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A HYPOTHESIZED FRONTIER BETWEEN HUNTER-GATHERERS AND FARMERS IN THE EASTERN FREE STATE

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ABSTRACT

Previous research in the southern highveld of South Africa established the southern boundary of agriculturist stone walled settlement in the lower Caledon Valley. This study assesses the evidence for interaction between hunter-gatherers and agriculturists in the resulting middle Caledon Valley frontier zone from a hunter-gatherer perspective, using archaeological data and historical accounts. To obtain the archaeological data three rock shelters were excavated; Orange Springs, Rooikrans and Westbury. Data from sites in the frontier zone excavated by other researchers is also considered in this study. These sites include Rose Cottage Cave, Roosfontein, Mauermanshoek and Tandjiesberg.

Modern ethnographic accounts of hunter-gatherer social organisation as well as historical evidence from the Caledon Valley are used to establish the various types of relationships documented between hunter-gatherers and agriculturists. These relationships include clientship, intermarriage and barter exchange. The same sources are used to establish the character of traditional reciprocal exchange relationships between hunter-gatherers themselves so that changes in pre-existing exchange relationships can be identified. Models derived from these sources are then used to interpret the archaeological data.

Ethnographic models suggest that traditional reciprocal exchange relationships amongst hunter-gatherers are replaced by barter exchange relationships with agriculturists in a frontier situation. Both reciprocal exchange and barter relationships are reconstructed from the archaeological data presented in this work using the distinctive material culture items attributable to either agriculturists or hunter-gatherers. These include ostrich eggshell beads probably made by hunter-gatherers and ceramics which may be attributed to either hunter-gatherers or agriculturists on the basis of stylistic and technological attributes. Domesticated plant remains found on hunter-gatherer sites are believed to have been obtained from agriculturists.

Ceramic assemblages are the most useful category of archaeological information for reconstructing interaction between hunter-gatherers and agriculturists in the Caledon Valley because their stylistic and sometimes their technological attributes can be tied to cultural identity.

When the ceramic sequence described in this work from the hunter-gatherer sites in the Caledon Valley frontier zone is compared with that from sites on the fringe and south of the frontier, an interesting difference emerges. The highly decorated grass-tempered ceramics associated with hunter-gatherers south of the hypothesized frontier in the Seacow and Orange River valleys persist into the nineteenth century. However, on hunter-gatherer living sites in the frontier zone and along its southern fringes this tradition is replaced by ceramics attributable to agriculturists, probably around the sixteenth or seventeenth century AD. The absence of grass-tempered hunter-gatherer ceramics on hunter-gatherer sites inside the frontier zone after the sixteenth century AD implies that this pottery was no longer made by, or exchanged between, hunter-gatherers in the frontier zone. Their absence in the frontier zone signifies at least a partial breakdown in traditional reciprocal relationships with areas to the southwest of the Caledon Valley, where these items are found in hunter-gatherer archaeological contexts into the late nineteenth century AD. The ceramic evidence as well as the historical and ethnographic evidence therefore strongly suggests that hunter-gatherers in the frontier zone coped with the arrival of farming communities by establishing innovative social relationships with them. The replacement of hunter-gatherer manufactured ceramics with characteristic agriculturist ceramics probably reflects the development of barter exchange relationships with agriculturists. No grass-tempered sherds are described from ceramic assemblages on agriculturist settlements in the highveld, including the earlier Type N agriculturist sites. This may reflect the non-reciprocal nature of exchange arrangements between agriculturists and hunter-gatherers there, even during the earlier phases of interaction between them. Further possible evidence for non-reciprocal exchange is the absence of evidence for ostrich eggshell bead manufacture on agriculturist sites in the highveld coupled with the presence of finished beads on these sites. This suggestion is supported by good evidence for ostrich eggshell bead manufacture from fourteenth and fifteenth century hunter-gatherer occupation levels at Rose Cottage Cave as well as more tenuous evidence from later hunter-gatherer contexts in the Caledon Valley including Rooikrans and Twyfelpoort.

Ethnographic models suggest that a 'mosaic frontier' with agriculturists results in reduced mobility for hunter-gatherers, which in turn adversely affects their ritual aggregation behaviour. Using criteria defined by Wadley to identify archaeological aggregation residues from the Caledon Valley hunter-gatherer sites considered in this study only the occupation in Level A of

Rose Cottage Cave dated to 680 BP can be said to represent an aggregation camp. None of the later occupations of sites in the Caledon Valley can be identified as aggregation camps. This supports the argument that hunter-gatherer mobility in the Caledon Valley frontier zone was adversely affected by agriculturist settlement after 680 BP.

High frequencies of scrapers at Westbury and Mauermanshoek are interpreted as evidence for the possible use of these sites as stock raiding camps. The wider range of formal tools from Rooikrans in conjunction with plentiful evidence for interaction with agriculturists including characteristic agriculturist ceramics, domestic plant remains and historical accounts from the area are interpreted as evidence for the use of this site by clients of Taung agriculturists.

Ceramic evidence from Roosfontein, Tandjiesberg and Rose Cottage Cave shows that hunter-gatherers in the middle Caledon River Valley were using grit tempered ceramics before agriculturists settled there. These ceramics may be similar to 'Khoi' ceramics described from areas south and west of the Caledon River or may even be derived from early grit-tempered ceramics from KwaZulu-Natal.

The Caledon Valley appears to be at the north-eastern limit of the distribution of grass-tempered ceramics attributable to hunter-gatherers. Research from areas further north suggests that hunter-gatherers there did not make grass-tempered ceramics. Instead they were using agriculturist ceramics at a considerably earlier date than the Caledon Valley hunter-gatherers, and may have already been largely absorbed into agriculturist groups by the twelfth century.

DECLARATION

I declare that this thesis is my own, unaided work. It is being submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

Carolyn Thorp

(Name of candidate)

14th day of March, 19 98.

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PREFACE

s research aims to investigate the effects on hunter-gatherers of a hypothesised fron ier with agriculturists in the Caledon Valley. The frontier hypothesis is based on previous Iron Age research which documented the distribution of agriculturist settlement in the southern highveld of South Africa and established a southern limit for this settlement between 28° and 30° South. In the report on this Iron Age research the presence of hunter-gatherers in the Caledon Valley was noted from historical sources. However there was little information from Stone Age sites in the middle Caledon Valley before 1990 when this study, and a project lead by Professor Lyn Wadley of the University of the Witwatersrand on Stone Age demography and band fluidity commenced.

In this study I will therefore investigate archaeological evidence from hunter-gatherer sites within the Caledon Valley frontier zone in an attempt to establish a hunter-gatherer perspective on the frontier situation. In order to interpret the archaeological evidence I will draw on models from ethnographic sources on hunter-gatherer social organisation and on historical accounts from the Caledon Valley. Theoretical approaches to understand ' unter-gatherer/agriculturist frontier dynamics have often focused on environmental, economic an political concerns. Agriculturists are usually assumed to assimilate or displace hunter-gathere s in a frontier situation. Using a different approach, this study examines the social aspect of a hunter-g therer frontier with agriculturists, by focusing on the mechanisms involved in long standing co-operative relationships between hunter-gatherers and agriculturists. Exchange relationships and clientship are explored as possible explanations for changes in material culture from archaeological sites in the frontier zone.

