-	3	-										4	22	-
20	2	10	1	-									11	61	28
4	-	1	-	1	-								5	27	30
5	2	6	4	4	2	-							9	50	65
6	-	5	-	5	-	-	-						5	27	30
7	-	1	-	1	1	-	-	-					2	11	7
8	-	2	-	2	-	-	1	-	-				2	11	-
14	1	1	-	1	-	1	-	-	-	-			1	6	-
17	1	1	-	1	-	1	-	-	-	1	-		1	6	22
10	-	-	-	-	-	-	-	-	-	1	-	-	1	6	2

Bowls are generally undecorated and burnish is rare. Only one bowl exhibited decoration, in the form of a band of opposed hatching (Fig.3:7). Most bowls are widemouthed to hemispherical in shape (Fig.3:1-6 & Fig.4:1-3), and rounded lip profiles predominate (Table 4). The noticeable lack of burnish, and the rough finish on the large wide-mouthed bowls, is suggestive of a highly functional vessel in very common usage. A decorated pot (Fig.4:9), with its neck ground away, appears to have functioned as a globular bowl.

The co-presence of specific and diagnostic attributes within the Mamba 83/4 and Ndondondwane (Maggs 1984b) assemblages (Table 3) is now firmly established by a series of C_{14} dates. In particular, it is the characteristic lower-neck location of decoration and the rarer presence of body decoration (as opposed to earlier "Msuluzi-type" expressions) that I considered sufficient grounds for ascribing a late 7th to 8th Century date to pottery sherds sampled from the number of smaller, disturbed sites described in Chapter 4, and discussed further in Chapters 7 to 10. These discernable shifts in pottery expression are discussed in greater detail with regard to the Wosi 84/5 assemblage described below.

WOSI 84/5

For ease of comparison the percentage occurrence only of the diagnostic pot attributes is tabled (Table 6). This is to facilitate the illustration of intra-site sample differences, and the relationship of the two period type-sites, Ndondondwane (Maggs 1984b) and Msuluzi Confluence (Maggs 1980c), to Mamba 83/4 and the respective grids excavated at Wosi 84/5.

The depth of deposit at Grid II, and the discernible occupation horizons, have provided an opportunity to assess pottery-style shifts over a period of nearly 200 years. Throughout the deposit there is no change in the neck profiles of pots, all having curved everted necks (attribute No. 2). Decoration on the whole

TABLE 6

Percentage occurrence of attributes of pots from Wosi 84/5 and [MBA] Mamba 83/4, compared with [NDO] Ndondondwane (Maggs 1984b) and [MZ] Msuluzi (Maggs 1980c).

Attribute.	No.	[MBA]	[NDO]	Wosi [GI+GIII]	Wosi [GII:1+2+3]	Wosi [GIV+GV+GVI]	[MZ]
	2	58	67	81	100	95	100
	44	42	29	19	-	5	-
	8	-	19	38	67	53	80
	9	-	2	-	10	-	2
	32	74	79	62	12	-	79
	11	16	2	24	41	26	2
	12	-	-	3	29	37	-
	14	5	10	16	29	16	4
	15	11	26	11	14	11	9
	34	47	45	22	12	16	22
	35	-	-	8	30	5	38
	17	-	2	3	4	-	4
	23	-	-	14	4	37	20
	36	-	-	3	4	5	11
	24	-	10	-	6	11	-
	19	-	2	5	10	21	9
	20	-	-	5	22	32	-
	37	5	12	32	21	42	24
	38	26	7	8	6	-	16
	39	47	7	19	6	16	2
	25	-	-	-	8	11	6
	40	-	2	8	2	5	9
	29	-	-	3	2	-	2
Burnish	48	5	7	8	8	5	2
	n =	19	42	37	49	19	45

neck (No.8) is most prevalent in the older deposits and decreases significantly in the younger deposit. Lower neck decoration (No. 32) is absent in the older deposits and increases in prevalence through time. Pendant decoration from the body neck junction (No. 11) is also a characteristic that decreases in frequency from the older to the younger deposits, as do the various decorative motifs in general (Figs.5-10).

Thus it is apparent that Grids II, IV, V and VI (Table 6) are stylistically closest to the Msuluzi type-site (Maggs 1980c. See Figs.6,7,9&10). The data would further indicate that Grids I and III are stylistically closer to Mamba 83/4 and Ndondondwane than to the samples derived from the other middens at Wosi 84/5, with lower-neck decoration on an upright neck profile predominating (Figs.5&8). Whole-of-neck decoration is uncommon, and remains rather a dominant characteristic of the typical earlier "Msuluzi" type assemblages. Upper neck decoration (characteristic 9) is rare throughout the analysed samples. Decoration motifs pendant from the body neck junction of vessels are well represented in the earlier period, a characteristic that becomes rarer in the later period, and further groups this later period with Mamba 83/4 and Ndondondwane. Noticeable too is the low occurrence of actual body decoration in the later period. Body shapes throughout the analysed samples are consistently spherical to sub-spherical, although two vessels from Grid II layer 1, and the fragmented pot from the pit in Grid III (Fig.8:1), exhibited a deviation in the form of a marked shoulder emphasis. Pots burnished with either graphite or red ochre are present, but rare, in the respective assemblages. Rare body decorations are illustrated in Fig.11.

TABLE 7

Percentage occurrence of attributes of bowls from Wosi 84/5 compared with [MBA] Mamba 83/4, [NDO] Ndondondwane (Maggs 1984b) and [MZ] Msuluzi (Maggs 1980c).

Attribute No.	[NDO]	[MBA]	Wosi [GI+GII:1+2 +GIV]	[MZ]
1	-	-	2	2
2	19	11	2	-
11	-	-	13	13
12	-	-	33	4
4	30	27	31	-
3	28	72	64	80
19	-	22	18	-
20	28	61	47	-
5	65	50	44	44
6	30	27	33	44
7	7	11	2	6
8	-	11	-	-
18	2	-	7	-
9	-	-	7	-
10	2	6	2	4
13	-	-	-	6
14	-	6	9	4
15	-	-	5	7
16	-	-	5	4
17	22	6	27	6
n =	26	18	55	45

The vessels in the Wosi bowl assemblage display a variety of shapes, hemispherical, wide-mouthed bowls, however, being the most common (Fig.12:1,2,3). These tend to be undecorated and lack burnishing. Typical "Msuluzi" bowls (attribute no.12), as described by Maggs (1980c) from the type-site, are well represented in the Wosi assemblage (Fig.13:5,6,7). Prior to obtaining the sequence of C-14 dates and the completion of the formal pottery analysis, the occurrence of these characteristic bowls during excavation assisted in providing a tentative date to the respective midden deposits. Comparatively, more bowls are burnished in the Wosi assemblage than pots, red and black burnish being equally represented. For comparative purposes the percentage occurrence of attributes are tabled (Table 7), together with those from Mamba 83/4, Ndondondwane (Maggs 1984b) and Msuluzi Confluence (Maggs 1980c).

MAMBA 86/7

An assessment of 30 rim sherds, four reconstructed vessels, and 10 bowl fragments indicated the material to be comparable to that from the 7th Century AD Msuluzi type-site (Maggs 1980c) and the 6th Century AD occupation at Wosi (see Wosi 84/5 above). On the basis of these correlations it was assumed that these deposits dated to an earlier, probably 6th to early 7th Century occupation. (See Figs.14&15).

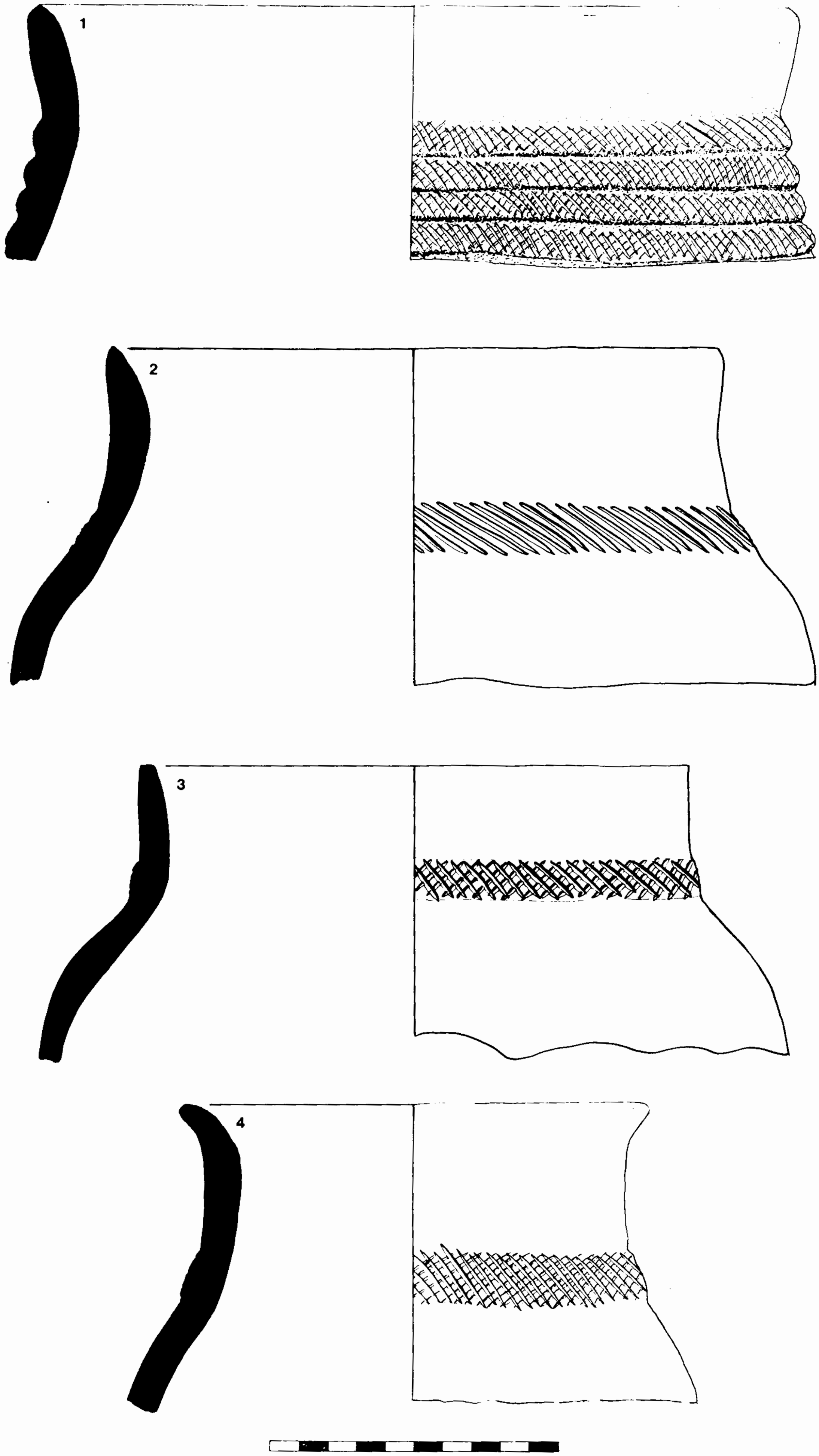

Fig.1. Mamba 83/4. Typical pots. Note upright neck profile and location of decoration on lower neck.

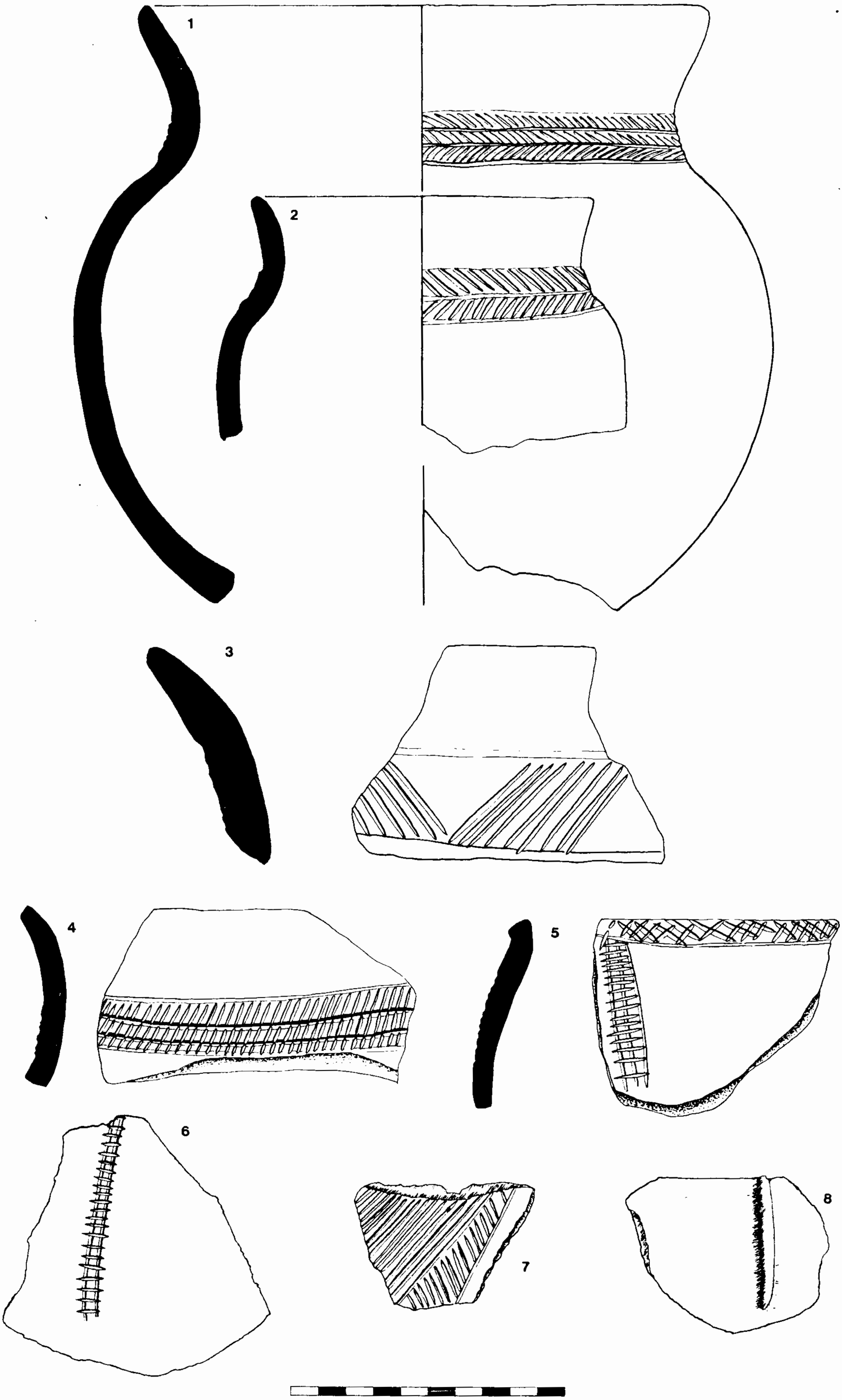

Fig.2. Mamba 83/4. Pots with curved everted necks, 1-3.
Rare body decoration, 4-8.

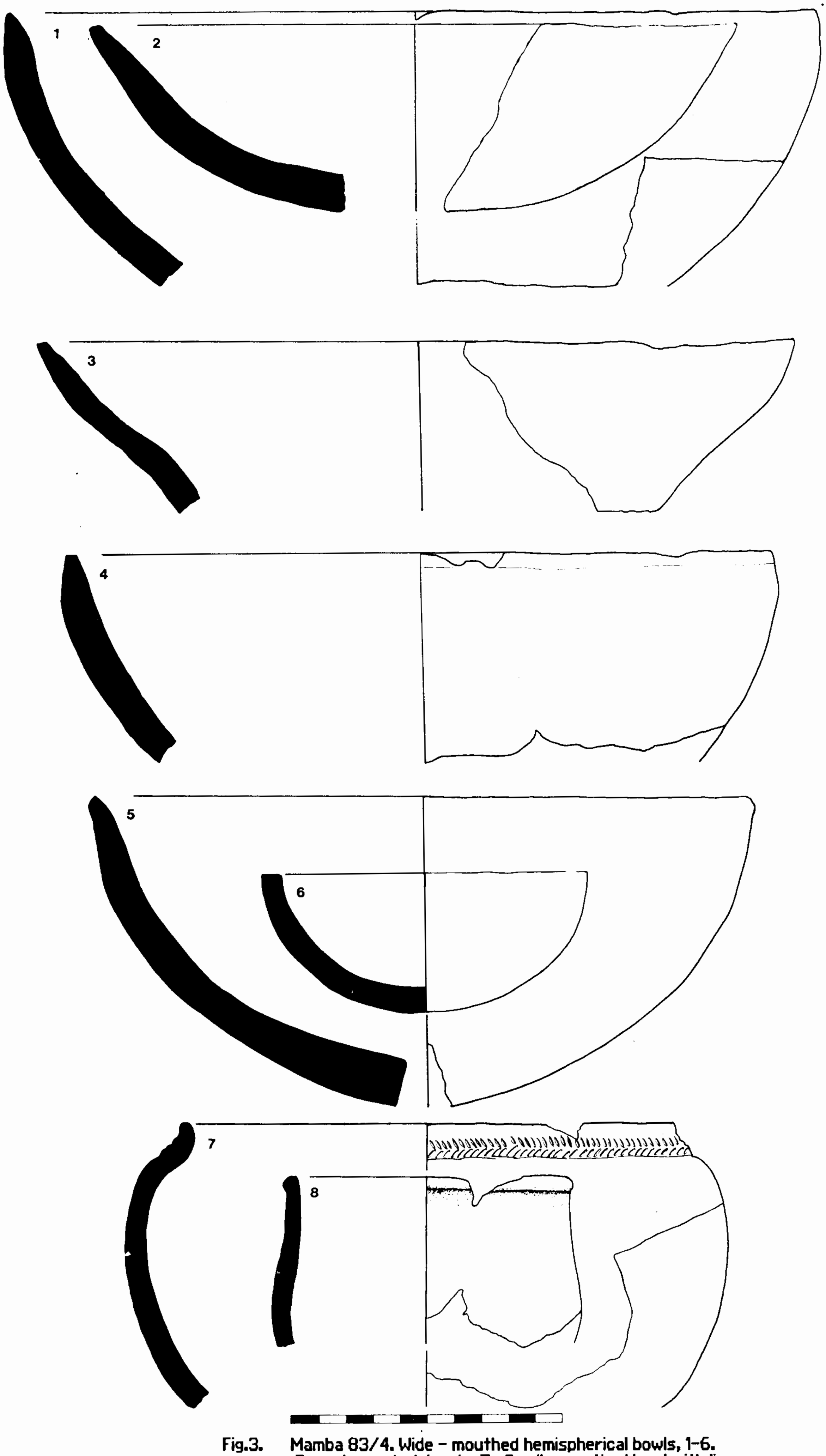

Fig.3. Mamba 83/4. Wide - mouthed hemispherical bowls, 1-6. Rare decorated bowl - 7. Small - mouthed bowl with lip emphasis - 8.