Chapter 1 of this study is an introduction to previous research in the Caledon Valley and surrounding areas and to the environment of the study area. Chapter 2 is a review of possible theoretical approaches to understanding interaction between hunter-gatherers and agriculturists in a frontier situation. Appropriate models are identified for interpreting the archaeological data considered in this study. Chapter 3 provides a historical background for the Caledon Valley and discusses historical accounts of hunter-gatherer interaction with agriculturists.

Chapters 4 provides contextual and chronological information about the archaeological material from hunter-gatherer sites in the Caledon Valley frontier zone which will be discussed in chapters 5 and 6. In chapter 5 stone tool assemblages from hunter-gatherer sites are examined for evidence of changes through time and other indicators which may be related to interaction between the hunter-gatherers and agriculturists. Metal and glass assemblages are considered as evidence for interaction with indigenous and European agriculturists. Faunal and plant assemblages are examined for evidence of domesticated items from agriculturist sources. In chapter 6 a ceramic sequence is established for the Caledon Valley using assemblages from hunter-gatherer sites in the frontier zone. This sequence is compared with published information from hunter-gatherer sites in areas south and west of the frontier. The sources of these ceramics are identified using stylistic and technological attributes.

Finally chapter 7 is an assessment of the archaeological and historical evidence. Models derived from ethnographic and historical sources are used to interpret the archaeological evidence for interaction between hunter-gatherers and agriculturists.

1 THE FRONTIER HYPOTHESIS IN THE CALEDON VALLEY

Introduction

The southward movement of Bantu-speaking agriculturists across the Vaal River into the southern highveld, from around the sixteenth to the eighteenth centuries AD, is thought to have reached the boundaries shown in Figure 1.1 (Maggs 1976:307). There is no evidence so far from this high altitude region for earlier agricultural settlement comparable with that found in more favourable environments in the Northern Province and KwaZulu-Natal (Maggs 1984; Hall 1987:47). The boundaries of Iron Age settlement have been established on the basis of the distribution of characteristic stone walled settlement types in the Free State (Maggs 1976:27 Figure 7) and historical, archaeological and oral records in the Northern Cape (Maggs 1972; Humphreys 1976; Morris 1990:63). Maggs (1976:307) hypothesised from historical evidence that a relatively stable frontier situation between hunter-gatherers and Iron Age agriculturists had grown up in the eastern Free State. He noted that areas to the south and west of the Caledon Valley were the preserve of hunter-gatherers down to the nineteenth century. Until recently little information concerning hunter-gatherer sites of this period was available from the proposed contact zone in the eastern Free State and areas immediately to the north of it. However, a frontier was tentatively traced by a negative correlation between hunter-gatherer paintings of domestic animals and agriculturist settlement (Loubser & Laurens 1994). Contact paintings of domestic ungulates and shields occur predominantly outside the area where Sotho-Tswana people built stone-walled settlements between the mid-fifteenth century and early nineteenth century AD. Loubser and Laurens suggest that paintings of domestic ungulates and shields may only date back to the eighteenth century and therefore hunter-gatherers might have started to depict these images only once the expanding frontier of agriculturists reached its limits. They believe that these paintings were sources of potency to 'San'[1] medicine people of the Caledon Valley area.

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[1] Both 'Bushman' and 'San' are unsatisfactory terms for hunter-gatherers in southern Africa. I use these terms when quoting from sources which employ them. I reject any pejorative connotations these terms may imply. Where possible I use the term 'hunter-gatherer' whilst recognising that some of these groups may also have engaged in herding, especially in the recent past.

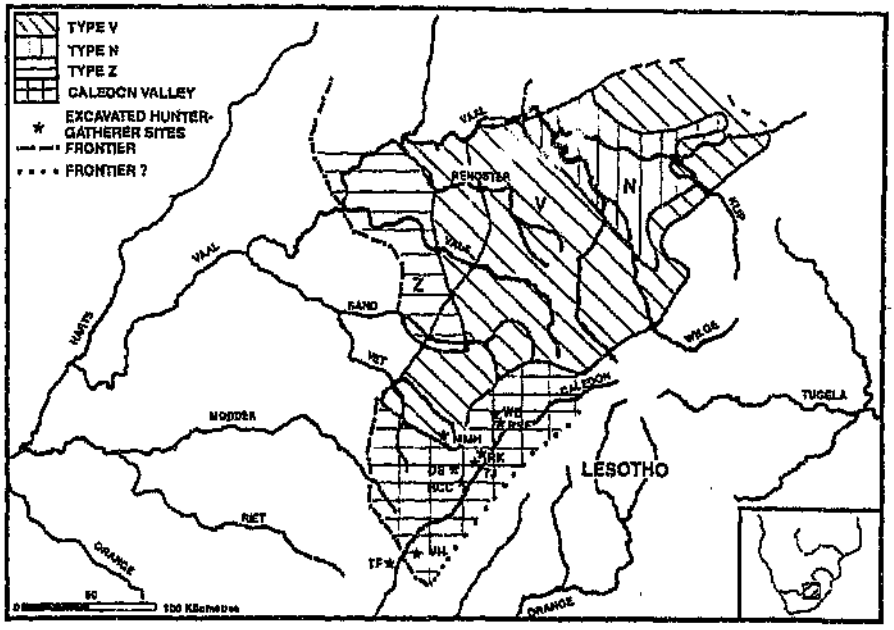


Figure 1.1. Map showing the distribution of stone walled agriculturist settlement on the highveld in relation to excavated hunter-gatherer sites.

Previous research

The main intention of this work is to assess the evidence for interaction between hunter-gatherers and agriculturists from hunter-gatherer sites in the proposed frontier zone. The following brief review of past research is therefore limited to an assessment of the archaeology of the last 3000 years in the Caledon Valley and surrounding areas in order to consider the existing evidence for agriculturist and hunter-gatherer settlement, and for changes in the archaeological record, such as the introduction of ceramics in Later Stone Age contexts, which may be attributable to interaction. Other possible sources for early ceramic assemblages in Later Stone Age contexts will also be investigated as part of this study.

Pioneer Later Stone Age research began in the 1920s and 30s in the Smithfield area just south of the proposed frontier zone which forms the focus of this study (Sampson, 1972:170). Surface

collections by Kannemeyer from around Smithfield town and Van Riet Lowe in the Riet River Valley resulted in the definition of the 'Smithfield' industry with three divisions A, B and C (Van Riet Lowe, 1929). To the north of the Caledon Valley ne ar Bethlehem excavations of two small rock shelters by Harding in the 1950s (1951a & b) produced undated assemblages which he attributed to a pre-ceramic 'Smithfield C' and a 'Smithfield C' with 'Bantu' pottery.

The Smithfied industry was later completely redefined as a result of an extensive research project carried out in the 1970s by Garth Sampson in the Orange River Scheme area, just south of the sites discovered during pioneer fieldwork in the Smithfield area described above and south-west of the Caledon River Valley. The Smithfield A industry had previously been defined from a type site on Lockshoek Farm. This phase was subsequently attributed by Sampson (1972:285) to the Oakhurst complex which is now known to pre-date the other entities of the Smithfield industry. Oakhurst levels are dated to between 9000 and 8000 BP at Rose Cottage Cav adley, 1991a:125; Wadley, 1995:574). Sampson devised a six phase sequence to describe the changes in stone tool assemblages from surface sites and excavations in the Orange River Scheme area (Sampson, 1972:214). Phases 4 to 6 of this sequence span the period between the last half of the first millennium BC and the nineteenth century and include the introduction of pottery comprising grit-tempered sherds and grass-tempered impressed decorated sherds (e.g. Fig. 1.2 and 1.3). This work demonstrated that Smithfield B and C could no longer be considered as separate entities. They were assigned to phase 6 of the Orange River Scheme sequence (Sampson, 1972:214) and were attributed to hunter-gatherer populations referred to as 'Bushmen' when encountered by European explorers and Trekboers in the eighteenth century (Sampson, 1972:287). At the end of his Orange River Scheme research project Sampson (1972:288) suggested that phase 6 should be renamed the 'Smithfield Complex'. Work by Mary Brooker in the mid 1970s around Wepener in the lower Caledon Valley described stone assemblages similar to those assigned to the 'Smithfield Complex' (phase 6) in the Orange River Scheme area, with additional evidence of interaction between recent hunter-gatherers and Iron Age agriculturists in the form of typical Iron Age ceramics (Brooker, 1980).