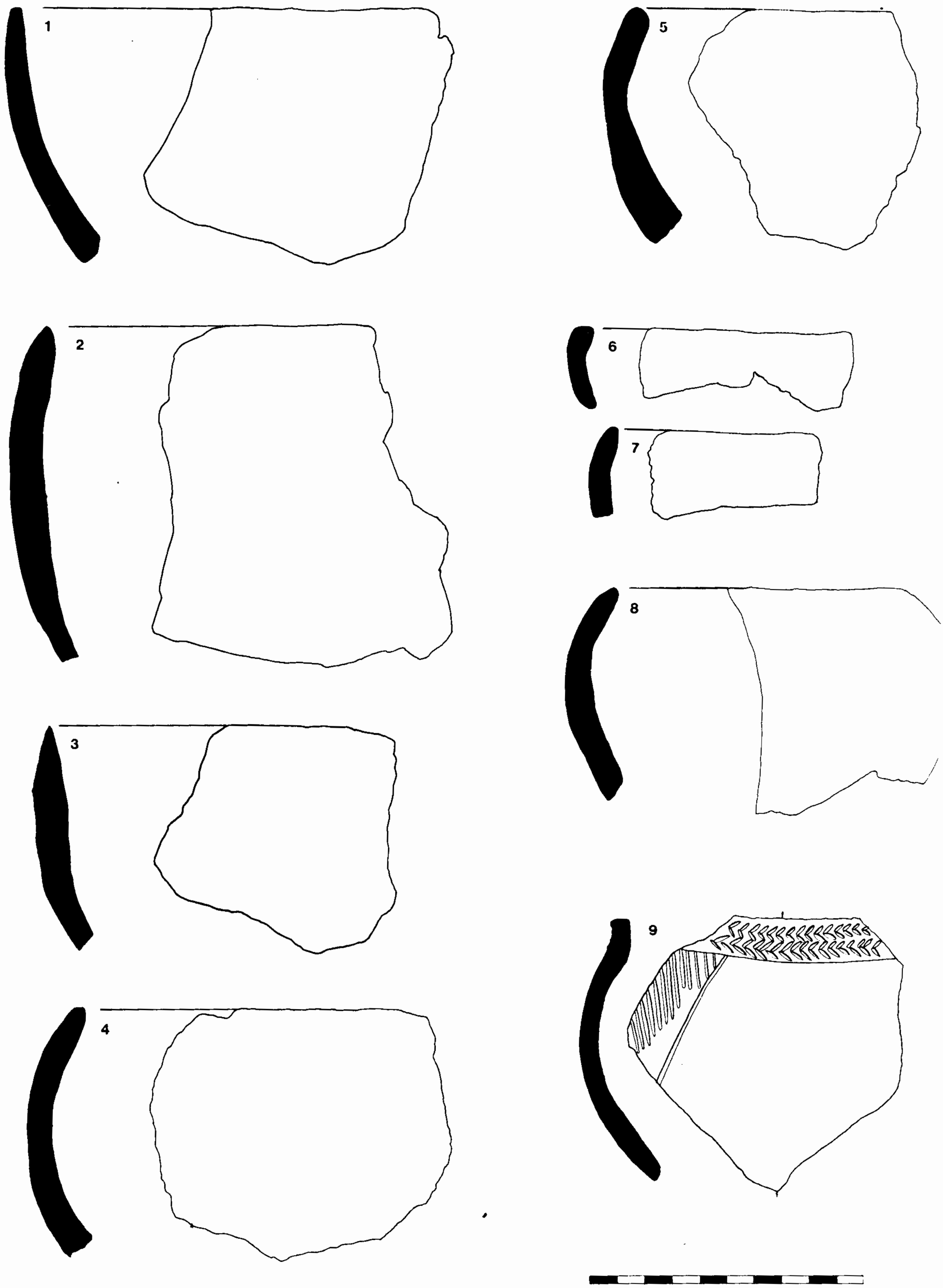

Fig.4. Mamba 83/4. Wide – mouthed hemispherical bowls, 1–3. 4–8 are subspherical bowls. 9 – decorated pot with neck apparently purposefully removed.

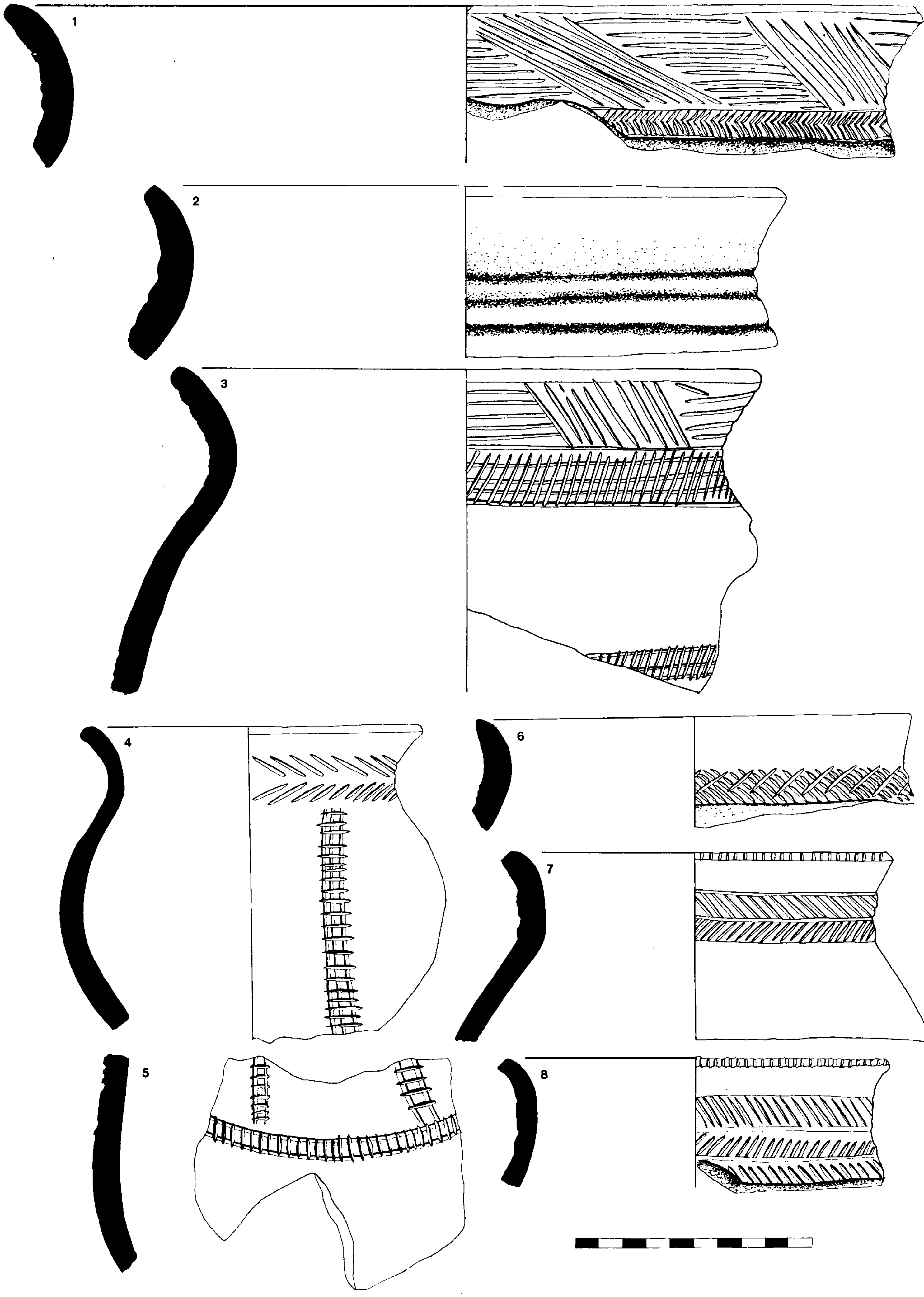

Fig.5. Wosi 84/5. Grid I. Typical pots.

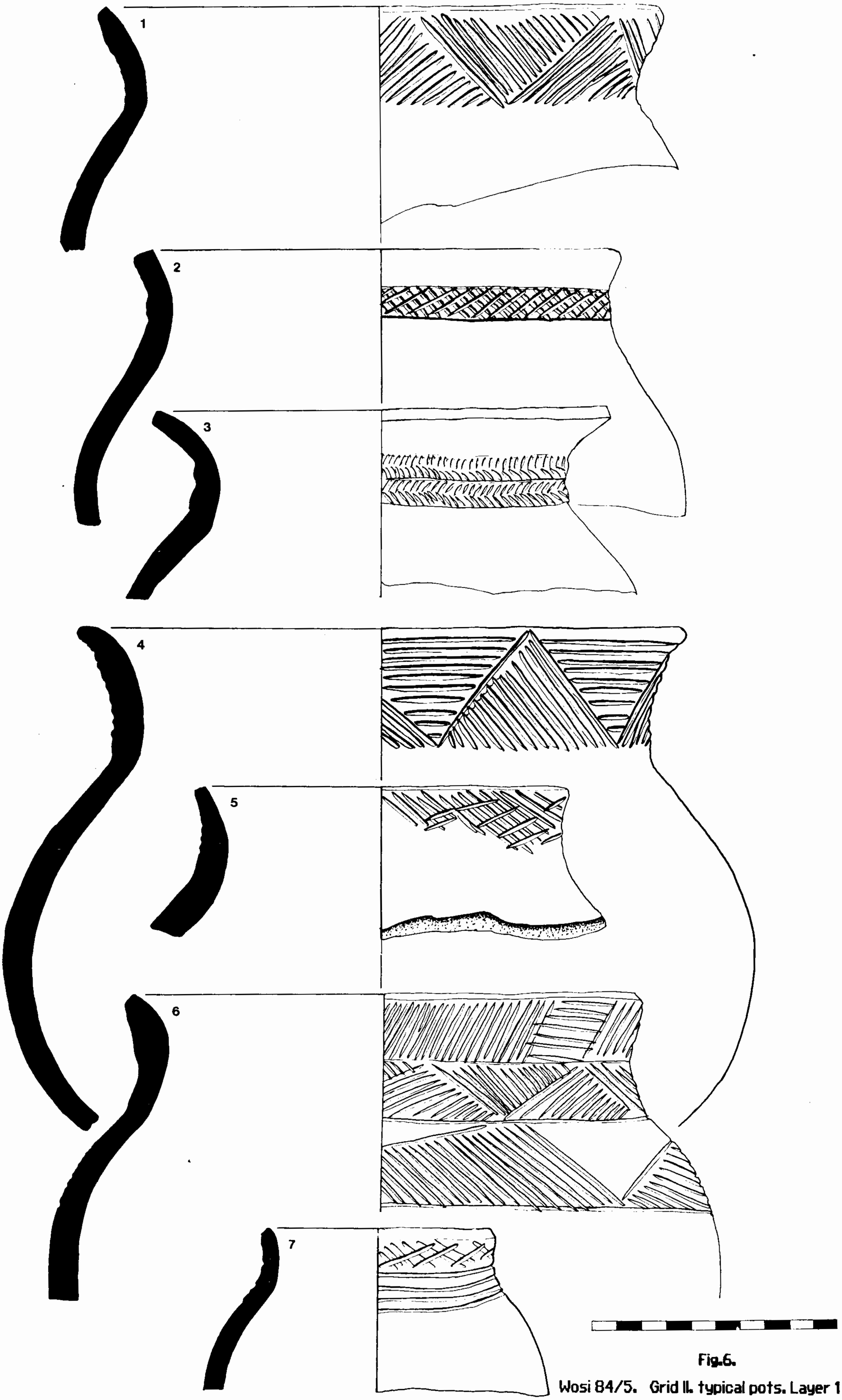

Fig.6.

Wosi 84/5. Grid II. typical pots. Layer 1 and 2.

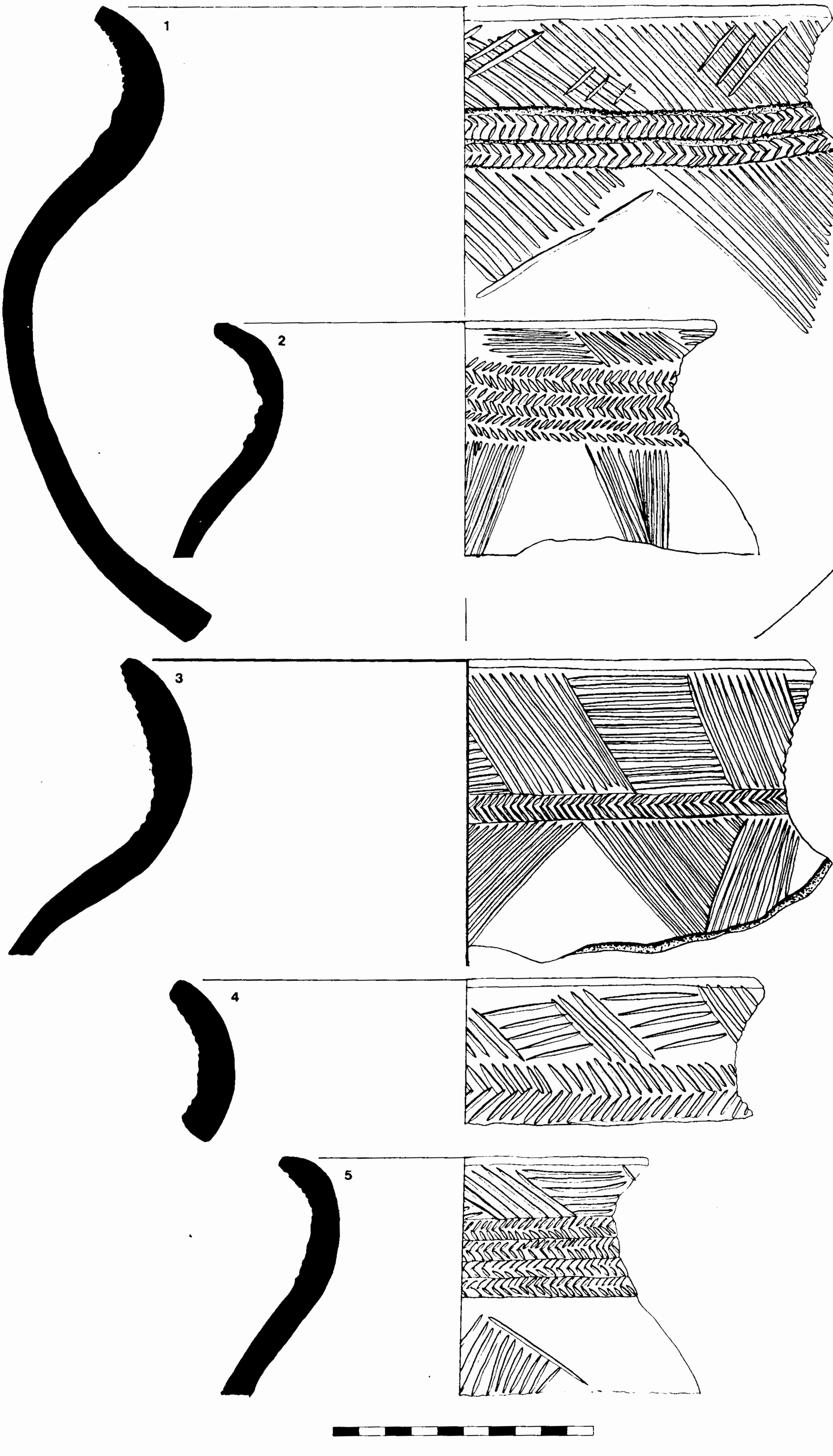

Fig.7. Wosi 84/5. Typical pots. Layer 3 Note typical "Msuluzi" hanging pendant triangles. 1, 2.

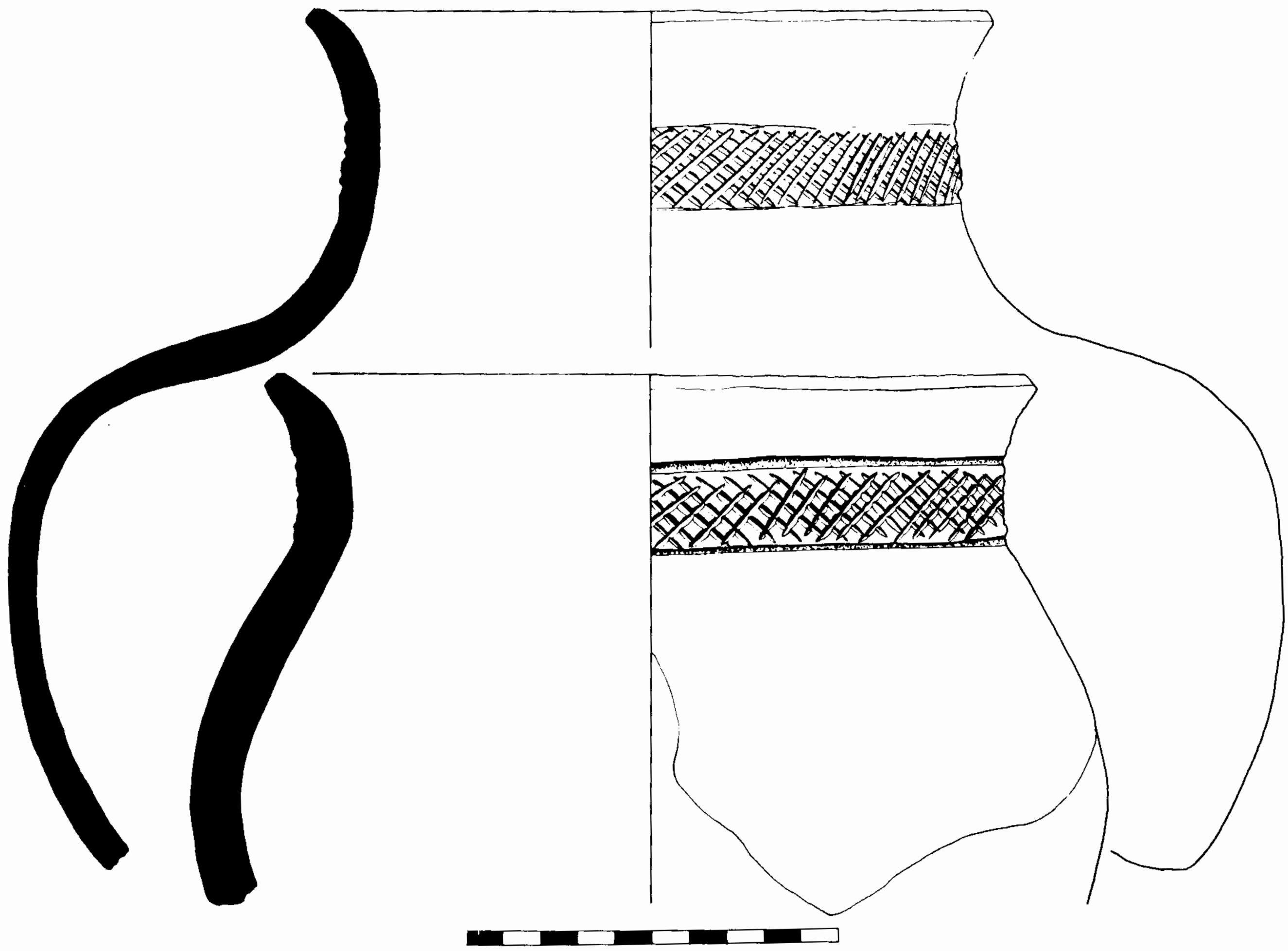

Fig .8. Wosi 84/5. Pots from Grid III. The larger vessel has an unusually pronounced shoulder emphasis.

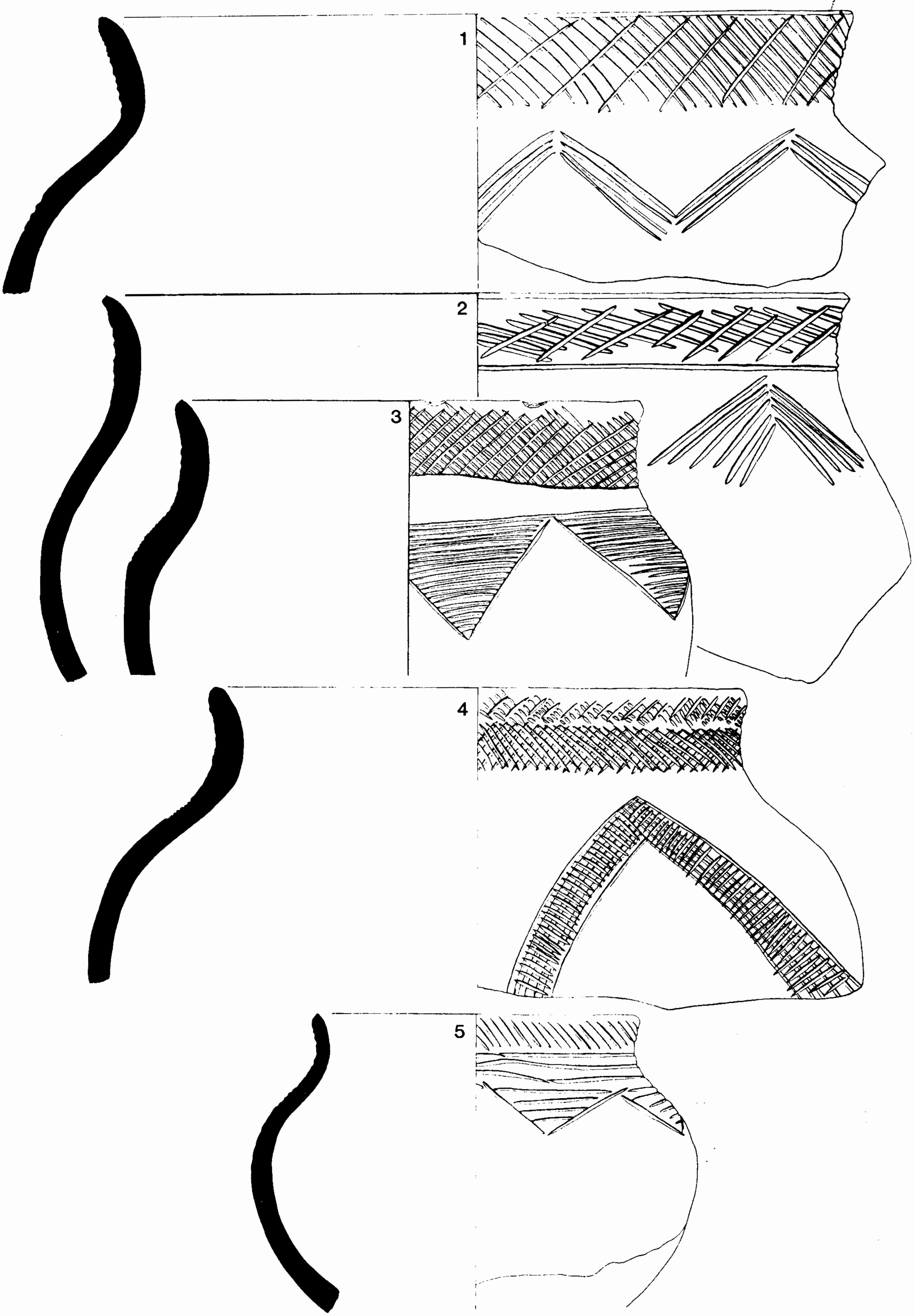

Fig.9. Wosi 84/5. Large pots. grid IV, 1-3. Grid IV, 4 & 5.

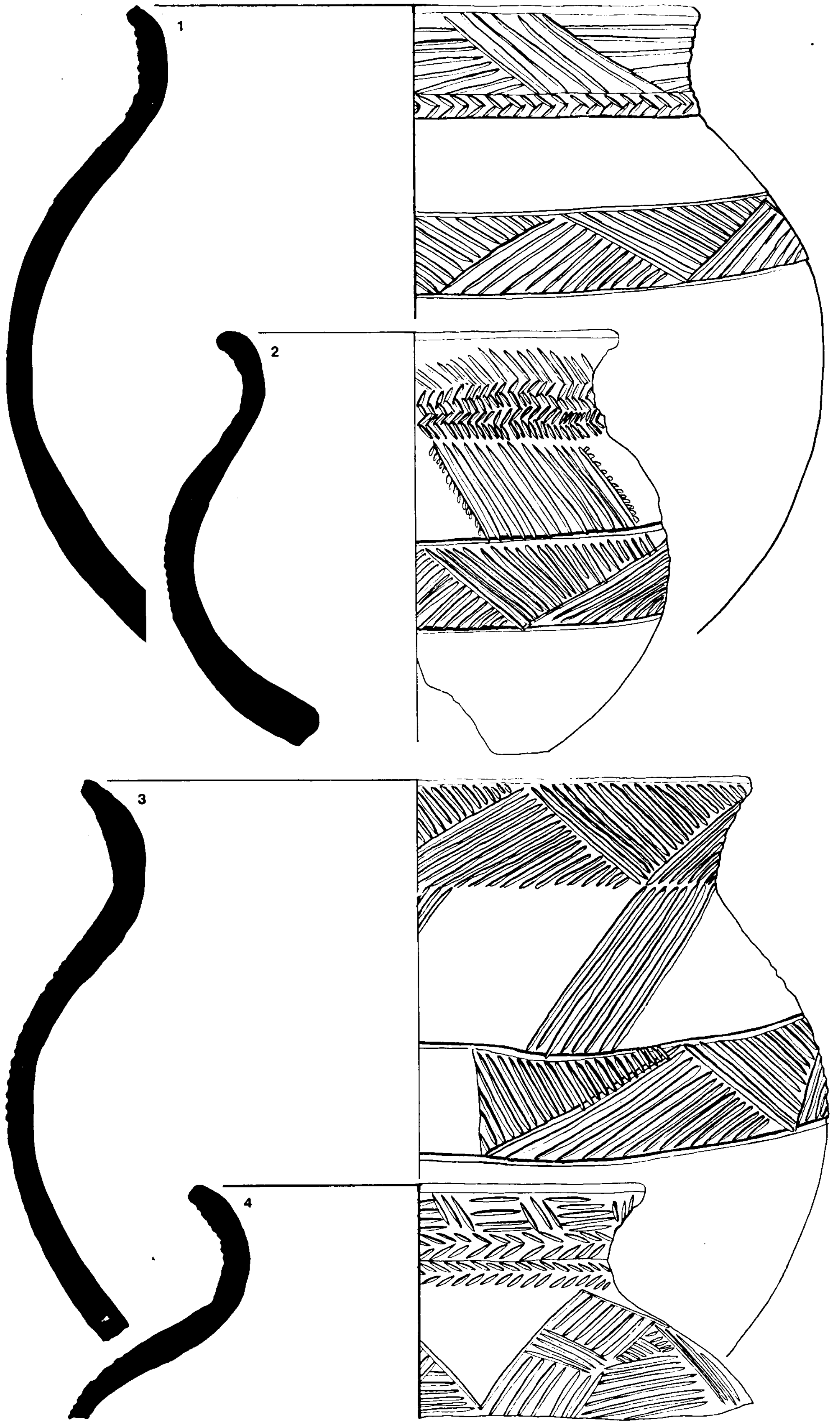

Fig.10. Wosi 84/5. Typical pots. Grid VI.

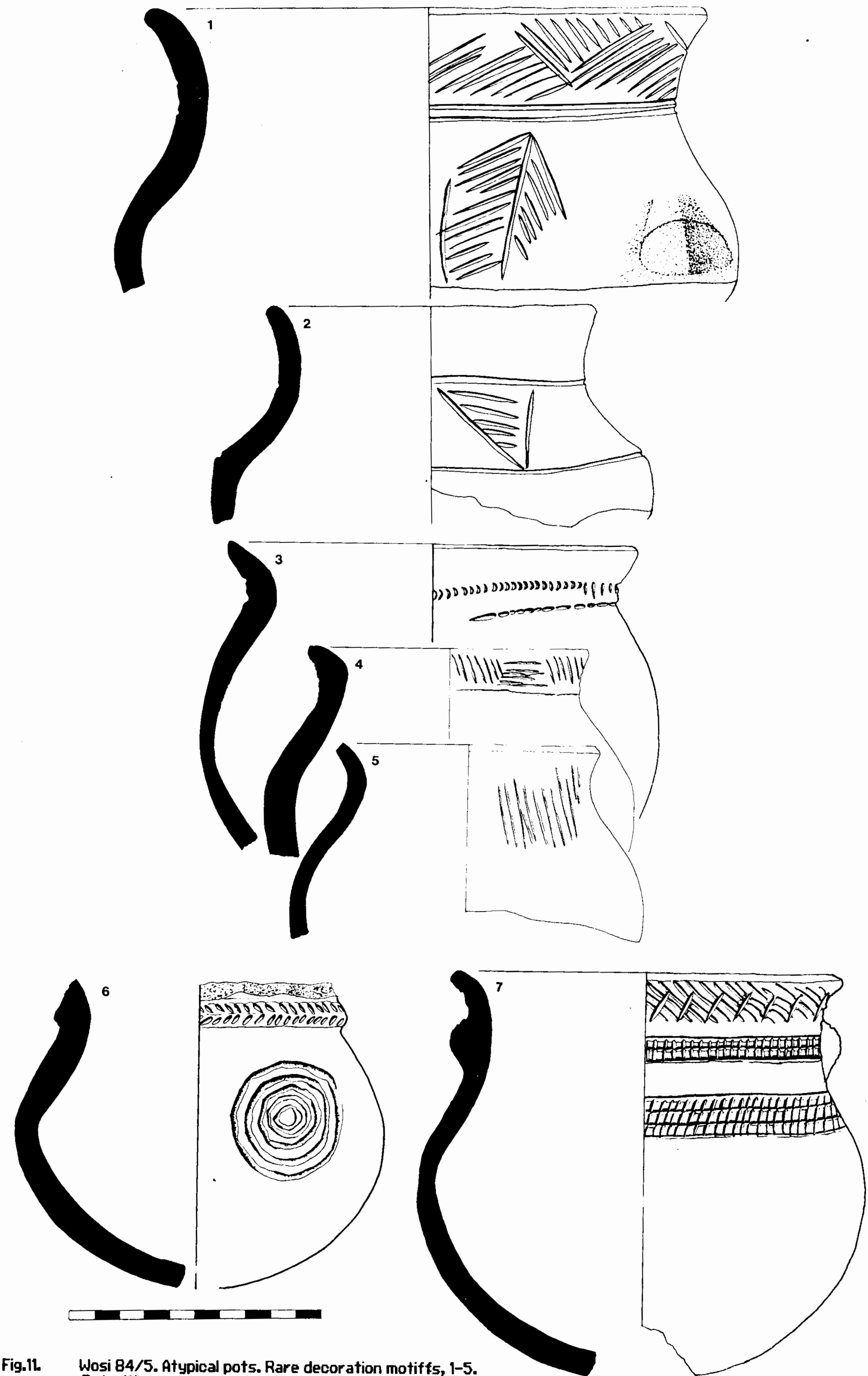

Fig.11. Wosi 84/5. Atypical pots. Rare decoration motiffs, 1-5. Pot with rare spiral decoration and purposefully removed neck, 6. Lugged pot, 7.