To the east of the Caledon Valley in Lesotho, Later Stone Age assemblages post dating 1400 BP with elongated endscrapers similar to those attributed to the 'Smithfield ' industry have been

described from Sehonghong in eastern Lesotho (Carter *et al.* 1988: 101; Wadley, 1992:11). Thin walled grit-tempered pottery from Sehonghong is said to represent an indigenous LSA ceramic tradition appearing at some time before 1,400 ± 150 BP (Carter *et al.*,1988:192; Mitchell *et al.*, 1994:51). Later Stone Age assemblages dating within the last 2000 years have been described from Hlolo Crossing in northern Lesotho, Leqhetsoana in western Lesotho and Masitise and Bolala in southern Lesotho (Mitchell *et al.*, 1994). The presence of ceramics is noted on all of these sites but is attributed to subsequent Basutho occupations during the nineteenth century with the exception of Bolahla, where pottery associated with a date of 910 ± 80 BP is thought to be of possible indigenous LSA origin. No grass-tempered (often impressed decorated) 'Smithfield' ceramics are recorded east of the Caledon in Lesotho (Mitchell *et al.*, 1994:51).

In the middle Caledon Valley, which is the focus of this study, the earliest substantial research on the Stone Age sequence was Malan's excavation at Rose Cottage Cave in the 1940s. The upper levels of the excavation were attributed to the Wilton (Wadley, 1991a:125) and further excavations at the site by Beaumont in the 1960s confirmed this definition (Wadley, 1991a: 129; 1991b: 605). Dates from these levels included one from a grass-tempered potsherd of 610 ± 50 BP (Pta-350), and another on charcoal of 1100 ± 50 BF (GrN-5298) (Beaumont & Vogel, 1972). However the considerable ceramic and stone assemblages recovered during these excavations were never fully described.

Ongoing excavations at Rose Cottage Cave by Lyn Wadley have attributed the stone assemblages from the upper layers (A and Mn) to the post-classic phase of the Wilton industry associated with ceramics (Wadley, 1991b: 605; 1992: 9). These stone assemblages are considered to be morphologically distinct from the 'Smithfield' complex described by Sampson from the Orange River Scheme area and the Seacow River Valley (Wadley, 1992:11). The ceramic assemblage from this excavation is analysed in chapter 6 of this study.

Since 1990 the University of the Witwatersrand has implemented a study of Stone Age demography and band fluidity during the Pleistocene and Holocene involving excavations of several sites including De Hoop and Roosfontein (Klatzow, 1994 & 1995), Tandjiesberg (Emby, 1990), Leliehoek (Esterhuysen *et al*, 1994), Twyfelpoort (Wallace, 1994; Backwell *et al*, 1996)

and Mauermanshoek (Domleo, 1993). Ceramics from some of these sites are analysed in chapter 6 of this study. Stone tool assemblages from these sites have contributed towards the construction of a cultural sequence for the area and charcoal as well as faunal remains have been used to reconstruct past environments.

Apart from the work at Rose Cottage Cave and the other Stone Age sites mentioned here archaeological research in the Caledon Valley has until recently largely focused on stone built agriculturist settlements (Maggs, 1976). In the 1920s and 30s interest in these settlements resulted in publications by Van Riet Lowe (1927), Laidler (1935), Daubenton (1938) and Pullen (1942). In the 1970s extensive work by Tim Maggs (1976) established the chronology and distribution of the various agriculturist settlement and ceramic types in the southern highveld and attributed them to ancestors of the present inhabitants of the area. The earliest date for these settlements was within the fifteenth century (505 ± 95 GX-1014) and came from excavation of the Type N settlement of Ntsuanatsatsi in the north eastern Free State (Maggs, 1976:159). Maggs pointed out however that earlier settlements may yet be found (Maggs, 1976:313). Four main divisions were established on the basis of settlement and ceramic types and their distribution was mapped. These divisions were labelled Type V, Type N, Type Z and Caledon Valley (Figure 1.1). At the time of Maggs's study little was known about the Stone Age archaeology of the area, although pottery from excavations at Rose Cottage Cave was thought to date to the ninth century (Maggs, 1976:295) and considered to be similar to class A (grass-tempered) ceramics from the Orange River Scheme area (Fig. 1.2 and 1.3). The recovery of Stone Age ceramics in the Caledon Valley was not considered surprising in view of existing evidence for ceramics from Stone Age sites in the Cape and Lesotho. Maggs speculated that:

> There was clearly a long period during which Stone Age hunter-gatherer communities lived in contact with Iron Age farming peoples - more than the 500 years covered by this project. The interrelationships were complex and they involved cultural and economic flow in both directions. (1976:295)

He made use of historical accounts of interaction between agriculturists and hunter-gatherers in the Caledon Valley and surrounding regions to reconstruct some aspects of this interaction (eg Maggs, 1976:306-307).

The route and chronology of the spread of ceramics and of pastoralism into southernmost Africa has been debated since 1905 when Stow (1905) postulated that pastoralists migrated from east Africa into the south-western areas of the continent. Early models of this spread involved speculative routes from the northeast through Zimbabwe and Botswana into northern Namibia and along the west coast into the Cape (Cooke, 1965) or alternatively, an origin in Botswana based on linguistic evidence (Westphal, 1963). More recently two possible routes have been suggested for the spread of pastoralism. The first is from northern Botswana through northern Namibia and the western and southern Cape (Robertshaw, 1978). The second is from northern Botswana through the highveld and Karoo to the west of the Caledon Valley, then eastward and westward along the coast of southernmost Africa (Ehret, 1982; Elphic, 1985). Finally, ceramics are no longer thought to have necessarily spread synchronously with livestock in Namibia and the Cape (Sealy & Yates, 1994; Kinahan, 1995: 219) although at Blombos in the southern Cape accelerator dates on sheep bone overlap with radiocarbon dates associated with pottery (Henshilwood, 1996). The possibility that hunter-gatherers were using ceramics before the advent of pastoralism in some areas and acquired sheep before ceramics in others is now a serious issue in the debate on the nature and route of the spread of pastoralism. It has recently been argued that sheep and pottery diffused into southern Africa at variable rates and were not brought in by Khoe (Khoi) migrants (Sadr, 1997:4).

It is apparent that previous research in the Caledon Valley and surrounding areas, although limited in extent, has already indicated the potential of archaeological and historical sources for reconstructing aspects of social relationships between hunter-gatherers and agriculturists through time. The possibility of the early appearance of ceramics in Stone Age contexts has also been raised by previous research in the area. The importance of ceramic evidence in establishing possible interaction between groups is evident from the known archaeological entities in the Caledon Valley and further afield. My attempt to develop these issues in the present study is therefore partly based on the results of previous and ongoing work by other researchers in the Caledon Valley and surrounding areas.

A review of ceramic traditions in southernmost Africa

The following review of ceramic traditions in southernmost Africa summarises the possible correlates for the ceramics from the Caledon Valley described in this work. This brief review highlights some of the problems inherent in attempting to make correlations between ceramic entities from this region based on present knowledge. In particular, the category referred to as 'Khoi' or 'Cape coastal pottery' from the western Cape to the eastern Cape and inland as far as the Orange River, comprises a variety of attributes which are poorly understood, especially in terms of their temporal and spatial variability. The lack of standardisation in the approaches used to analyse these ceramics, and the shortage of firmly dated assemblages, adds to the difficulty of making meaningful comparisons and correlations between them.

The earliest ceramics in southernmost Africa are best known from the southern Cape, where there is evidence for a ceramic sequence characterised by an initial phase of thin walled quartz tempered pottery without lugs or pointed bases, possibly dominated by bowl shapes, from Boomplaas BLD member with a date of 1955 ± 65 BP (UW-336) at it's base (Deacon *et al.*, 1978:54) and Die Kelders in Layer 12, dated to 1960 ± 85 (GX-1688) (Schweitzer, 1979:127,159). Ceramics from the upper (DGL) levels at Boomplaas, dated to 1630± 50 BP (UW-337) include a pointed base and spout (Deacon *et al.*, 1978:51,53-54). At Die Kelders ceramics from the upper level (Layer 2) dated between 1650 BP (GaK-3877) and 1465 BP (GX-1685) (Schweitzer, 1979:127) included a spouted jar with a pointed base as well as a sherd decorated with a stamp made of a shell edge (Schweitzer, 1979:168-169).

At Kasteelberg in the western Cape a three phase ceramic sequence beginning around 1800 BP including vessels with a small rim diameter and some spouts is described. Vessels are decorated on the rim and neck with incised and shell-edge stamp motifs, but details of vessel shape, finish and temper are not included in the analysis (Sadr & Smith, 1991:108). The second phase of this sequence is characterised almost exclusively by shell-edge stamped motif and the final phase by larger mostly undecorated spoutless pots (Sadr & Smith, 1991: . 13). The last two phases are thought to date between 1300-800 BP (Sadr & Smith, 199 :0).

The later distinctive Cape Coastal ware is found inland and along the coast of the western Cape as far north as Clanwilliam and along the southern Cape coast as far east as Port Elizabeth (Sadr & Smith, 1991:114). Ceramic assemblages of this type date to within the last 600 years (Sadr & Smith, 1991:112) and comprise mostly necked jars with internally re-enforced lugs and pointed bases (e.g. Fig.1.4:3 Kommetjie). Decoration includes incision and punctates on the rim and neck (Fig. 1.4:104,141,107) and the surface may be burnished with ochre. More recently this type of assemblage has been referred to as De Hangen style (Sadr & Smith, 1991:112) after the richest ceramic sample of this tradition from De Hangen in the south-western Cape (Fig. 1.4:104,141,107) (Parkington & Poggenpoel, 1971).

In the Eastern Cape sherds which appear to be similar to those described as De Hangen style were recovered from Melkhoutboom and Scotts Cave. At Melkhoutboom these sherds came from the surface level dated to 250 ± 70 BP (Gak-1537) and are assigned by Rudner to his Type C (Deacon, 1976:52-55,186; Rudner, 1979:12). Similar pottery assigned by Rudner to his Cape Coastal ware Types C_1 and C_2 (Rudner 1968:598-599) was found throughout the deposit at Scotts Cave (Deacon & Deacon, 1963:108-112). The deposit was thought to be culturally homogeneous but radiocarbon dates obtained subsequently suggest that this material accumulated over a considerable period. A date of 1190 ± 100 BP (SR-82) came from a hearth on bedrock and a further date of 360 ± 80 (Y-1425) was obtained from a sample collected in the top three inches of deposit (Deacon, 1967). Brooker (1989:27) refers to the ceramic assemblage from Scotts Cave and to comparable sherds from Uniondale as red 'Albany ware'. She suggests that they are distinct from Cape Coastal pottery and could represent an earlier ceramic entity. A sequence is described from Uniondale beginning with a thin, well baked ware dating to 2000 BP followed by thicker grass-tempered beakers and bowls. The red 'Albany ware' is assigned to a more recent period than these two preceding entities. At Wilton Large Rock Shelter a sequence is also identified with undiagnostic thin quartz tempered sherds recovered in Layer 2a, while thicker grass-tempered sherds came from the overlying Layer 1. These layers are undated although a date of 2270 ± 100 (GaK-1540) came from Layer 2b underlying both of these levels (Deacon, 1972:14). At Welgeluk in the eastern Cape a two component ceramic sequence is documented (Hall, 1986), with ceramics referred to as 'decorated sherds and shapes typical of Khoi Cape coastal pottery' in a layer dated to 1360 ± 50 BP (Pta-3960) and later rim-nicked pottery attributed either to an Iron

Age or mixed Khoi/Xhosa origin dated to 510 ± 50 BP (Pta-3934). Brooker (1979:27) compares the red 'Albany ware' from Uniondale with the Cape coastal sherds described by Hall from Welgeluk.

The evidence for early pre-agriculturist pottery in the eastern part of southern Africa has been reviewed by Mazel (1992a). Mazel describes unequivocal evidence for pottery which is stylistically distinct from Early Iron Age ceramics and comes from deposit sealed under a collapsed ceiling from the basal level of Collingham Shelter dated to 1880 ± 45 BP (Pta-5101). The assemblage is small and undiagnostic although there is evidence for a bag shaped vessel and some plain burnishing. Mean thickness for the assemblage is 5.88 mm (Mazel, 1992b:27). At Clarke's Shelter (Mazel, 1984:57) an assemblage from Layer 2, dated to 1580 ± BP comprising U shaped and bag shaped pots with a mean thickness of 9.4 mm is described. No rims were recovered from Layer 3, but the assemblage which is dated to 2160 ± 50 BP is thought to be *in situ*. Claims for early pottery from six further sites in KwaZulu-Natal and Lesotho are less well substantiated (Mazel, 1992a). Although the date for pottery from Collingham Shelter is almost as early as the earliest pottery from the southern Cape there is not sufficient published data to make a meaningful comparison between these roughly contemporary assemblages from the two areas, beyond the observation that undecorated vessels without pronounced necks seem to feature in both at this time.

Ceramics have also been described from Stone Age sites in inland regions (Sampson 1972; 1988). In the Orange River Valley and the Seacow River Valley ceramics from rock shelters, open sites and sites with stone built stock kraals attributed to herders have been documented by Sampson (1972; 1988; 1989). Three different ceramic traditions; herder (Khoi), Interior Wilton (grit-tempered Class B) and 'Smithfield' (grass-tempered Class A) ceramics were identified initially (eg Sampson,1972:200-205 & 1988:47).