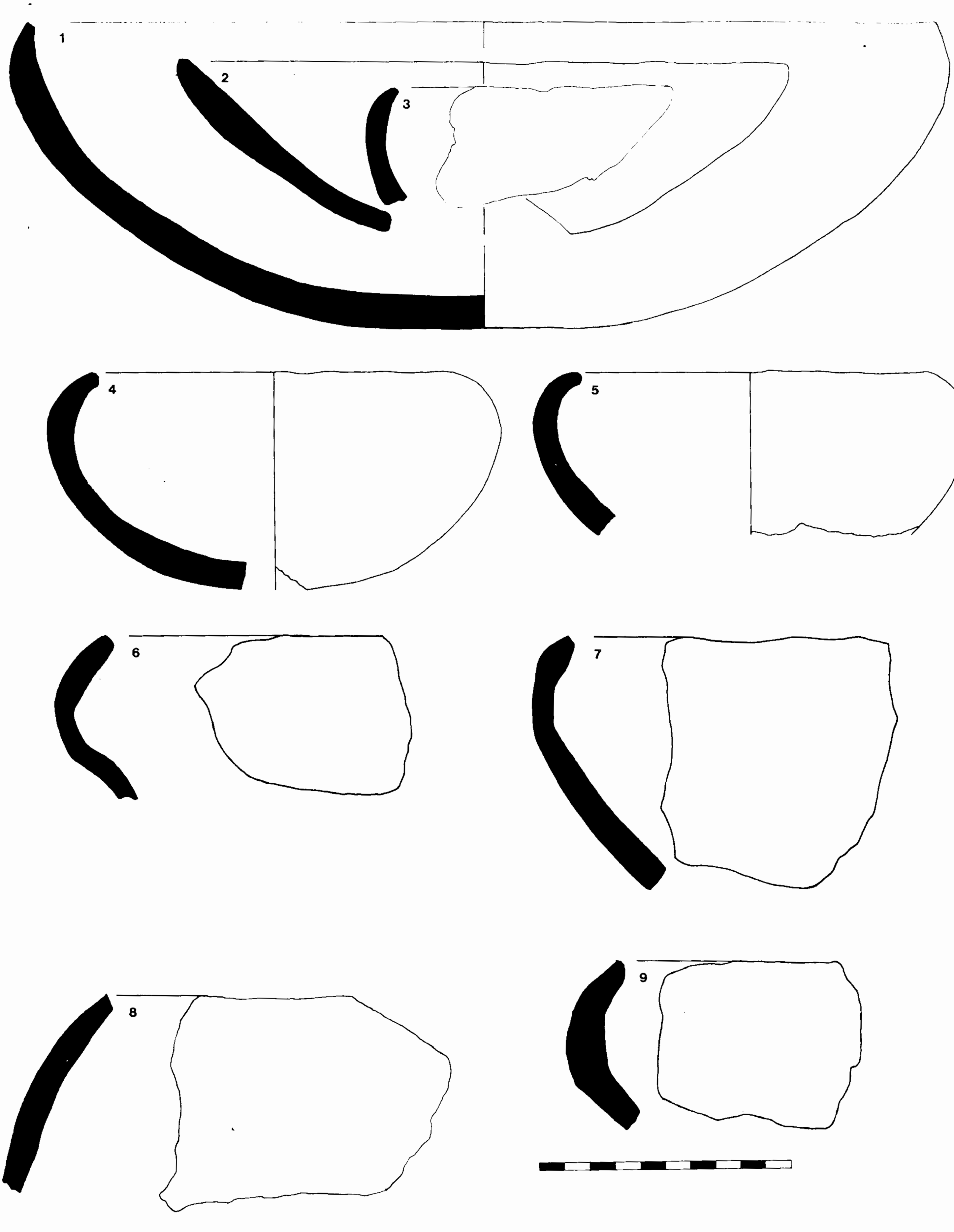

Fig.12. Wosi 84/5. Bowls.
1-3 are wide-mouthed, 4-5 are subspherical and 6,7,9 are subcarinated. 8 is a globular pot.

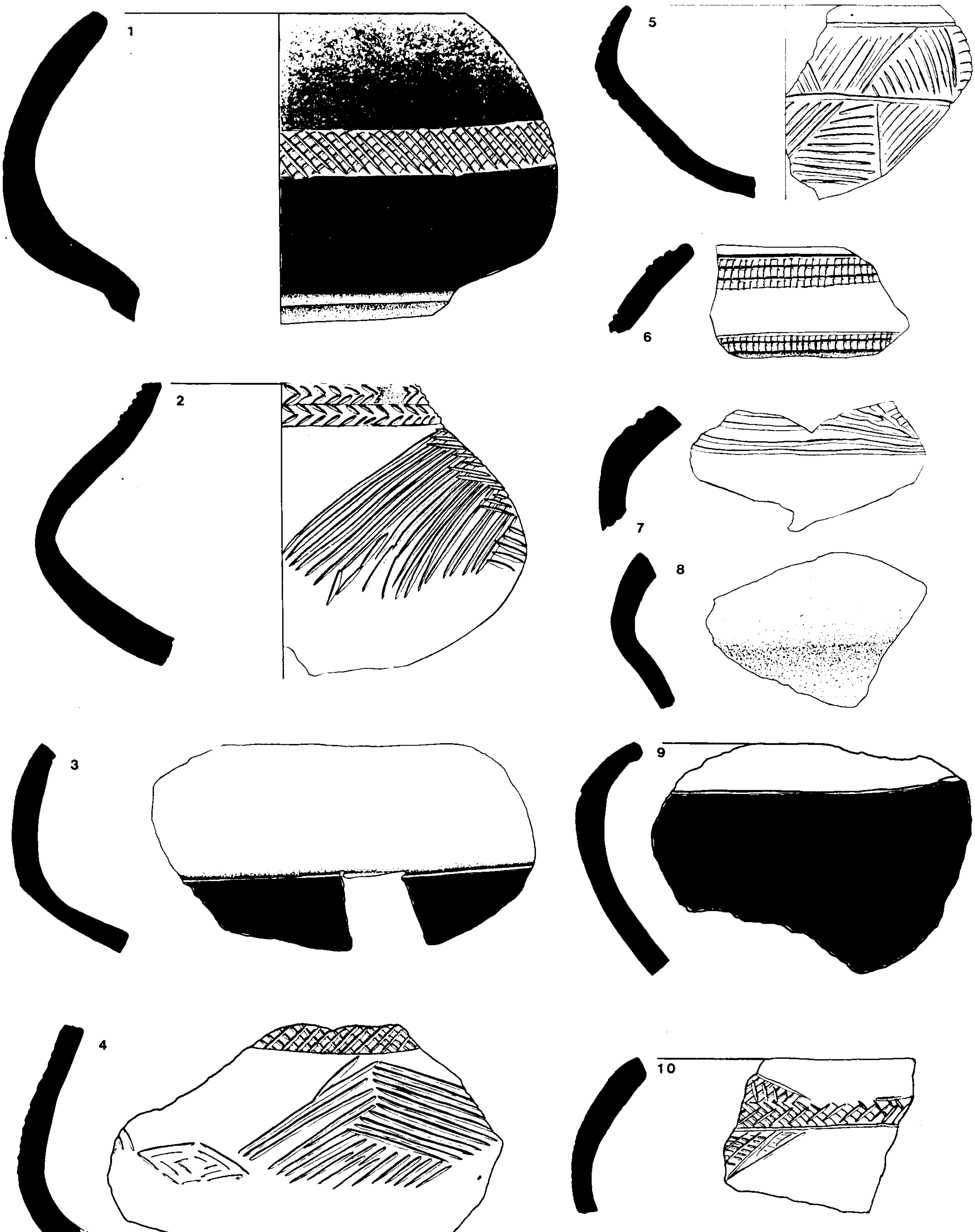

Fig.13. Wosi 84/5. Bowls.
1–4 are subcarinated bowls, 1&3 with constricted bases.
5–7 are "Msuluzi" bowls. 9 & 11 have black burnish.
8 has a slight red burnish. 10 is a decorated subsperical bowl.

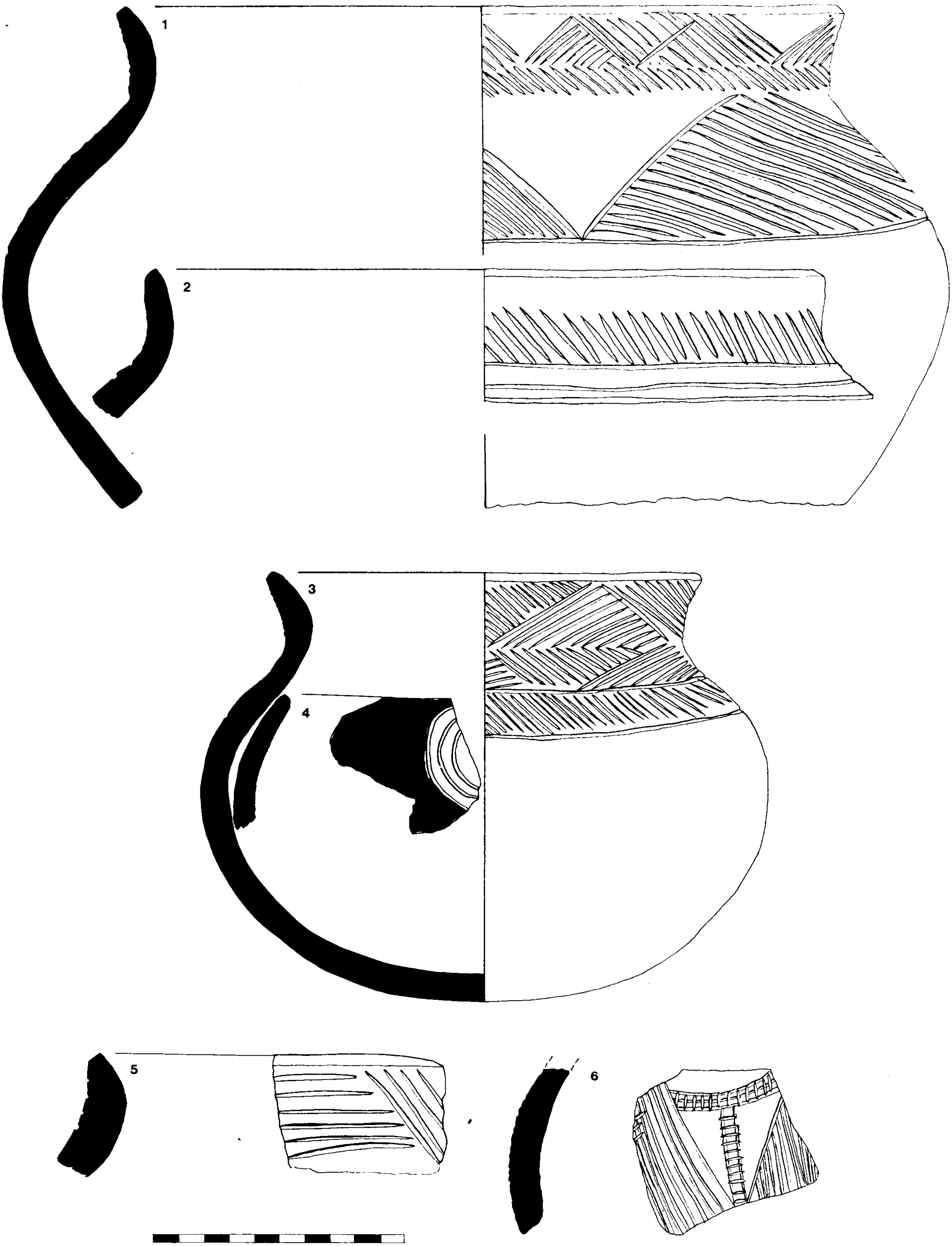

Fig.14. Mamba 86/7. Pots.
1 has a strange deflated shape and a pronounced shoulder emphasis. 4 is a globular pot with spiral decoration.

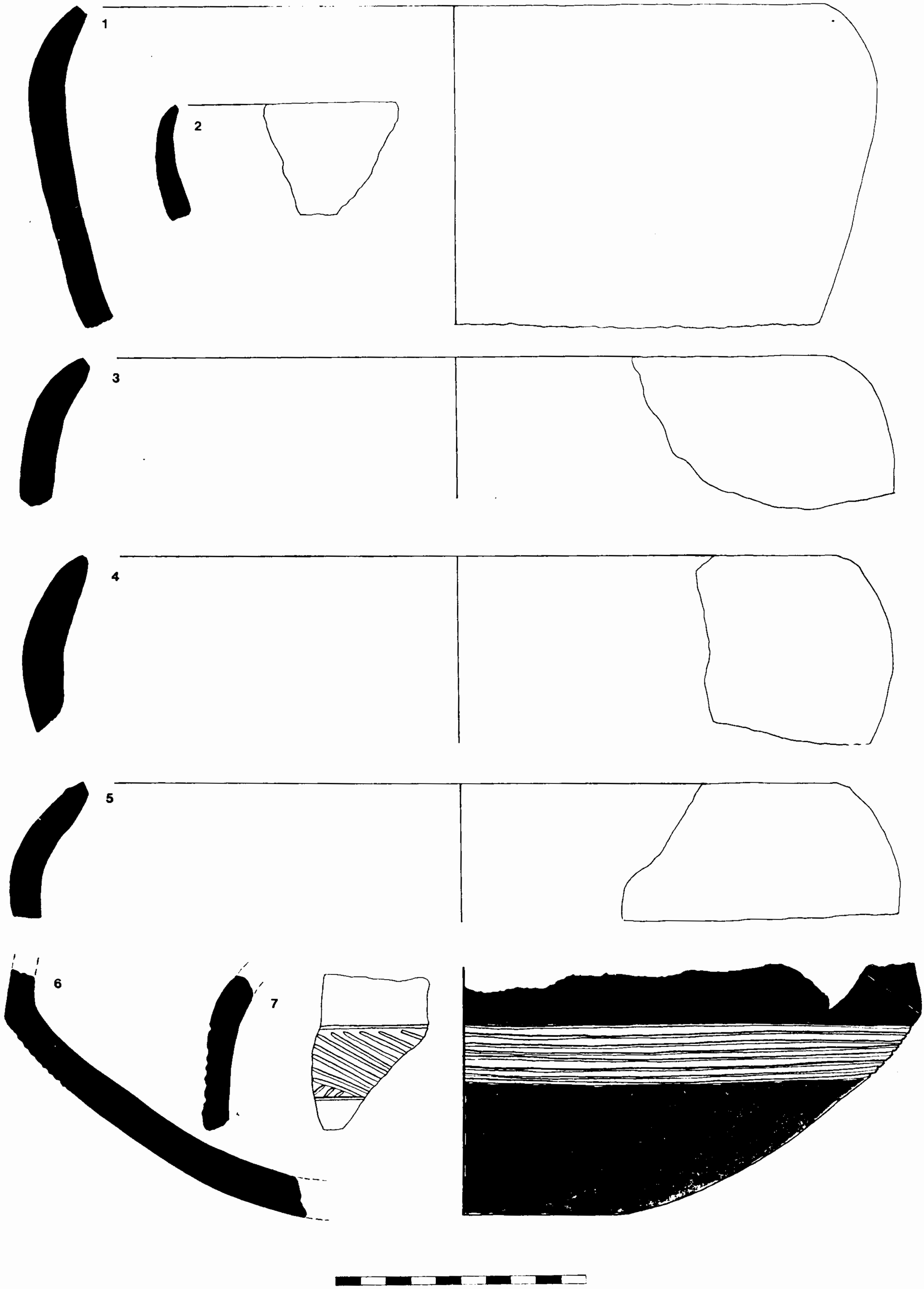

Fig.15. Mamba 86/7. Bowls.
1 & 2 are hemispherical wide - mouthed bowls. 3-5 are large subspherical bowls. 6&7 are "Msuluzi" bowls.

APPENDED UNPUBLISHED SPECIALIST REPORTS

WOSI AND MAMBA: FAUNAL ASSEMBLAGES AND EARLY IRON AGE ACTIVITIES IN THE THUKELA BASIN

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WOSI AND MAMBA : FAUNAL ASSEMBLAGES AND EARLY IRON AGE ACTIVITIES IN THE THUKELA VALLEY.

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INTRODUCTION

As a result of a regional survey of a section of the lower Thukela River Valley, a number of Early Iron Age sites were located. Three of these were selected for excavation - Ndondondwane, Mamba and Wosi - and the faunal remains submitted for analysis.

The present report is concerned with two of the sites, the third being part of a larger faunal study. The method of analysis was similar to that used for other Natal Iron Age sites (e.g. Voigt 1984) except that the taphonomy of the collections was not taken into consideration. Detailed records of the collections are housed at the McGregor Museum, Kimberley and the collections themselves are housed at the KwaZulu Cultural Museum at Ulundi.

MAMBA 83/4.

There were two phases of excavation on this very interesting and specialised site. The faunal sample treated here is small and unfortunately consisted almost solely of material regarded by the first excavator, R. Wade, as being identifiable. It is nevertheless interesting because it comes from four distinct types of activity areas as identified by L. van Schalkwyk. The total analysed sample is listed in Table 1; this shows the low proportion of unidentifiable material. All the samples are dominated by remains of domesticated bovids; it is the disproportion between ovicaprine and *Bos taurus* remains which is particularly interesting.

Area II (AII) was a 25 square metre excavation into an ashy soil rich in cultural material and bone. It is assumed to be a dump area for domestic rubbish. Charcoal and bone samples gave two dates of AD 650 and AD 560.

Cattle remains outnumbered ovicaprine remains in a ratio of 2:1. At least three specimens of *Ovis aries* were present; there was no clear evidence for the presence of *Capra hircus*. One male and one female specimen of *O. aries* and of ovicaprines was noted.

A well-preserved horncore of Nguni (Sanga) type was found as well as a major portion of a poll which suggested the profile of the Afrikaner breed. The presence of both breeds has previously been noted on Iron Age sites (Voigt 1983).

All age groups were present with a relatively high number of very young animals among the *B. taurus* remains. If the deposit represents dietary remains from a living area then the occupants were utilising their herds and flocks without much restraint.

Bones from the forelimb, pelvis and lower hind limb were best represented among the *Bos taurus* skeletal parts while scapula, pelvis and femur were the most common ovicaprine skeletal parts.

This excavation produced the widest range of species (Table 2). The bovid species indicate a relatively closed environment as do the felids. The *otter* would have been caught on or near the river bank. The presence of carnivores suggest hunting for pelts: it is interesting that felids occur in three of the four assemblages, an unexpectedly high rate of occurrence.

The presence of domestic dog is also of interest; as domestic dog is present at Wosi as well it is clear that Man's best friend was around all the early Iron Age settlements in the Thukela Valley.