More recently two major ceramic traditions, 'Khoi' and grass-tempered ware have replaced the initial three traditions (Sampson *et al.*,1989; Bollong & Kamilli, 1995; Sampson & Vogel, 1996). 'Khoi' ceramics are thought to appear before 1350 BP (Sampson & Vogel, 1995:89) and are described as coil built, thin-walled, sand/silt-tempered, well fired ware with characteristic

shoulder, neck, everted lip, slightly pointed base, lugs and rare spouts. Some sherds have orange-red-mauve (ochre?) slip or paint (Sampson *et al.* 1989:4). It is not clear how this material relates to the chronological sequence and stylistic characteristics of assemblages described by Sadr and Smith from the southern and western Cape (Sadr & Smith, 1991). Brooker concludes that 'Khoi' material from the Seacow River Valley is similar to 'Albany ware' from the eastern Cape (Brooker, 1989:27).

The other tradition described by Sampson comprises grass-tempered plain and decorated ware. The plain ware appears at the same time as the first 'Khoi' pottery, before 1350 BP, and decorated grass-tempered ware is found from around 950 BP (Sampson & Vogel, 1995:87). Vessels assigned to this category are thick-walled, low-fired cooking bowls and bag-shaped pots (Fig. 1.2). There are no necks, and lips are straight or very slightly everted. The temper is crushed dolerite and grass. There is no slip and decoration, when present, includes a variety of stamping and impressions (Fig. 1.3). Although they are described as slab built in the literature it is now thought that most of the fibre-tempered bowls were coil built (Bollong, 1996; *pers. comm.*)

Until recently few ceramic assemblages from hunter-gatherer contexts have been described from the eastern Free State, and most of the existing reports are unpublished or preliminary (Thorp, 1996; Domleo, 1993; Wallace, 1993; Klatzow, 1994). One exception is a report on ceramics from Saulspoort Shelter near Bethlehem (Harding, 1951a). Although the deposits excavated from this shelter are undated the author ascribes the final occupation to 'Bantu' or 'Bushmen under strong Bantu influence' because of the presence of characteristic 'Bantu' ceramics illustrated in the paper. The latter suggestion is a tantalising introduction to material culture evidence for interaction between these groups in the Caledon Valley.

Most of the ceramics described from archaeological contexts in the eastern Free State are from stone walled agriculturist settlements attributed to Sotho speakers (Maggs, 1976). Although the range of decorative motifs varies according to the various types of settlement identified by Maggs (Figure 1.1), the characteristics of the assemblages are broadly similar. The ceramics are all grit-tempered with occasional use of pottery grog. The assemblages from earlier Type N settlements north of the Caledon Valley and dated to the fifteenth or sixteenth centuries, are predominantly

decorated with comb stamping in pendant triangles or horizontal bands on pots and bowls, often in combination with ochre burnish (Maggs, 1976:292-3) (Fig. 1.5:1-9). Rim notching and miscellaneous impressions are also found. These motifs are also found on later Type V settlements (Figure 1.1) (Figure 1.6) with a distribution which includes the Caledon Valley. However, Type V sites have an increased frequency of finger-impressed or pinched decoration. Caledon Valley assemblages are similar to Type V assemblages but lack comb stamping and have finger-impressed decoration on unburnished vessels (Fig 1.7). North-west of the Caledon Valley (Figure 1.1) ceramics from Type Z settlements are predominantly decorated with horizontal bands of parallel grooves and sometimes stylus impressions. Type R settlements around the Riet River are attributed to a Khoisan population (Humphreys, 1970; Maggs, 1971)). Ceramics from these settlements are largely grit-tempered and undecorated although small amounts of grass temper and some comb stamping and burnishing occurs (Maggs, 1971; 1976:Beaumont & Vogel, 1984).

In summary there is evidence from both the southern Cape and Natal that the earliest ceramics appeared approximately 2000 years ago and comprised bowls or bag shaped vessels with grit temper or inclusions. Pottery with grit inclusions or temper appears in the eastern Cape at roughly the same time but little is known about the other attributes of these ceramics. The lack of evidence for a similar entity in the intervening areas could therefore be due to sampling and dating problems. In the southern Cape jars with grit temper or inclusions commonly labelled 'Khoi' are documented from approximately 1800 years ago. 'Khoi' vessels are described from the eastern Cape and its hinterland from approximately 1300 years ago. Assemblages including fibre-tempered bowls commonly attributed to hunter-gatherers are also documented from the eastern Cape and the interior. In the Free State the earliest known agriculturist pottery dates to the fifteenth century. Fibre-tempered pottery from hunter-gatherer contexts in this area has not been extensively documented until recently (Thorp, 1996) and the analysis of the assemblages described in this work is a contribution towards reconstructing the ceramic sequence from hunter-gatherer contexts in the Caledon Valley area.

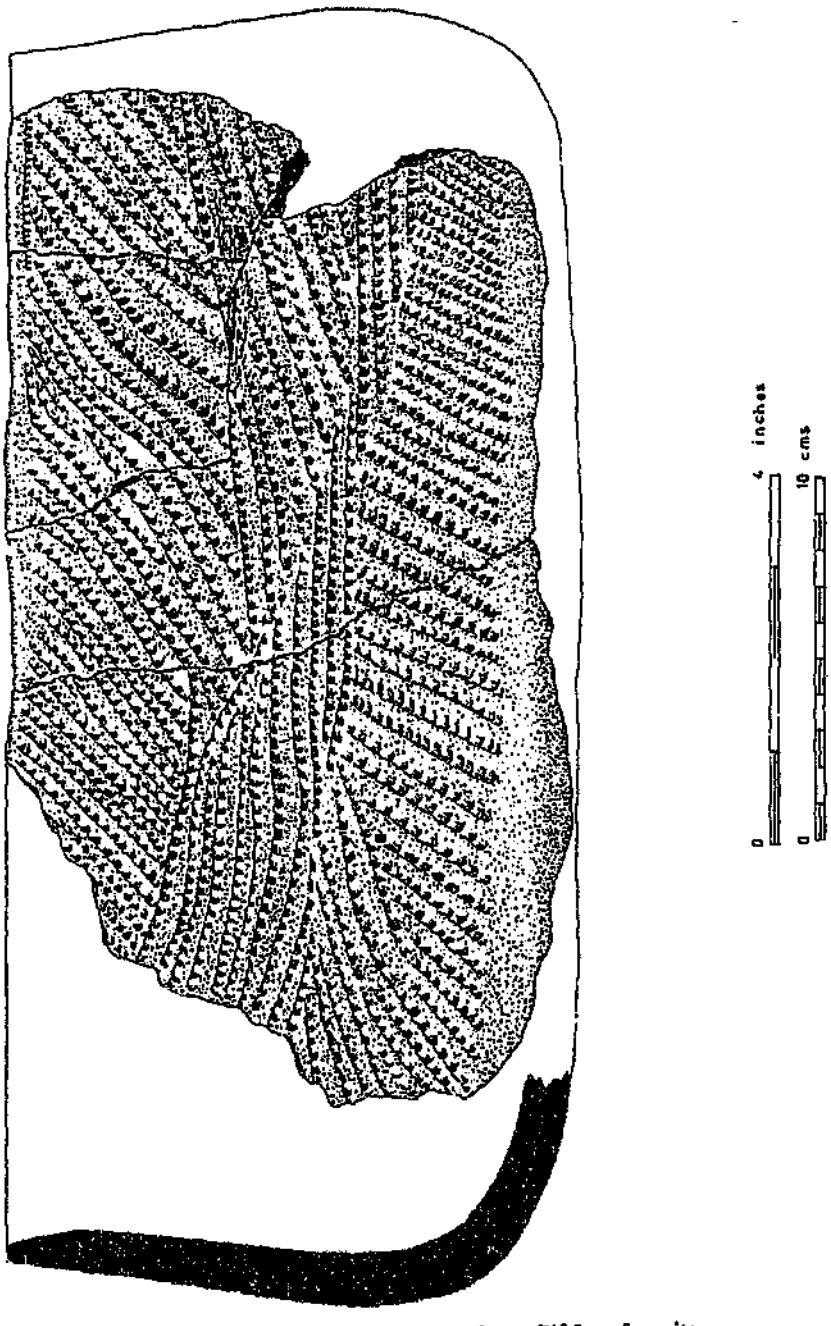


Fig. 79: A class A bowl from the Jouberts Gif 3 surface site.

Figure 1.2 A stamp impressed grass-tempered bowl from the Orange River Scheme area (from Sampson 1970:166 Fig. 79).

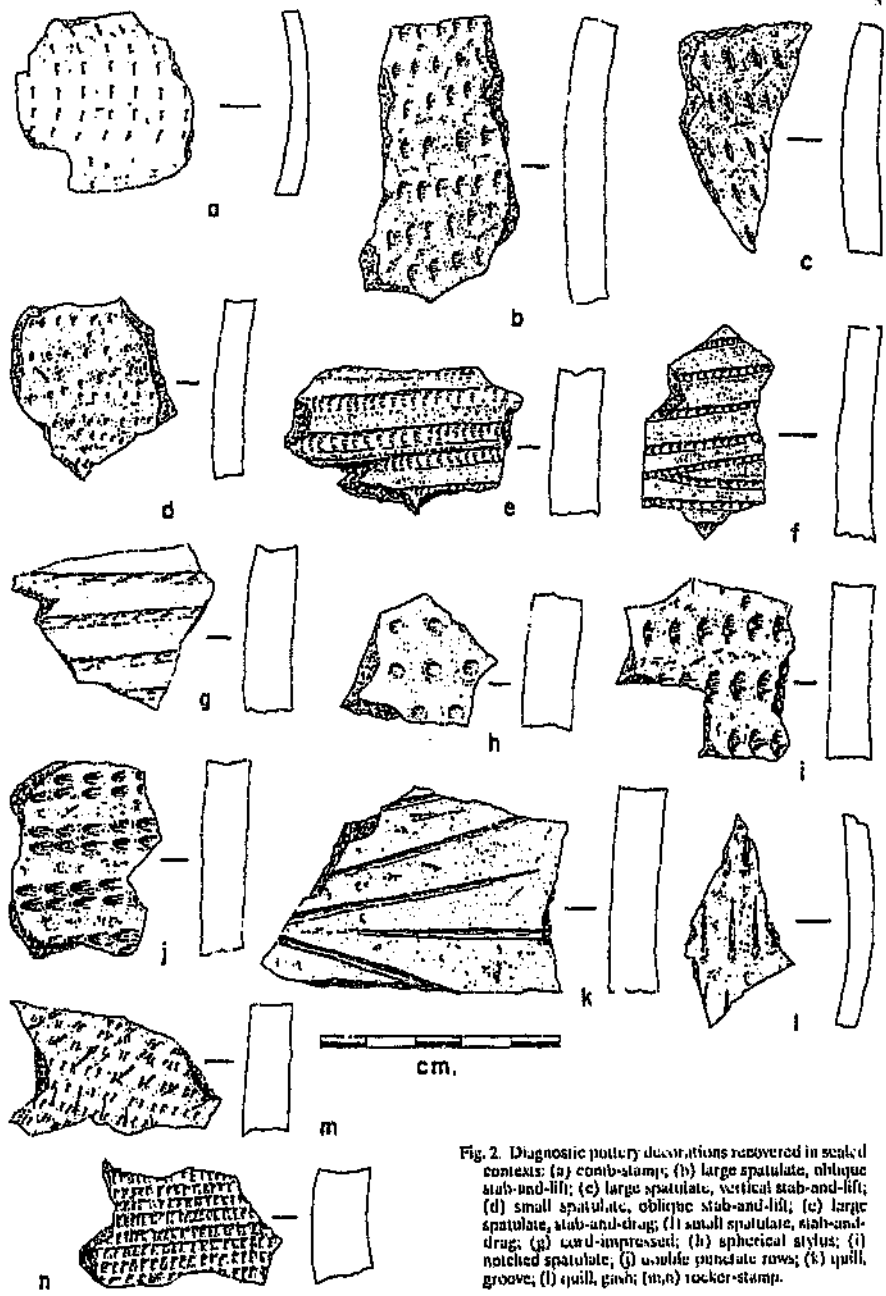
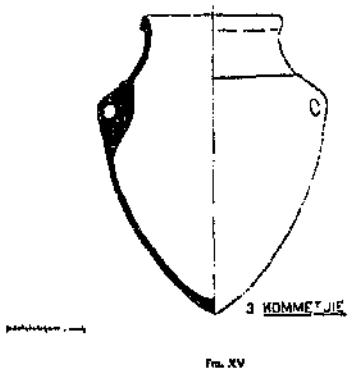


Fig. 2. Diagnostic pottery decorations recovered in sealed contexts: (a) comb-stamp; (b) large spatulate, oblique stab-and-lift; (c) large spatulate, vertical stab-and-lift; (d) small spatulate, oblique stab-and-lift; (e) large spatulate, stab-and-drag; (f) small spatulate, stab-and-drag; (g) cord-impressed; (h) spherical stylus; (i) notched spatulate; (j) double punctate rows; (k) quill, groove; (l) quill, gash; (m,n) rocker-stamp.

Figure 1.3 Stamp impressed decorations from the Seacow River Valley (from Sampson *et al.*, 1989:5 Fig. 2).



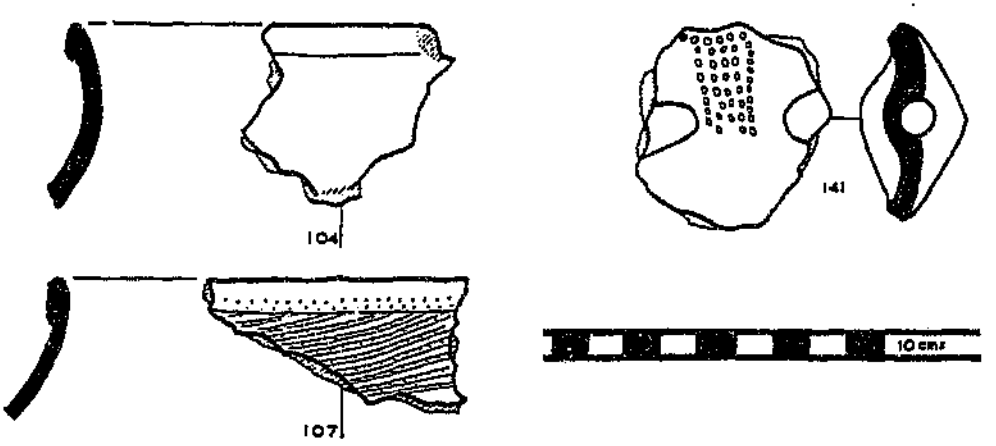


Figure 1.4 Cape coastal ware jar from Kommetjie (from Rudner 1968:644 Fig. XV no. 3); Cape coastal ware jars (104 and 107) and lug (141) from De Hangen (from Parkington & Poggenpoel, 1971:20 Fig. 14).