Area IV (AIV) was a series of trenches and pits in a deposit of approximately 25x30m in extent. The deposit included phytoliths and therefore probably represents the deposit of a stock enclosure, the level of fragmentation in the phytoliths suggesting a cattle enclosure. The excavation has been dated to AD 650.

It is therefore not surprising that this area has the lowest bone density. Cattle remains are slightly more common that ovicaprine remains. The presence of mountain reedbuck bones is again an indicator of a relatively closed, rugged habitat and a felid is again present .

The few cattle teeth present were from young mature animals.

The low bone density could relate to the function of the area in two ways: either the discarding of bones in the enclosure was avoided, or those that were discarded were so heavily fragmented that they did not survive. An example of such fragmentation was seen at Ondini, when all that remained of the adult ox eaten in the *isibaya* during the opening celebrations was a scatter of a few dozen burnt bone fragments less than 5cm long. Such ritualistic behaviour is not conducive to the preservation of archaeozoological material.

Test Trench 3 also exposed cattle enclosure deposit; it yielded very little bone material.

Area VII exposed a thin clay floor and the remains of a collapsed hut. An area of 4mx5m was identified; the date obtained for this area was AD 660.

The assemblage is dominated by domesticated bovids, with cattle remains being in the majority. A third of the cattle and of the ovicaprine remains are teeth. Both *Capra hircus* and *Ovis aries* were identified.

The teeth which could be aged showed slightly more mature animals than in the dump area; however, if the groups from the two areas are combined we get an almost even distribution of ages.

The skeletal parts show an emphasis on extremities among *Bos taurus* remains with a relatively even distribution across the axial skeleton among the small stock .

Once again domestic dog and mountain reedbuck are present, as well as an isolated fish . Parts of at least two individuals of grey duiker attest to hunting; this is the only assemblage lacking carnivore remains. If skins were being processed in the vicinity the waste material was being carefully dumped away from the living floor.

Oven 1 (OV I) This excavation revealed the debris from iron-smelting; bone collagen produced a relatively late date of AD 780 for the debris. It is, however, regarded as being contemporary with the other features.

The excavation yielded the largest faunal assemblage from Mamba. It is again dominated by cattle remains in almost a 3:1 proportion in relation to ovicaprines. The large number of teeth is particularly noticeable; a high proportion of these are from young and very young animals. The age curve for cattle shows a distinct bias towards young and young mature animals. Among the ovicaprines there is an even age distribution with no clear peak.

There was no evidence for *Capra hircus* in the sample. The presence of a bifid thoracic vertebra indicated the presence of an humped animal among the cattle.

Three sizes of domestic dogs are present. Felid remains are also again present alongside grey duiker, hippopotamus and elephant .

The body part distribution for *B. taurus* shows a fairly even representation of limb bones. Among the ovicaprines forelimb bones are more common than hindlimb. The figures suggest that the smelters were possibly being supplied with complete carcasses for meat.

The quantity of bone present in a smelting dump also raises the possibility that the bone was being used as a flux. When viewed against the quantity from the occupation deposit (AII) this would appear to be a more likely explanation than a dietary one. This possibility could be tested by an analysis of the slag or ash for C13 content.

The overall picture presented by the faunal sample is of a settlement in which small and large stock played an important part. Cattle bones and cattle minimum numbers are higher than those of small stock. In the only reasonable sample (OVI) cattle outnumber ovicaprines 2:1 on MNI counts and 3:1 on bone counts. Overall cattle bones make up 67% of the bone sample of domesticates.

Goats may have been more common than the bone counts suggest; but the example of Wosi and Ndondondwane suggest that sheep were the dominant small stock.

Mamba forms an intermediate link between Wosi and Ndondondwane in terms of dates and stock proportions. The proposal that large stock were traded for iron in a contact situation with other mixed agriculturalists in the area is an attractive one. Certainly the presence of San bone tools and marine shells indicate a network of contacts which would allow for free movement of desirable commodities.

The wild species present indicate exploitation of relatively closed environments, suggesting access to more heavily bushed environments than are present in the valley today. The number of felid remains is high for so small a sample; as they occur in three of the four activity areas it argues for deliberate hunting/snaring for pelts. Whether these could also be for trade or whether they would have some ritual significance as clothing or smelting medicine we cannot at present say. Carnivore remains are certainly more common on earlier sites than later ones - but this could also be due to the pressure of increasing human populations forcing smaller carnivores out of their natural habitats.

WOSI 84/5

The Wosi site is characterised by the presence of twenty-two middens, of which eleven were relatively undistributed. Each midden unit consisted of a well-defined mound of ash-soil matrix containing potsherds, faunal material and other cultural remains. The maximum number of discernable layers was four, representing two periods of occupation. Layers 3 and 4 represent the earlier occupation period with dates clustering around AD 520. Layers 1 and 2 represent the later and terminal occupations respectively with dates of around AD 660. A stylistic shift in pottery styles is observable between the two periods of occupation, notably Msuluzi phase in the earlier occupation with an increasing affinity for Ndondondwane pottery in the later levels.

Poorly preserved human burials and debris - filled pits were located during the excavation of six of the midden deposits. No evidence for cattle dung was found during the excavations; therefore the faunal samples described below are all from a domestic midden context. The individual excavations are referred to as Grids 1-6; the analysed faunal sample, which is all faunal material retrieved during the excavations, is listed in Table 3 and the composite species list in Table 4.

Grid I

Level 1 yielded a relatively small faunal sample, much of which belonged to domesticates . Cattle and sheep were identified with ovicaprine material being more common than cattle material.

The presence of two examples of *Nerita* indicate coastal contact.

The assemblage from Level 2 is dominated by ovicaprine material; there is no evidence for *Capra hircus* in the sample. Evidence for an humped specimen of *Bos taurus* occurs in the form of a bifid vertebra. Domestic dog is present in Level 2 and the associated Floor Feature 1. Isolated human remains were found in the collection; these may have been part of the burials which were excavated seperately.

The wild bovid remains are mainly from small bovids. The presence of *Philantomba monticola* reflects a bushy environment. It is likely that most of the Bov I material is from *Sylvicapra grimmia*; this species is well represented in all the samples.

The ovicaprine skeletal parts from Level 1 come from all sections of the axial skeleton; the *Bos taurus* specimens come from a premaxilla, a scapula, carpal and first phalanx. The small *Bos taurus* sample comes from all sections of the axial skeleton. The ovicaprine material shows an emphasis on the major limb bones and pelvis.

Grid 2

The faunal samples from all levels of Grid 2 were dominated by domesticated bovids, of which ovicaprines constituted the major part. *Bos taurus* and *Capra hircus* are poorly represented. Isolated human remains occurred in all levels; one of the Level 1 specimens was a juvenile and the Level 3 + 4 specimen a juvenile female. Domestic dogs of two sizes occurred in Levels 1 and 3 + 4.

The non-domesticated bovid species range is relatively wide, with both species of reedbuck, bushbuck and red duiker being new additions to the Wosi species list. Small bovids are the most common; the general environmental conditions reflected in the bovids is of bushy, relatively closed country.

Riverine species - hippopotamus, clawless otter, water mongoose and cane rat, as well as a small number of fish specimens, reflect utilisation of the river itself.

The presence of both species of suid again indicates the availability of more open cover for hunting. The presence of zebra in Level 1 certainly indicates more open habitats; it is the first record of zebra from the Early Iron Age in the Thukela Valley.

Small carnivores were hunted sporadically and an aardvark is present in Level 2. A large quantity of ivory trimming fragments came from Levels 3 + 4; ivory was present in all three levels. Ivory is less common in the other excavations.

There is an interesting variety of molluscan species in Grid 2. This includes five marine species. *Turbo* has not previously been recorded in other samples analysed by the authors. The presence of *Achatina immaculata* in the deposits, especially as complete specimens, probably indicates recent intrusions on the site. As *A. immaculata* is a species associated with relatively dry, open environments, and *Metachatina kraussi* with a damp, bushy environment, it is unlikely that these species are contemporary. The switch in species is a reflection of increasing bush clearance and a drier, sparser ground cover.

The range of species is wider for the earliest level; this is not entirely a result of sample size differences as the assemblages from Levels 3 + 4 and Level 2 are very similar. These species lists reflect a rich and varied environment, a cameo of the pristine fauna in the Thukela Valley when the first Iron Age settlers moved in.

The assemblage from the Test Pit is very similar to the rest of G2.

In the detailed lists of bovid skeletal parts the two less common domesticates - cattle and goats - are largely represented by limb bones. The axial skeleton is the most commonly preserved portion in all the species.

Grid 3

The pottery retrieved from the three levels excavated within this grid suggests that the material dates from the terminal occupation of the site. Small stock dominates the assemblage. There is no direct evidence for the presence of *Capra hircus* or *Canis familiaris* and *Bos taurus* is poorly represented. Two fragments of human skeletons occurred in the faunal sample there.

A wide range of wild species is represented, several of which indicate bushy/wooded environments (*Philantomba* and *Potamochoerus* specifically). Several came from the nearby riverine environment -*Aonyx*, *Hippopotamus*, *Clarias* and *Thryonomus* - while the presence of aardvark (*Orycteropus afer*) is of interest. Two species of birds are present; the presence of warthog as well as bushpig suggests utilisation of more open country in the search for food. The two felids were presumably hunted for skins and body parts .

The ovicaprine material in the pit associated with the deliberately buried pots came from five individuals. These included a subadult male, a large adult male, two juveniles and a probable female - although hornless skulls cannot always be assumed to belong to females when dealing with indigenous breeds.

The identification of *Conneochoetes taurinus* is based on the size of the specimen, which was larger than the *C. gnou* material available at various institutions but matched *C. taurinus* material. This is an open woodland species as opposed to the Black wildebeest which shows a preference for drier grasslands. The presence of this species in an Iron Age assemblage is of interest as it establishes an historical range.

In studying the preservation of bovid skeletal parts in the combined Levels 1 and 2 the only notable aspect is the relatively large number of ovicaprine mandibles in the collection.

Grids 4, 5 and 6

The deposits of these three middens was divided into two levels. The dating of the material is unfortunately problematical; stylistically the pottery is, in the opinion of the excavator, more closely allied to the Msuluzi tradition than to the pottery from Ndondondwane. The faunal assemblages are similar to that of Grid 3. They are dominated by small stock, *Capra hircus* appearing in Grid 5. Domestic dog and isolated human remains occur in Grids 4 and 6 respectively.

The species present in Grid 4 are very similar to those in Grid 3, including Blue Duiker, Bushpig, Cane rat, primates and birds. There is an interesting variety of birds in Grid 4. Aardvark occurs again in Grid 6, along with Mountain Reedbuck.

The bovid skeletal part samples are all less than 100 specimens per level; they show a fairly even distribution of parts of the axial skeleton.

The age and sex distribution among domesticates at Wosi and

Mamba.

Table 5 shows the number of individuals according to each age group in the two main groups of domesticates.

The majority of cattle in the Wosi assemblage are young or mature, the older age classes (VIII) being only represented in G1/2 and IX being absent completely. The larger sample from Mamba is very similar, with a peak among the young adults and three old animals being present.

Among the small stock at Wosi there is a slight peak in the mature (Classes IV and V) groups; what is notable is the very high number of young animals represented. The situation where young animals are strongly represented in assemblages from pioneering Early Iron Age sites has been noted before at Happy Rest (Voigt 1984a) Msuluzi Confluence (Voigt 1980) and Magogo (Voigt 1984(b). At Magogo it was suggested that the Class I group was unlikely to be edible; at Wosi this group is present in all except two assemblages. The presence of so many young animals (29% of the sample less than 10 months old, 45% less than 16 months) strengthens the argument that pioneer groups might suffer high mortality rates among small stock until both herders and animals became accustomed to the environment.

In the Mamba assemblage 30% of the small sample of ovicaprines is younger than 10 months; in fact the age distribution in this sample is very even and provides little evidence one way or another for selection.

The even age distribution at Wosi might be a combination of both slaughtering and natural attrition. The occupants of each period in each midden had access to the full range of animals - and took advantage of it.

There is no evidence for selective slaughtering of male animals in any of the samples. Of the small quantity of material which could be sexed, 35 of the Wosi ovicaprines were male and 30 female; at Mamba there were three males and three females. Hornless skulls occurred as well as skulls with poorly developed horns; these were described as being female rather than male animals

Animal husbandry

The small stock remains from Wosi reveal little about the type of animal involved. It was noted that some of the goat material was from relatively small animals; this is similar to the situation at Ndondondwane. Among the sheep remains there were some extremely large individuals.

Two pathological cases were noticed among the ovicaprine material. One was a rib with a healed fracture, the other the proximal articulation of a left femur. There were cut marks on the caput from butchering; the one side of the femoral head showed polish which would have been caused either by arthritis or by injury to the limb which resulted in atypical movement in the socket.

Two interesting horncores of Bos taurus occurred in the assemblage from Mamba. OV I produced a thin-walled, very smooth textured right horncore which had been chopped off the skull. The horn curved forward from the skull, suggesting the Afrikaner breed. The texture of the horncore suggests either a female or an ox.

Area II also produced a right horncore, attached to part of the frontal. The core is short; in spite of extensive damage it could be reconstructed adequately so as to show that the horn curved down from the skull. There is a prominent boss developed at the base of the horn. The texture of the core resembles that of Sanga animals, but the shape is that of an Afrikaner. This specimen is worth closer investigation as it might represent a shaped or trained horn; aspects of the texture suggest damage to the horncore. Several groups of indigenous people are known to "shape" the horns of their animals; this specimen might be from such an animal.

Grid II, Level I, yielded the right and left mandibles of a domestic dog. Overcrowding occurred of the right P3; this has not been noticed previously in dog material from Iron Age sites, the tooth rows usually displaying no overcrowding.

Such overcrowding of teeth is a distinctive feature of early domesticated dogs in Europe and Asia.

The taphonomy of the assemblage

Breakage patterns and butchering damage in Iron Age assemblages have been extensively recorded. The Wosi and Mamba assemblages displayed the normal range of butchering marks - shallow parallel cuts, chopping damage, scraping damage. These details were noted on the record cards for all identifiable material.

Burning was also noted as the collection was analysed. In sorting the waste bone it was noted and the results are presented in Table 6.

The lower levels of Grid II show the highest proportion of burning; the excavator specifically noted that there were ashy layers with a large amount of charcoal. However, the overall amount of burning is low compared to a site such as Magogo, where material from the Ash Heap and from pits displayed between 26% and 16.8% burning.

It was noted during analysis that numerous specimens were burnt only on part of their surfaces; this phenomenon has been recorded before but not specifically mentioned. The interpretation of this phenomenon is that the specimens were partially buried and were damaged either by a veld fire or even by the deposition of hot ash on the midden (J.E.P). Thus only part of the bone would be burnt; also the burning damage in such cases has nothing to do with the primary processing of the bone but is a secondary result of the later history of the site.

The presence of complete Achatinid shells in deposits is an ongoing archaeozoological problem. Beads were being made out of small fragments of both *Achatina* and *Metachatina* material, so that the mollusca were being utilised by the inhabitants. However, whether they were a food source or not is more difficult to determine; there are records of their being used as food and it is possible that, if boiled, the animal could be withdrawn from the shell without breaking it. However, the habit of these creatures of aestivating in soft soil is designed to confuse the archaeozoologist - many or even all of the complete shells could be intrusive.

The presence of both _Metachatina kraussi_ and _Achatina immaculata_ on the site has been commented on by the excavator and the present authors. An examination of the mollusc beads showed that both genera were used. Identification of the point at which the arid zone genus appears would assist us in understanding the rate of environmental deterioration which occurred in the Valley. If _A. immaculata_ is not contemporary with the Earliest Iron Age it might also not occur on the later sites such as Ndondondwane; _Metachatina_ has been identified on that site as well as numerous achatined fragments; this aspect should receive special attention during the continued analysis of the Ndondondwane material. The other possibility is that _Achatina immaculata_ beads were being traded in from further north.

Cultural modification of bone, shell and ivory

Bone tools in the form of points and link-shafts are found on many Early Iron Age sites, although the quantities differ. The K2 assemblage on Greefswald was an exception, with over 600 bone tools being recorded; the collection was interesting in that it was clear that the tools were being made on the site (Voigt 1983). The occurrences argue strongly for a continuing San-Iron Age interrelationship; certainly the bone tool component decreases and changes in form in the Late Iron Age assemblages.

Wosi and Mamba were no exception. Table 7 lists the number of bone tools found during sorting of the faunal material. The bone typology numbers used by Voigt are used for identification; a broad description of each type is given for easier reference.

Two tools were found in the Mamba collection, a blunt point made on a bone splinter, and an eyed needle.

Wosi yielded 29 formal tools and five fragments of tools. Most of these were points of various kinds (17 specimens) with seven probable linkshafts.

The eyed needle from Mamba is made on a Bov II metapodial. It is highly polished from use; the single perforation just below the remains of the articulation was drilled from both sides. The needle from Wosi is rectangular in section; the shaft is incompletely polished with the base cut across at an angle. The perforation was drilled from one side only.

The bone tubes are interesting; they have been formed by cutting both ends off a shaft (Bov II size); the ends and shaft are polished from use. One specimen from Grid II at Wosi is decorated with 16 grooves across the diameter of the shaft. Grid II also yielded an ovicaprine tibia shaft with an intact distal epiphysis. The shaft was polished from handling and the epiphysis perforated for suspension. One likely use for these tubes is as whistles for controlling stock; this practice is well-documented.

When the horizontal distribution of the bone tools in Grid II was listed it was found that most of the tools came from Q4(12) and Q1(10). Level 1 had more tools in it than the other levels (11, 5 and 9 respectively).

The vertical distribution of the ivory pieces showed a concentration in Levels 3 + 4 of GII and in GIV.GII Level 1 has the third largest sample of ivory; there is therefore no correlation between the working of ivory and the presence of bone tools.

Three bones with polish due to utilisation were found in the assemblage. These were a rib and an ulna fragment. The third specimen, from Mamba, is a bone flake with one end polished smooth and straight; while not a formal tool it was certainly a utilised piece of bone. The shape is reminiscent of the kind of bone used as a melon knife or a marula knife.

Two rib fragments had notched edges. One is very irregular and worn, the other has six distinct V-shaped notches cut into it. The latter specimen is broken at both ends; it is difficult to see what the function of it could have been.

Two perforated teeth were found, presumably to be used as ornaments. One came from a young adult jackal; the other was too badly damaged to be identified. Similar specimens are known from Ndondondwane and Magogo.

A much more sophisticated ornament is a flat, triangular bone fragment 26mm wide and 24mm deep with a perforation at the apex. The edges are carefully decorated with small, drilled holes.

A number of faunal collections - Schroda in the Northern Transvaal, Magogo and Ndondondwane to name a few - have produced ovicaprine astragali which have been abraded laterally and medially, often to the point that all distinguishing features have been obliterated. The Wosi collection produced a right and a left astragalus of a sheep and Mamba a left ovicaprine astragalus. It is likely that these form part of a divining set. Plug (1988:65) has studied a number of divining sets and listed the species present. Marine mollusca, baboon, suid, aardvark and carnivore all occur frequently in such sets, associated with bovid and other remains. Several members of this suite, including aardvark, occur in GIII Level I.

The assemblages yielded a wide range of molluscan species; cowries are recorded by the excavator from Mamba only. Four of the specimens showed modification for cultural purposes: an Achatinid fragment and *Oxystele sinensis* from Wosi and the *Nerita albicilla* specimen from Mamba AVII were all drilled for suspension. The *Nerita* specimen was perforated through the apex which is smoothly polished to form a flat surface.

One large *Perna perna* valve from Mamba AVII had one border ground smooth from utilisation. These shells are frequently used by potters to smooth the coild of their pots.

Most of the ivory from Wosi and Mamba came from elephants. Grid II yielded two pieces of hippopotamus tusk, each with a cut, flat edge. In Grid III we found a rectangular piece of hippopotamus ivory, 31.8x29.7mm, 9.6mm thick, with two flat cut edges and convergent "flaking" from three sides. The centre of the flaked face is rough and weathered. The piece looks like a blank for a pendant of some sort.

Table 8 lists the elephant ivory finds from Wosi. Both narrow and deep armband fragments occur. Most have two flat edges but in some cases one edge is slightly convex. Two armband fragments of 18mm deep show wear on the inside. The more finely finished specimens have a convex outer face.

Each large collection of ivory throws a bit more light on the manufacturing processes. We still do not know how such totally flat edges and smooth exteriors were obtained. Two large fragments from Wosi which appear to be incomplete armbands show shallow cut marks on the inside and on the outside faces. Another thick fragment with two flat edges has two deep, V-shaped cuts converging across the surface - as if a knife blade was being used to trim the ivory. Another piece shows careful flaking along one edge, possibly in an attempt to reduce the depth of the piece.

The two most interesting pieces, both from Level 3 in GII, throw some light on the preparation of ivory for armband making. One is a cut section from the solid end of a tusk. It measures 33x27mm and is 17mm thick. One face is rough, the other cleanly cut, as are two edges. The fragment looks like a piece cut off the top of a damaged tusk.

The other specimen is a small (12.2mm diameter) half circle of ivory with one cut face. The centre has been neatly drilled out and then the "plug" broken out of a solid piece. This specimen suggests that armbands might (sometimes) have been made from a section cut off the solid end of the tusk. The centre of the solid piece was then gradually worked out, first by drilling a small hole and removing a "plug" such as this specimen, then widening the centre by flaking and cutting. Certainly preparing an armband must have been a laborious process, as evidenced by the very large number of trimming flakes found in the collection.

The overall impression is that ivory working was practised at several of the middens, the lowest levels of GII being the most productive.

Conclusions

The faunal assemblages from Wosi and Mamba are of extreme interest because of their early date (Wosi) and the specialised nature of the site (Mamba).

The composite species list for Wosi (Table 4) shows a wide range of species which reflects a rich fauna in an area which had probably not been utilised by agriculturalists for very long. It is therefore useful as a reflection of the fauna of the Thukela Valley before the development of large settlements. Most of the wild species support the excavator's view of a relatively closed, bushy environment. A few species indicate more open country near by - warthog and zebra particularly - and the probable presence of blue wildebeest is of interest to zoologists. Impala and zebra are both on the southern limit of their known distribution.

There is little difference between the species lists for the early, late and terminal phases at Wosi. The only difference lies in the proportions of the two main groups of domesticates, the cattle and ovicaprines. In Levels 3 + 4 cattle are half or one third less frequently represented than in Levels 2 and 1. It is this disproportion among the stock which is of most interest.

In all the deposits excavated at Wosi, ovicaprine remains outnumber cattle remains. The disproportion is too large and too consistent on a site in which the excavations were really extensive, to be a sampling problem. The same disproportion has been recorded on other Early Iron Age sites in Natal. The argument has been put forward that cattle are present on these sites but are not found because no excavation is done in the areas relating to the isibaya. Certainly all the Wosi deposits are identified by the excavator as being occupation deposits; extensive sampling did not reveal evidence of a central or even a peripheral isibaya.

The cattle byre deposit at Mamba yielded very little bone; cattle bones were more common than ovicaprine bones (in a very small sample) but cattle bones were also more common than ovicaprine bones in the overall sample, regardless of where the samples came from.

The situation at Mamba argues for the fact that occupation deposits reflect the general trend in the domestic fauna. The cattle byre should theoretically be the worst possible place to look for cattle bones, as ritual offerings tend to be so heavily fragmented as to be rendered unrecognisable. Offerings which are divided up between households should appear as cattle remains in occupation debris. It may be that Ndondondwane will provide some clues to the problem of horizontal distribution in relation to activity areas; at present we believe that the argument holds true that, in a large scale excavation, the proportions found in midden deposits are a realistic reflection of the proportions of species present.

If one is to argue that cattle are present, but invisible, the same argument would have to be applied to goats, which are even more poorly represented in the sample. A number of sites in Natal have shown the same low number of goats as opposed to sheep. Goats are susceptible to many diseases; it may be that they could only come into their own once thicket cover had been cleared by grazing and agriculture.

The fauna from Wosi is clear evidence for small stock farming at this period of time. The same picture emerged at Magogo, but changes at Ndondondwane. The high number of fatalaties among young animals is particularly noteworthy; this probably reflects pioneer stock farmers and their flocks coming to terms with a new environment. The Mamba sample presents a markedly different picture with cattle well represented in all the areas. This is an interesting sample because of the specialised areas. The occupation debris and the hut area produced similar sized samples with a similar composition, whereas the smelting area sample was almost double the sizes of each of them. This was an unexpected result; the use of the bone as flux in the smelting process might be the reason for this larger sample.

During the analysis of the Magogo assemblage, domestic dog was tentatively identified and was quoted as the earliest evidence for dogs. The Wosi material is firmly identified and should be seen as the earliest sure identification of domestic dog in the Iron Age of South Africa. Already at this early date we are also able to identify both Sanga and Afrikaner cattle.

The two sites are interesting not only for their dating but also for the evidence of specialised crafts, with smelting at Mamba and the utilisation of talc - schist and of ivory at Wosi. The ivory-working tradition continues at the later site of Ndondondwane, providing a similarly long record to that of the Northern Transvaal Iron Age. The use of ivory and the manufacture of ivory ornaments largely disappears after 1000 AD; perhaps by this time most ivory was being traded out of Africa via the East Coast.

These two assemblages provide a solid baseline for studies in the Thukela Valley. Wosi links in with the Magogo assemblage but it also provides us with well-preserved evidence for early, established large-scale settlement in the Thukela Valley. This early tradition continues at Ndondondwane and other sites; the analysis is therefore of great use in providing a glimpse of the faunal spectrum during the earliest settlement of the Valley. The Ndondondwane analysis will enable us to continue with the reconstruction of Iron Age subsistence in the Thukela Valley.

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TABLE 1 MAMBA 83/4 ANALYSED BONE SAMPLE.

DESCRIPTION	AREA II	AREA IV	AREA VII	OV I	TOTAL
DOMESTICATES					
Bovid Teeth	106	10	77	300	493
Ovicaprine skeletal parts	48	5	61	46	160
Bos taurus skeletal parts	94	9	88	124	315
Canis familiaris	8	0	3	6	17
TOTAL domesticates	256	24	229	476	985
NON DOMESTICATES					
Bovids	12	7	25	6	50
TOTAL bovids	268	31	254	482	1 035
Non-bovid vertebrates	19	3	2	14	33
Invertebrates	25	13	12	14	64
TOTAL	312	47	268	510	1 132
Miscellaneous skeletal parts	39	4	26	135	204
Bone flakes	22	2	14	12	50
TOTAL SAMPLE	373	53	308	657	1 386

TABLE 2
MAMBA 83/4. COMPOSITE SPECIES LIST : MINIMUM NUMBER OF INDIVIDUALS AND NUMBERS OF SPECIMENS.

Number of juveniles in parenthesis.

SPECIES	AREA II		AREA IV		AREA VII		OV I		TOTAL	
	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP
DOMESTICATES										
Bos taurus	17(7)	163	4(2)	15	12(6)	135	28(10)	333	61	646
Ovis aries	3(1)	16	1	2	5	27	2(1)	6	11	51
Capra hircus	0	0	0	0	1	1	0	0	1	1
Ovicaprines	8(6)	69	1	7	4(3)	63	11(5)	116	24	245
Canis familiaris	1	8	0	0	1	3	3	6	5	17
TOTAL DOMESTICATES	29	256	6	24	23	229	44	461	102	970
NON-DOMESTICATES										
Sylvicapra grimmia	2	8	0	0	2	24	1	6	5	38
Aepyceros melampus	1	1	0	0	0	0	0	0	1	1
Redunca fulvurufula	0	0	1	6	1	1	0	0	2	7
Kobus ellipsiprymnus	1	1	0	0	0	0	0	0	1	1
Tragelaphus scriptus	1	1	0	0	0	0	0	0	1	1
Hippopotamus amphibius	1	5	1	1	0	0	1	4	3	10
Loxondonta africana	0	0	0	0	0	0	1	1	1	1
Atilax paludinosis	1	1	0	0	0	0	0	0	1	1
Canis mesomelas	0	0	1	1	0	0	0	0	1	1
Felis caracal/serval	1	1	0	0	0	0	1	2	2	3
Felis (sylvestris) libyca	1	1	1	1	0	0	1	3	3	5
Rodent/leporid	1	7	0	0	1	1	2	4	4	10
Bird	1	3	0	0	0	0	0	0	1	3
Varanus sp.	1	1	0	0	0	0	0	0	1	1
Clarias sp.	0	0	0	0	1	1	0	0	1	1
Invertebrates :										
Terrestrial	12	18	1	12	0	0	8	12	21	42
Freshwater	2	4	0	0	0	0	0	0	2	4
Marine	2	3	0	0	5	9	1	1	8	13
TOTAL NON-DOMESTICATES	28	55	5	21	10	36	16	31	59	143
TOTAL SAMPLE	57	311	11	45	38	265	60	492	161	1 113

TABLE 3

JOSI 34/5 ANALYSED BONE SAMPLE

DESCRIPTION	EARLY	LATE		TERMINAL			PROBABLY EARLY			TEST PIT	TOTAL	PERCENT OF TOTAL SAMPLE
	G2/3/4	G/2/2	G1/2	G2/1	G1/1	G3	G4	G5	G6	G2		
DOMESTICATES												
Bovid teeth	461	495	73	388	10	297	109	32	140	57	2 062	7,3
Bos taurus skeletal parts	8	9	34	15	6	43	15	4	19	4	157	0,6
Ovicaprine skeletal parts	898	824	194	736	27	296	132	59	115	78	3 459	12,3
Canis familiaris	1	0	2	6	0	0	1	0	0	2	12	0,04
Homo sapiens	1	1	3	3	0	2	0	0	3	0	13	0,04
TOTAL DOMESTICATES	1 369	1 329	306	1 148	43	738	257	95	277	141	5 703	20,3
NON-DOMESTICATES												
Bovids	82	48	30	67	2	34	9	7	12	4	294	1,04
Primates	5	4	0	3	0	2	2	0	0	0	16	
Carnivores	8	8	0	4	0	5	0	0	0	0	25	
Other mammalian vertebrates	23	10	13	16	1	14	2	1	7	33	120	
Birds	1	1	0	0	0	5	6	0	1	1	15	
Reptiles & amphibians	16	17	14	12	0	18	5	0	1	2	85	
Fish	8	5	3	6	0	4	5	0	2	0	33	
Invertebrates : Terrestrial	59	124	22	67	1	30	26	3	11	9	352	
Freshwater	5	3	1	0	0	1	2	1	0	0	13	
Marine	4	6	1	3	2	1	0	1	0	0	18	
TOTAL NON-DOMESTICATES	211	226	84	178	6	114	57	13	34	49	972	3,5
TOTAL IDENTIFIED	1 580	1 555	390	1 326	49	852	314	108	311	190	6 675	23,7
BOVID BONE FRAGMENTS												
Skull	619	451	35	388	1	358	136	51	129	-	2 118	
Vertebrates	269	83	50	174	9	130	68	20	78	-	881	
Ribs	1 275	912	108	537	15	690	200	104	252	-	4 093	
Bone flakes	3 130	2 240	379	2 097	65	1 660	434	209	459	-	10 679	
Miscellaneous skeletal parts	576	1 066	362	994	61	409	106	28	122	-	3 724	
TOTAL FRAGMENTS	5 869	4 752	934	4 140	151	3 253	944	412	1 040	-	21 495	76,3
TOTAL SAMPLE	7 449	6 307	1 324	5 466	200	4 105	1 258	520	1 351	190	28 170	

Orycteropus afer	0	0	1	1	0	0	1	1	2
Aonyx capensis	0	0	1	1	1	1	0	0	2
Atilax paludinosis	0	0	0	0	1	2	0	0	2
Procavia sp.	0	0	0	0	1	1	0	0	1
Thryonomus	1	1	0	0	1	1	1	1	3
Swinderianus	1	1	0	0	1	1	1	1	3
Hystrix africae-australus	0	0	1	1	0	0	0	0	1
Numida meleagris	1	1	0	0	3	3	3	3	7
Francolinus sp.	1	1	1	1	1	2	0	0	4
Pternistes sp.	0	0	0	0	0	0	1	1	1
Bostrychia hagedash	0	0	0	0	0	0	1	1	1
Crocodilus niloticus	1	1	0	0	0	0	0	0	1
Tortoise	2	13	2	17	4	20	2	4	54
Varanus sp.	1	4	2	2	1	3	1	1	10
Clarias sp.	1	7	2	7	4	9	4	7	30
Barbus sp.	0	0	0	0	1	1	0	0	1
Achatina immaculata	4	16	16	66	16	37	6	14	133
Metachatina kraussi	9	23	12	46	11	22	7	9	100
Unio caffer	4	5	2	4	1	1	3	3	13
Perna perna	1	2	3	6	2	2	0	0	10
Turbo coronatus	1	1	0	0	0	0	0	0	1
Oxystele sp.	1	1	0	0	1	1	0	0	2
Nerita sp.	0	0	0	0	2	2	0	0	2
Nassarius kraussianus	0	0	0	0	1	1	0	0	1
Polynices didyma	0	0	0	0	0	0	1	1	1
TOTAL NON-DOMESTICS	45	335	59	231	89	333	50	148	1 057
TOTAL	108	1 845	146	1 866	222	2 267	122	777	6 76[illegible]

TABLE 5
WOSI 84/5 AND MAMBA 84/4 AGE AT DEATH OF B. TAURUS AND OVICAPRINES ON BASIS OF TOOTH ERUPTION

	WOSI											MAMBA					TOTAL
	G2/3/4	G2/2	G1/2	G2/1	G1/1	G3	G4	G5	G6	G2 TEST PIT	TOTAL	AII	AIV	AVII	OVI	TOTAL	
BOS TAURUS																	
I	0	1	0	1	0	0	0	0	0	0	2	2	0	1	2	5	7
II	0	2	0	2	0	1	0	0	0	0	5	2	0	1	3	6	11
III	0	0	1	1	0	1	0	0	0	0	3	2	0	2	6	10	13
IV	0	1	1	1	1	1	0	0	1	0	6	1	2	2	5	10	16
V	0	1	0	1	1	1	1	0	0	0	5	1	1	2	4	8	13
VI	0	0	1	0	0	0	0	0	0	0	1	3	1	2	3	9	10
VII	0	1	1	1	1	0	0	0	0	0	4	3	0	1	0	4	8
VIII	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	3	4
IX	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	3	3
TOTAL	0	6	5	7	3	4	1	0	1	0	27	17	4	12	25	58	85
OVICAPTINES																	
I	6	6	2	9	0	4	2	1	2	0	32	3	0	1	2	6	38
II	7	11	2	5	0	7	5	2	5	3	47	1	0	2	2	5	52
III	9	9	1	6	1	8	5	2	4	2	47	2	0	2	2	6	53
IV	8	11	4	11	0	8	3	0	7	3	55	1	0	2	3	6	61
V	11	7	3	11	1	16	6	2	5	1	63	2	0	2	2	6	69
VI	4	5	4	6	0	10	3	2	3	1	38	1	0	1	2	4	42
TOTAL	45	49	16	48	2	53	24	9	26	10	272	10	0	10	13	33	305