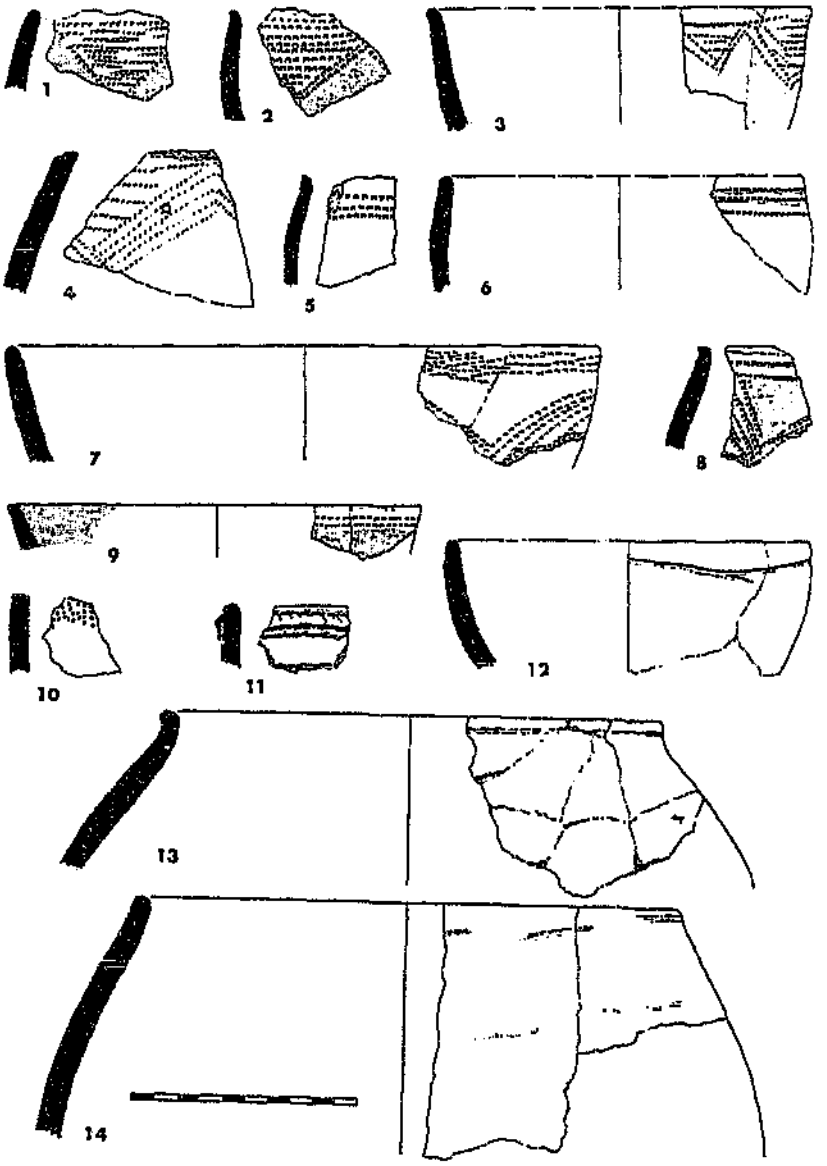


Figure 1.5 Type N agriculturist ceramics from OU 1 Ntsuanatsatsi (from Maggs 1976:150 Fig. 42).

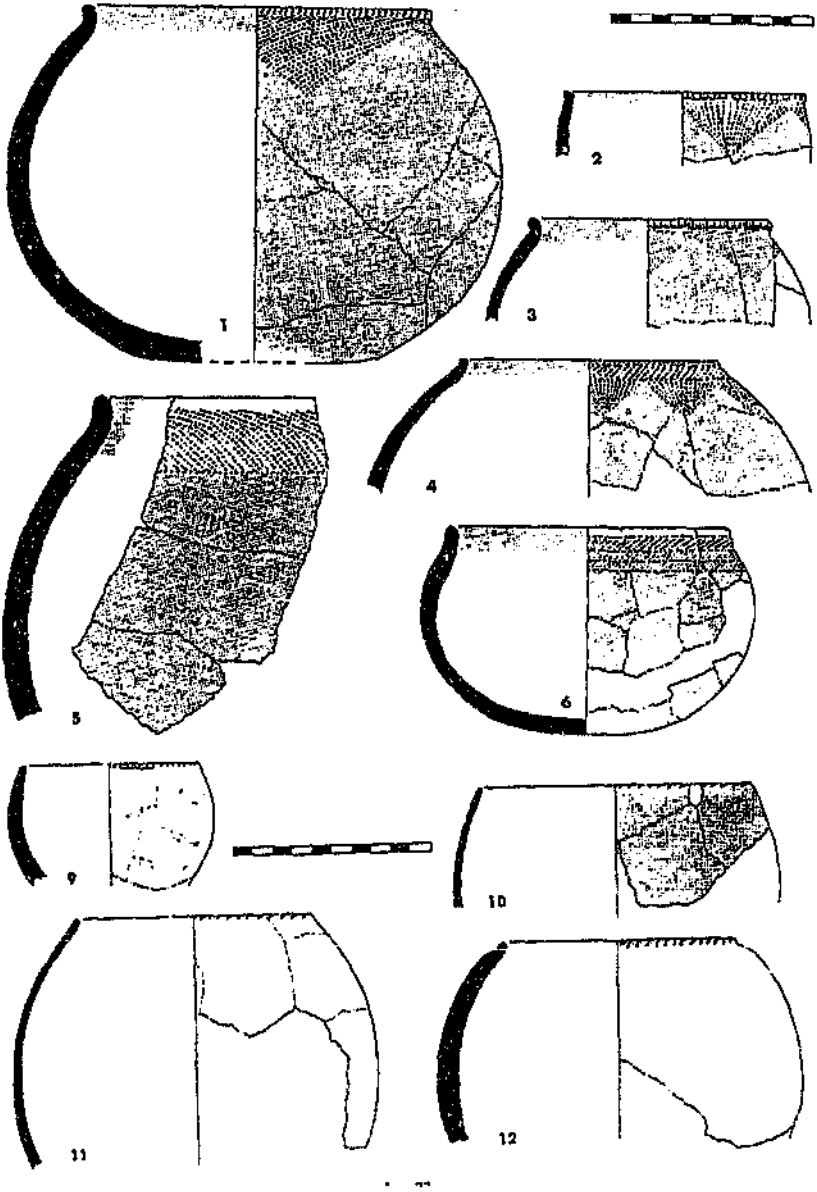


Figure 1.6 Type V agriculturist ceramics from OO1 Makgweareng (From Maggs 1976:90 Fig. 26 nos. 1-6 decorated with comb-stamping and Fig. 27 nos. 9-12 decorated with rim notches)