TABLE 6
WOSI 84/5 PROPORTION OF BURNING IN WASTE BONE

	PROVENANCE									
	EARLY	LATE		TERMINAL			PROBABLY EARLY			
	G2/3/4	G2/2	G1/2	G2/1 *	G1/1	G3	G4	G5	G6	TOTA
Unburnt	5 338	4 298	850	3 831	140	2 988	882	377	955	19 65
Burnt	531	454	84	309	11	265	62	35	85	1 83
TOTAL	5 869	4 752	934	4 140	151	3 253	944	412	1 040	21 49
% Burnt	9.1	9.6	9.0	7.5	7.3	8.2	6.6	8.5	8.2	8.5

* Includes G2 Test Pit waste bone

TABLE 7
CULTURALLY MODIFIED BONE FROM WOSI 84/5

DESCRIPTION	WOSI						TOTAL
	G2/3/4	G2/2	G2/1	G3	G4	G6	
TYPE 502	0	3	0	1	0	0	4
503	2	0	4	0	0	0	6
505	0	0	1	0	0	0	1
509	0	0	1	0	0	0	1
512	4	0	1	0	0	1	6
513	0	0	1	0	0	0	1
518	2	1	1	0	0	0	4
523	0	0	1	0	0	0	1
527	0	1	0	0	0	0	1
534	0	1	1	0	1	1	4
Polished mid-sections	1 +1xG1	0 1xG5	1	1	0	0	5
	9	6	12	2	1	2	34
TOTAL IVORY	189	39	66	41	69	9	

Types 502 - 509, 518 - 527 = points; 512, 513 = linkshafts;
523 = eyed needle; 534 = bone tube

TABLE 8
WOSI 84/5 IVORY PIECES

PROVENANCE	BANGLE/FRAGMENTS		TRIMMING FLAKES			TOTAL
	NARROW (5-15mm)	DEEP 15mm +	2 FLAT EDGES	1 FLAT EDGE	NO EDGE	
G2/3/4	2	8	35	131	13	189
G2/2	1	8	8	19	3	39
G1/2	6	0	0	0	0	6
G2/1	0	5	16	43	2	66
G3	2	2	5	24	8	41
G4	4	8	7	41	9	69
G5	0	0	2	1	0	3
G6	1	0	3	5	0	9
G2 Test pit	1	0	0	4	0	5
TOTAL	17	31	76	268	35	427

HUMAN SKELETAL REMAINS FROM WOSI: AN EARLY IRON AGE SITE IN THE THUKELA BASIN, NATAL.

ALLAN. G. MORRIS

Human Skeletal Remains from Wozi:

An Early Iron Age site in the Tugela Basin, Natal.

Alan G. Morris
Department of Anatomy & Cell Biology
University of Cape Town

The human remains from the Wozi 84/5 site come either from formal burials, or were found as isolated bones within the context of middens. Three burials were identified, but only bones from Burials 2 and 3 were made available for examination. The general bone preservation of these individuals can be described as good, but one of the individuals was quite fragmentary.

ISOLATED HUMAN REMAINS

The three burials from Wozi were clearly identifiable as such, but further isolated bones were found during the excavation of the various middens. Bone specimens from Grids 2, 3 and 6 were submitted for physical anthropology specialist analysis.

Grid 2

The two bone fragments from this grid are not human. One fragment appears very similar to a human juvenile ilium, but it is too elongated and is most probably the ilium of a young buck. The iliac crest seems to have been chewed, and this is the major factor that makes it appear human-like. The second fragment appears like the tibia of an infant. Closer examination shows it to be fully formed but without formal epiphyses. It is most likely a reptilian long bone, either tibia or ulna.

Grid 3: Layer 2

The three bones from this grid are undoubtedly human and represent two or possibly three individuals as shown by two bones from an adult human foot and a fragment of a juvenile first cervical vertebra.

The foot bones are a complete right 2nd metatarsal and a complete left cuboid. Neither of the bones show any sign of pathology and they are quite large. It is very difficult to confirm the sex of the individual without a comparative sample to compare sizes, but the relatively large size (maximum length of the metatarsal is 86 mm) suggests that the person was a man. The fact that the cuboid is from the opposite foot prevents an possibility of formally stating that only one individual is present. The bone preservation is not identical, but the cuboid size is also relatively large.

The juvenile bone is the left half of the atlas (C1). The midpoint of the posterior arch was not yet fused to its opposite half at the time of death, and it appears as if the anterior arch is also unfused. The fusion of these elements normally occurs before the 5th year of life, and the relatively small size of this individual may mean that the individual was perhaps only 3 or 4 years of age at death. The bone is quite badly weathered.

Grid 6: Layer 1

A further three human bones were found in the test pit on Grid 6. These three bones come from two individuals, one an adult and the other a baby.

The adult bones are once again from the foot, this time representing a right 4th metatarsal and a right cuboid. The bones articulate perfectly showing that they are from the same individual. The bones are again large (maximum length of the metatarsal is 81 mm) and the preservation is nearly identical to the metatarsal from Grid 3, even down to similar discolourations on the proximal and distal ends of the bones. This cuboid is minimally larger than that found in Grid 3. The ventral surface of the anterior portion of the shaft of the metatarsal has been chewed by rodents indicating that it had been exposed on the surface for some time before burial. Neither of these bones demonstrate pathologies or abnormalities.

The remaining bone is the right tibia of an infant. The preservation is less than perfect and both ends are slightly eroded. An estimated maximum length of the bone is 62 mm. The calculated age of the individual as indicated by the tibial length is 37.6 +/- 2.1 weeks post-conception (Scheuer, Musgrave & Evans 1980). This is consistent with a neonatal (new born) age at death.

A question that must be posed despite its low probability, is whether the foot bones from Grids 3 and 6 represent the same individual? The two right metatarsals and the right cuboid are so similar in size and preservation that an assignation to one individual would be immediately acceptable if they had come from near to each other. In fact, the two grids are approximately 100 metres apart.

BURIAL 2: GRID 1

Burial 2 was discovered some four metres from Burial 1 near the bank of the Wozi River. The skeleton appeared to be disarticulated and was tightly compacted with the matrix. That it was an intentional burial was evidenced by a whole pot and large bowl fragment positioned over the body, and the fact that the skeleton was found in a pit dug 10cm into the sterile base.

Preservation

This specimen is fragmentary with almost no complete bones. The cranium is represented by only the occipital region and right side. Extensive reconstruction was done to assemble these portions into an observable unit (FIGURE 1). The occipital bone is nearly complete along with much of the right parietal and some of the temporal bone on the same side.

The face is represented by a number of fragments. The left zygomatic, and a fragment of the left side of the palate with dm_1 and dm_2 in the sockets are the largest pieces. The mandible is represented by a part of the left mandibular corpus (including

dc, dm_1 and dm_2 in their sockets) and a fragment of the right half immediately distal to the symphysis (di_2 is in its socket). Two other deciduous teeth are present as loose specimens along with 18 permanent crowns in various stages of formation.

The post-cranial skeleton is fragmentary, but most osteological elements are present. The vertebral column is represented by all of its arches, but many of the centra have been lost. The pelvis, scapulae and the rib cage are highly fragmented and unreconstructable. All long bones of the upper and lower limbs are present but all but the right clavicle are incomplete. Elements of the hands and feet are present, as is the body of the hyoid bone.

Age Estimation

The most accurate age estimation for this specimen is based on the calcification stages of the permanent teeth. The crowns and top of the roots of the I_1 and M_1 are fully formed, as are the crowns of the canines. The M_2 crown is not quite complete. The dm_1 and dm_2 roots are just beginning to be resorbed. This calcification pattern is typical for a child of approximately 7 to 8 years of age.

General Comment

The child from Burial 2 was not old enough at death to estimate its sex, and no attempt is made here to describe its morphological identity in racial terms. There are no signs of pathology, and no cause of death can be determined.

The only special feature which can give us a picture of the life history of this individual is found on the crowns of both upper permanent canines. A hypoplastic band is present on the buccal surface of these crowns just above the cemento-enamel junction. The time of formation of this part of the crown is roughly in the 6th year of life, which means that the individual did have a physiological growth arrest some one to two years before its death. No specific cause for this growth disruption can be identified.

BURIAL 3: GRID 2

Burial 3 is an undisturbed burial in the midden under Grid 2. The body had been placed in a sitting position with the arms wrapped around the tightly flexed legs. Above the skeleton was a complete pot.

Preservation

The specimen as excavated is the virtually complete skeleton of a child. The preservation is excellent, although there is minor breakage on the base and left asterionic region of the cranium, the left knee, and the auricular surfaces of both ilia.

The breakage on the sides of the cranium is consistent with post-mortem pressure fracturing from the grave fill overburden, and relatively little distortion is present. The only loss of fragments has occurred at the base of the sphaenoid bone, and very minor areas of the left asterionic region are too badly broken to reconstruct (FIGURE 2). The fine detail of the preservation is good, with many of the extremely fragile pieces present; the pterygoid wings, vomer and the nasal concha. The mandible is also in excellent condition.

The full set of deciduous teeth are erupted, but none of the permanent teeth. Of the deciduous set, the right di_2 and the left di_1, di_2 and dc, have been lost post-mortem.

The post-cranial skeleton is essentially complete. The only missing bones are the lateral half of the left clavicle and distal half of the right ulna. Fresh breaks on these bones indicate that the damage and loss was probably at the time of excavation. The centrum of T1 and the whole of T2 have been lost as well as part of the C1 arch. The state of epiphyseal ossification and fusion is not advanced. No epiphyses are united to diaphyseal shafts. There are 14 centres of the carpal/tarsals and metapodials present, but only the developing centres of the talus and calcaneus are easily identified. The pelvis is represented by all three components with no sign of union. The manubrium, two sternal segments, the scapulae and separate coracoid epiphyses are present.

Age Estimation

The age at death can be estimated by tooth eruption, cranial bone fusion and the length of the long bones.

All of the deciduous teeth are fully erupted and none have been shed. The M_1 is visible in its crypt, and the crown is not yet fully formed. The age brackets from this pattern are older than 2 $^1/_2$ years but not older than 4 years. The separate bones of the occipital are still not united indicating that the individual is not more than 4 years of age.

Growth rates of body size tend to be population specific and are strongly influenced by environment, but the length of the long bones can act as a guide to age estimation. A recent survey of juvenile individuals from the Raymond Dart Collection of human skeletons at the University of the Witwatersrand (Glaser 1990) identified the following lengths for individuals 2 to 4 years of age (n=6):

	mean	range
humerus	116	104-127
radius	91	81-100
ulna	101	90-111
femur	149	129-173
tibia	126	111-141
fibula	118	97-137

The lengths of the long bones of Burial 3 all fall within the ranges of these standards, but tend to be toward the top end of the range. This supports the dental information that Burial is between 2 and 4 years of age at death, and is probably closer to 4 years.

General Comments

The individual from Burial 3 is an exceptionally well preserved specimen. Although its young age prevents any detailed comparison of other individuals of known biological backround, a full list of measurements and observations are appended here as Tables 1 and 2.

There are no visible pathologies on the dentition, radiographic views of the tibia and humerus, or on the surface of the bones. A very faint and diffuse pitting is present as very minor cribra orbitalia on the roofs of both orbits, but this is difficult to interpret.

SUMMARY AND CONCLUSION

The two burials from Wozi are of children 7 approximately and 4 years of age. Neither show signs of osteological pathology but the older individual from Burial 2 did have a growth arrest event at approximately 1 to 2 years before its death.

The isolated bones from the two middens are of 2 or 3 adults and two children, one of 3 or 4 years of age and the other a new born infant. The foot bones of the adults provide an interesting speculation because their size and preservation are so nearly matched that they could possibly have been from the same individual. The idea that the feet of one individual could have been dismembered and placed in different middens 100 metres apart seems to be highly unlikely, and a more conservative interpretation would be that 2 or 3 individuals are represented.

References

Glaser, R (1990) A study of diaphyseal growth of long bones in South African Natives. B.Sc. Project. Department of Anatomy & Cell Biology, University of Cape Town.

Scheuer, JL, Musgrave, JH, & Evans, SP (1980) The estimation of late fetal and perinatal age from limb bone length by linear and logarithmic regression. Annals of Human Biology 7(3):257-265.

Captions for Figures

FIGURE 1 : **Cranial Remains from Wozi 84/5 Burial 2.**
- a) Zygomatic fragment
- b) Left palatal fragment
- c) Mandibular fragments
- d) Cranial Reconstruction, right lateral view
- e) Cranial Reconstruction, basal view
- f) Cranial Reconstruction, occipital view

FIGURE 2 : **Cranial Remains from Wozi 84/5 Burial 3.**
- a) Skull, facial, occipital, basal & superior views
- b) Skull, right & left lateral and mandibular views

TABLE 1 CRANIAL AND MANDIBULAR MEASUREMENTS

	Burial 3	Burial 2
Maximum Cranial Length (L)	165 mm	-
Maximum Cranial Breadth (B)	120 mm	-
Basibregmatic Height (H')	113 mm	-
Bistephanic Breadth (STB)	96 mm	-
Biasterionic Breadth (ASB)	99 mm	120 mm (est)
Frontal Sagittal Arc (S_1)	115 mm	-
Parietal Sagittal Arc (S_2)	123 mm	-
Occipital Sagittal Arc (S_3)	100 mm	107 mm
Transverse Arc (Q)	339 mm	-
Frontal Sagittal Chord (S_1')	95 mm	-
Parietal Sagittal Chord (S_2')	111 mm	-
Occipital Sagittal Chord (S_3')	84 mm	93 mm
Glabellar Projection (GLS)	0 mm	-
Foramen Magnum Length (fml)	33 mm	-
Foramen Magnum Breadth (fmb)	25 mm	28 mm
Mastoid Height (MDH)	16 mm	19 mm
Least Frontal Breadth (B')	80 mm	-
Bizygomatic Breadth (J)	91 mm	-
Bimaxillary Breadth (GB)	69 mm	-
Upper Facial Height (G'H)	46 mm	-
Nasion-basion Length (LB)	78 mm	-
Prosthion-basion Length (BPL)	76 mm	-
Bimaxillary Subtense (SSS)	22 mm	-
Naso-frontal Subtense (NAS)	17 mm	-
Inner Biorbital Breadth (M43.1)	77 mm	-
Outer Biorbital Breadth (M43)	81 mm	-
Bidacryonic Breadth (DC)	18 mm	-
Bimaxillofrontal Breadth (IOW)	16 mm	-
Orbital Breadth (O_1)	31 mm	-
Orbital Height (O_2)	29 mm	-
Nasal Height (NH)	32 mm	-
Nasal Breadth (NB)	20 mm	-
Least Nasal Breadth (SC)	9 mm	-
Naso-dacryal Subtense (DS)	9 mm	-
Maxillo-alveolar Length (MAL)	38 mm	-
Maxillo-alveolar Breadth (MAB)	48 mm	-
Palatal Length (G'_1)	35 mm	-
Palatal Breadth (G'_2)	23 mm	-
Palatal Height (PAH)	6 mm	-
Maximum Mandibular Breadth (w_1)	84 mm	-
Bicoronoidal Breadth (crcr)	68 mm	-
Bigonial Breadth (gogo)	69 mm	-
Bimental Breadth (zz)	36.5 mm	-
Proj. Rameal Height (rl)	32 mm	-
Proj. Coronoidal Height (crh)	36 mm	-
Proj. Corpus Length (cpl)	50 mm	-
Proj. Mandibular Length (ml)	71 mm	-
Length of Condyle (cyl)	14 mm	-
Breadth of Condyle (cyb)	8 mm	-
Mandibular Notch Subtense (MNS)	7 mm	-
Minimum width of Ramus (rb')	28 mm	-
Symphyseal Height (h_1)	23 mm	-
Mandibular Angle (M)	126 °	-

TABLE 2 CRANIAL AND MANDIBULAR NON-METRICAL OBSERVATIONS

	Burial 3	Burial 2
Metopism	none	–
Inferior Frontal Eminence	absent	–
Mons temporosphenoidalis	absent	–
Ossicles	one lambdoid	one asterionic
Foramen of Huschke	absent	absent
Os japonicum	absent	–
Torus palatinus	absent	–
Torus maxillaris	absent	–
Mental Foramen	single	–
Torus mandibularis	absent	–

TABLE 3 MAXIMUM LENGTHS FOR POST-CRANIAL BONES OF BURIAL 3

	Left.	Right
Clavicle	–	67 mm
Humerus	120 mm	120 mm
Radius	92 mm	91 mm
Ulna	105 mm	–
Femur	–	162 mm
Tibia	–	135 mm
Fibula	131 mm	131 mm

WOM 84/5 BURIAL 2

FIGURE 1

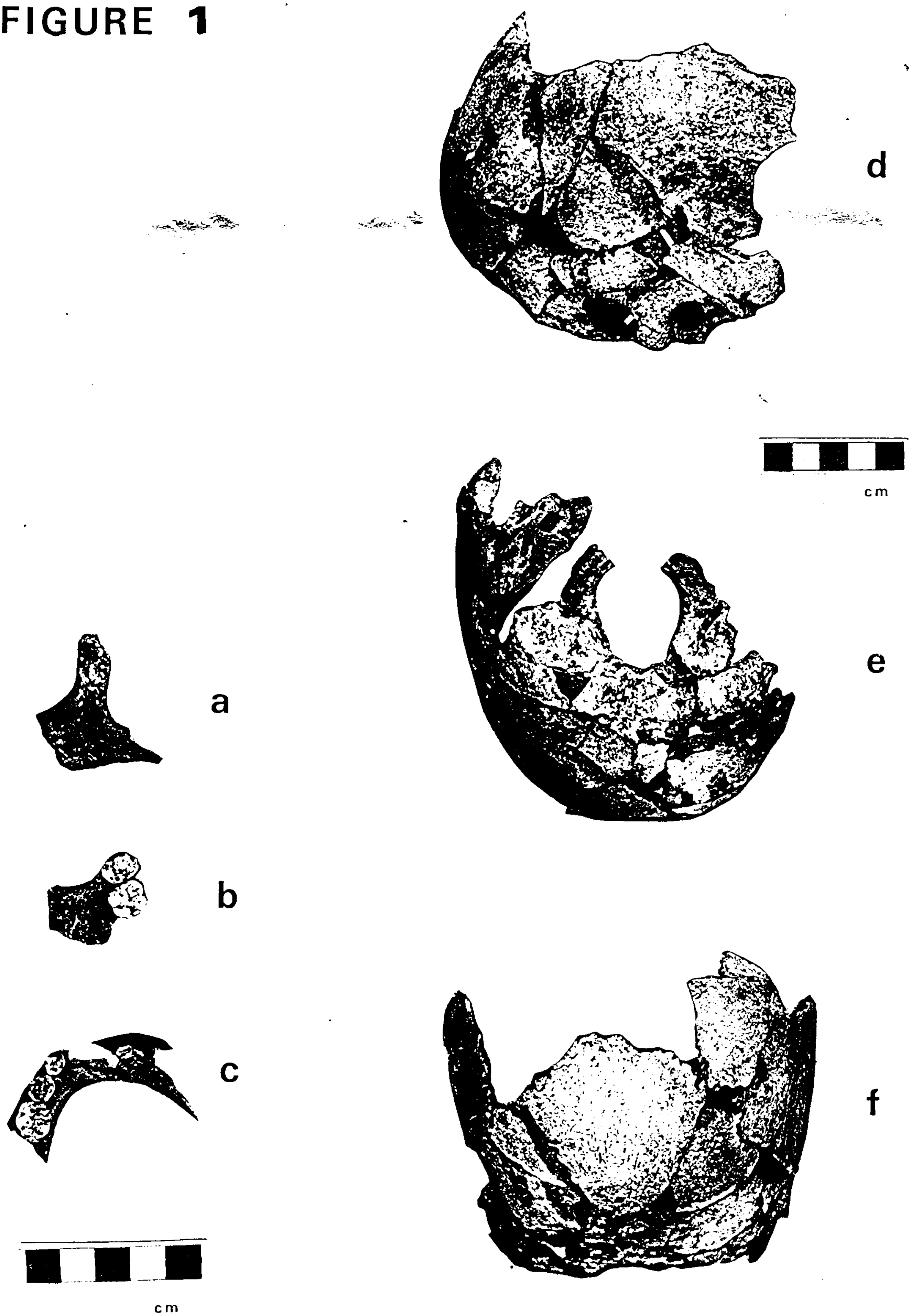
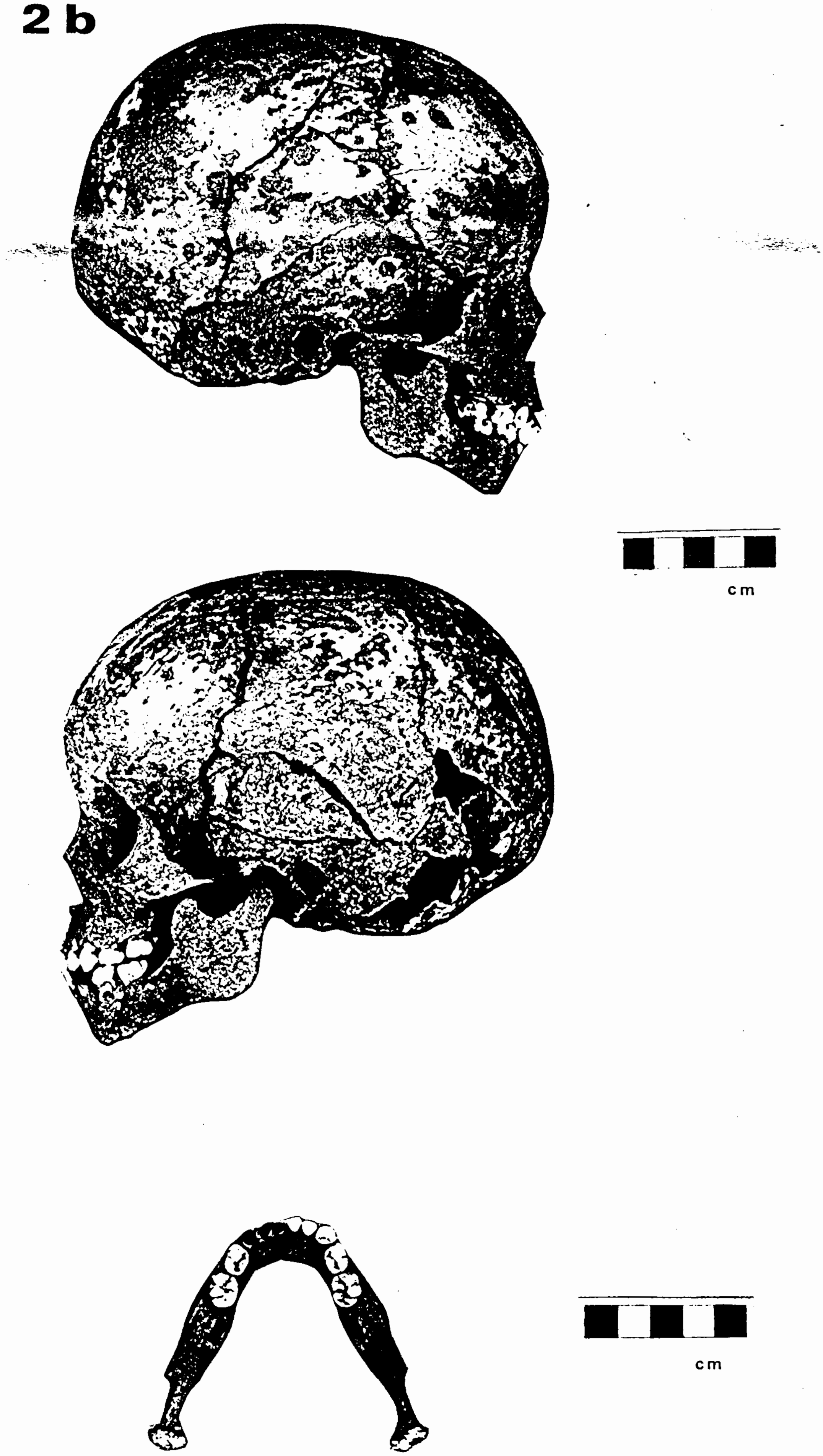
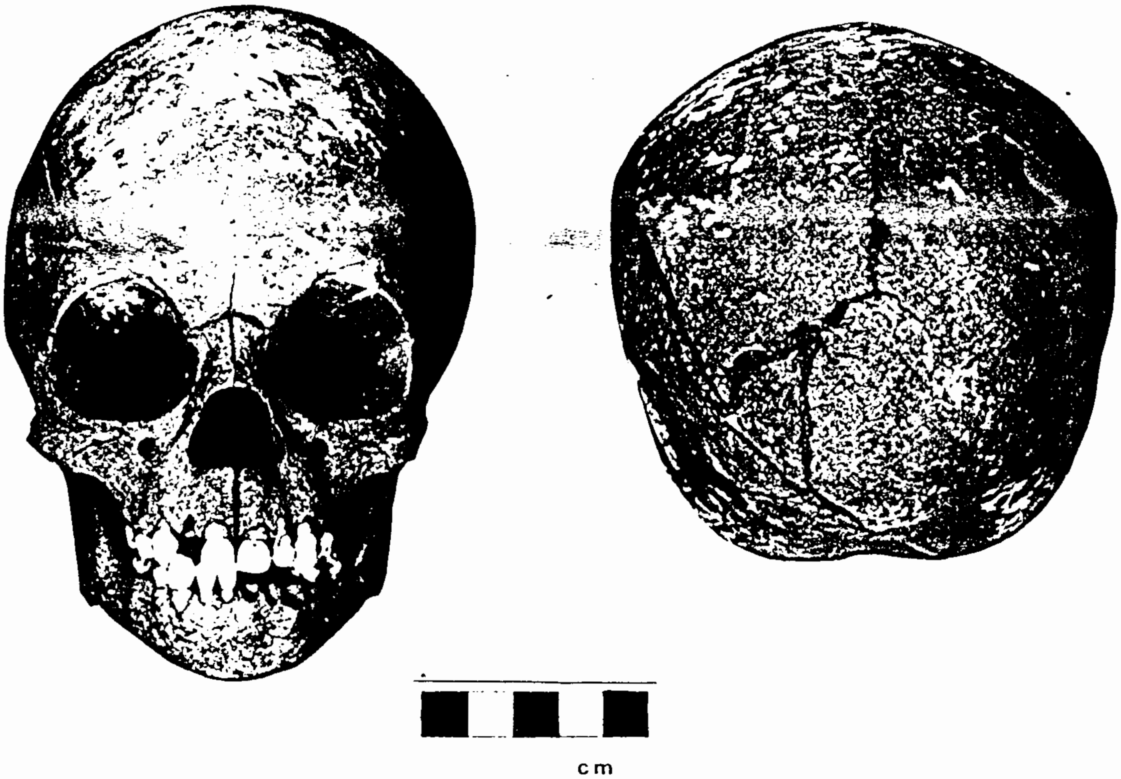


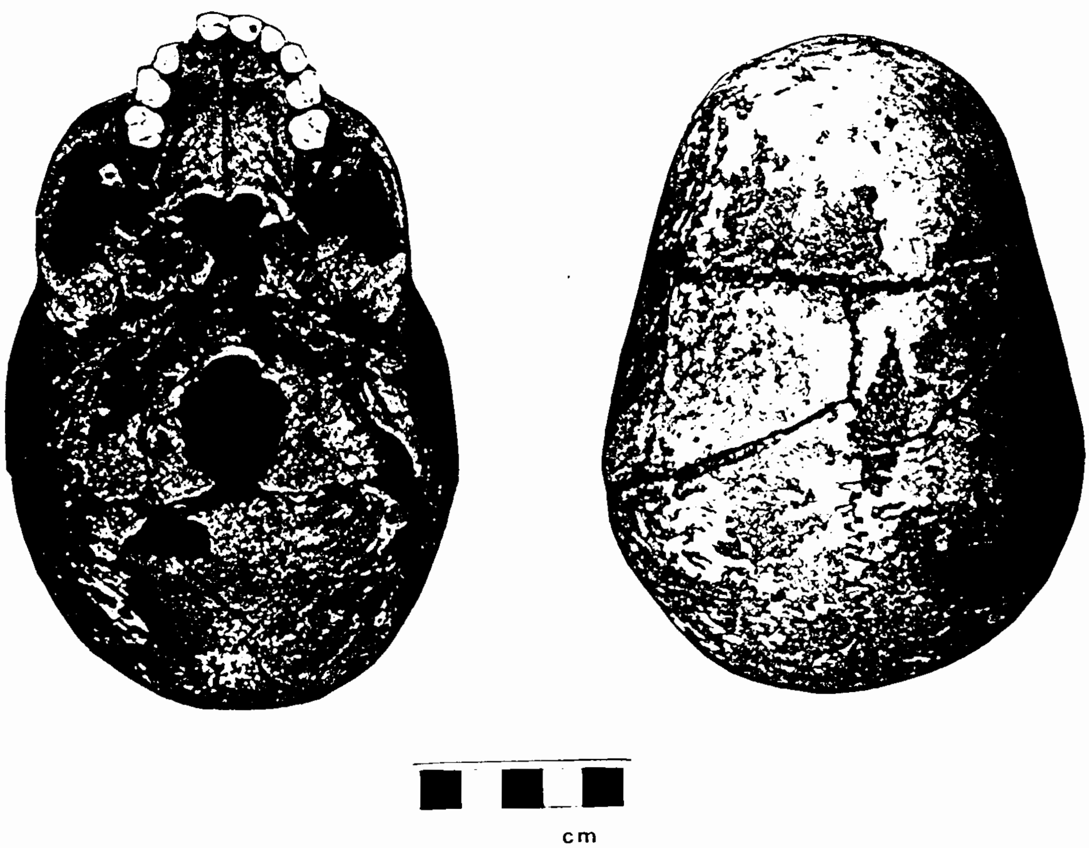
FIGURE 2b



WOSI 84/5 BURIAL 3

FIGURE 2a





RESEARCH LETTERS

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Mr L van Schalwyk
Kwazulu National Museum
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Ulundi
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Reference: TNH/dcv

Enquiries:

(011) 716-3500

Date: 27 April,1990

Dear Len,

Mamba Soil Samples

I have examined the three soil samples from the EIA site of Mamba. They were different in texture and colour:

A V11	grey powder with white nodules
No 1	white angular blocks (visually dung)
No 2	brown angular blocks with high frequency of soil silica

The phytolithic content, however, was similar. All three samples contained grass hairtips, elongated forms, and variations of dumbbells characteristic of the panacoid tribe of grasses. The frequency of these phytoliths is far greater than in any of the control samples from EIA villages, and I have no doubt that your samples came from dung deposits. Sample No 1 clearly came from the actual byre itself. Because of the low frequency of fragmentation, all three samples most likely reflect the dung of cattle, rather than small stock.

With best wishes,

Yours truly,

Signed by candidate

Signature removed

T N Huffman
Professor and Head
Department of Archaeology

For Len

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Dr T Maggs
Natal Museum
237 Loop Street
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3201

Dear Dr Maggs

I have received just now the first results of the analyses of the slag samples which you have so kindly made available to me.

The values found are all in the limits represented by previous analytical work with the exception of the titanium content of the Mamba slag (7,1% TiO_2), the manganese content of the Wosi slag (5,2% Mn_3O_4) and the lime/alkali content of the Mabhija slag (9,5% CaO; 1,69% K_2O) - all values on the high side - probably the results of use of local ore and fuel of "abnormal" composition.

The number of slags we have investigated so far (about forty) is still too small to allow valid conclusions, but it seems to me even so that the preliminary results support the concept of a single basic iron smelting technology during the whole South African Iron Age, as we have suggested it in a previous publication in the J. S. Afr. Min. Metallurgy. I enclose a copy of this paper.

I shall write to you again when more analytical results become available.

I am very grateful to you that you have given me a chance to learn something about the slags of the Matola tradition furnaces, which are certainly of considerable archaeo-metallurgical interest.

With best regards.

Yours sincerely

Signed by candidate

Signature removed

H M FRIEDE
HON RESEARCH OFFICER

encls

Copy to Len

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Date 18 October 1985

Dear Dr Maggs

I have just received the results for the thermal characteristics of the five smelting slags from your Iron Age sites. The values are:

	°C Start of melting	°C Fully molten final stage (flow)
1 Wosi 84/85	1342	1525
2 Mamba 83/84	1370	1515
3 Magogo 80/1 (Muden)	1360	1483
4 Msuluzi Confluence 77/30	1350	1490
5 Mabhija 75/81 Colenso	(1285)	1500-1570

(Determinations by Dr A Hejja, Department of Metallurgy, University of the Witwatersrand). Det. by Hot-stage Microscope Technique as described in paper by Friede, Hejja and Koursaris. J. S. Afr. I. Min. Metall 82, No. 2).

The values fit in well into the range found for 30 Iron Age slags (flow 1420°-1520°C), but are not indicative for the top temperatures obtained in the smelting procedures. The abnormal figures for the Mabhija sample are probably due to its high earth-alkaline content (9,5% CaO).

I am now busy drawing up the tabulation of analyses for 12 Iron Age slags including your samples and shall send you a copy of the table later.

The recently published paper by Morais (Zitundo E.I.A. site - Afr. Archaeol. Review No 2, p.118) strengthens the case for the coastal Matola tradition and is of special interest for metallurgical studies. I hope this aspect will be investigated and samples be analysed.

With many thanks for your help and best regards.

Yours sincerely

Signed by candidate

Signature removed

H M FRIEDE
HON RESEARCH OFFICER

GEOLOGICAL MAP OF THE KAKAMAS-KEIMOES AREA