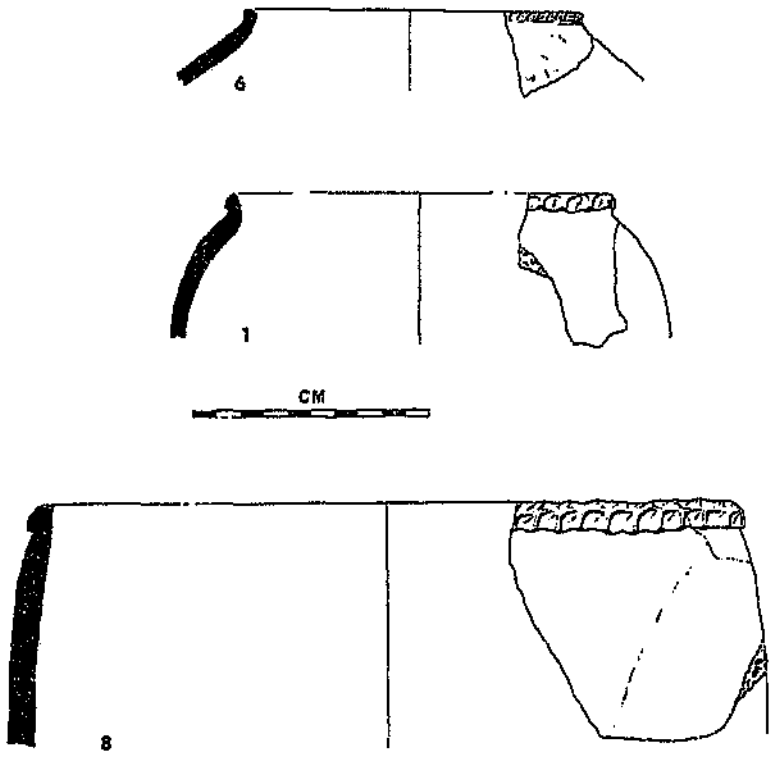


Figure 1.7 Caledon Valley agriculturist ceramics from OND 2 (From Maggs 1976:218 Fig. 63 nos. 6-7 and Fig. 64 nos. 1 & 8).

The environment of the Caledon Valley

The lower Caledon Valley south of Ladybrand is characterised by sandstones of the Beaufort Series. The Caledon Valley north of Ladybrand mainly comprises 'Cave Sandstones' of the Stromberg Series. The vegetation of the middle Caledon Valley is Cymbopogon-Themeda Veld which is a mixed veld. The nutritional value of the grass is high in summer and remains moderate in winter according to Talbot and Talbot (1960 in Maggs 1976:18). However, according to Tainton (1981) the veld is only suitable for grazing for six months of the year. Although the area south-west of the middle Caledon Valley in the vicinity of Wepener is classified as sweet

grassveld by Acocks (1975: Map no.1) it is relatively sparse grassveld with low nutritional content in winter (Talbot & Talbot, 1960 in Maggs, 1976:20).

Mean annual rainfall in the middle Caledon Valley ranges between 600 mm and 700 mm but tails off drastically towards the west. The western limit of Iron Age agriculturist settlement corresponds with the suitability of the climate for growth of traditional staple crops such as sorghum and millet which require adequate summer rainfall (Maggs, 1976:16; Maggs, 1980a:9; 1984 ; Maggs 1995:173). The contrast in the climate and environment of the middle Caledon Valley compared with areas to the west and south-west is therefore crucial in substantiating the evidence for a frontier zone involving hunter-gatherers and agriculturists in the Caledon valley.

Environmental changes may have been a significant factor in the timing of the spread of agriculturist settlement into the Caledon Valley. The 'Little Ice Age' between the fifteenth and nineteenth centuries (Tyson and Lindsay, 1992:271) coincides with the arrival of agriculturists in the area. There is evidence of taxa suited to dry conditions from charcoal found in Level A at Rose Cottage Cave dated to 680 BP (Esterhuysen, 1996; Wadley, *in press*). At Twyfelpoort Shelter in the H and M levels, thought to date to the nineteenth century, species identified from charcoal indicate a cooler climate which coincides with the final phase of the 'Little Ice Age' (Backwell *et al.*, 1996:90). The drier climate associated with the 'Little Ice Age' in the summer rainfall region would have reduced the amount of sour veld and would have made the area more attractive to pastoralists and farmers (Wadley, *pers comm.*).

The research design of this study

The distribution of Iron Age settlements (Maggs 1976:27 Figure 7) as well as the environment of the eastern Free State and adjacent areas of the northern Cape suggests that the hypothesized frontier zone lies roughly between 28 and 30 degrees south (Figure 1.1) with a western boundary somewhere in the region of 27 degrees east.

The aim of this work is to investigate the impact of this farmer/forager frontier on hunter-gatherer communities in the eastern Free State frontier zone. There are two main sources of evidence

which I draw on in order to achieve this aim, namely archaeological data from both hunter-gatherer and agriculturist sites and historical accounts.

Firstly I examine the archaeological evidence attributable to hunter-gatherers on the basis of material culture in excavated deposits. Three rock shelters, Orange Springs, Rooikrans and Westbury, with surface scatters of stone tools and pottery indicating possible contact horizons were excavated as part of this strategy. Assemblages from other excavated sites within this proposed frontier zone, including Rose Cottage Cave, Roosfontein, Mauermanshoek, and Tandjiesberg (Figure 1.1) are also considered in this work.

I also make use of the extensive archaeological data available from research published by Tim Maggs (1976) on contemporary agriculturist stone walled settlements. This evidence comes from sites in the hypothesised frontier zone and adjacent regions (Figure 1.1). The main sources of evidence from the archaeological sites are assemblages of ceramics and stone tools as well as plant and faunal remains. I attempt to establish the chronological and spatial distribution of attributes within these assemblages and then compare them with data from published contemporary assemblages south of the proposed frontier zone. The possibility that some ceramic assemblages from the Caledon Valley predate agriculturist settlement in the area is investigated and the potential origins of such assemblages are examined.

Secondly I examine historical sources which describe events in the proposed frontier area and surrounding regions from the seventeenth century onwards. These sources include accounts of oral traditions recorded amongst the indigenous people of the area and documents written by missionaries and travellers who entered the region from the 1830s onwards.

Finally in order to interpret the archaeological and historical evidence presented in this study, I use Moore's (1985) version of 'frontier theory' for models of the possible forms of inter-relationship expected between hunter-gatherers and agriculturists in a frontier situation. I use ethnographic accounts of historical and recent hunter-gatherer social organisation, as well as descriptions of their interactions with agriculturists, as sources of models to explain changes in

material culture through time on archaeological sites in the proposed frontier zone and surrounding areas.

2 HUNTER-GATHERER INTERACTION WITH AGRICULTURISTS: MODELS AND THEORY

Relationships between hunter-gatherers and agriculturists or pastoralists can take various forms according to anthropological, archaeological and historical sources. Interactions include trade and exchange, clientship and intermarriage. Such relationships have been documented from several regions of southern Africa and interpreted in different ways. In the south-western Cape, Parkington (1984) and Smith et al. (1991) cite archaeological and historical evidence to show that hunters and herders maintained separate identities and developed client relationships whereby hunters became messengers and lookouts for herder patrons. Alternatively, Schrire has argued that the two subsistence strategies cannot be divided into neat culturally defined entities (Schrire, 1992). The issues raised in this controversy are comparable with those involved in the 'Kalahari Debate' between protagonists who view 'San foragers' as a comparatively autonomous entity (Solway & Lee, 1990), and the view that 'foraging' in the Kalahari is a strategy within a complex hierarchical social organisation involving both hunter-gatherers and agriculturists (Wilmsen, 1989; Wilmsen & Denbow, 1990).

Negative interactions between hunter-gatherers and agriculturists are recorded, including livestock theft from agriculturists (Dornan, 1909:439; Stanford, 1909:437) and sometimes fighting (Jolly, 1994:6; Ellenberger & Macgregor, 1912:132). Nevertheless most records are of co-operative interactions and the negative instances seem to have occurred in more stressful circumstances during the 'mfecane' or when conflict with Europeans had pushed agriculturists and hunter-gatherers to the limit of endurance.

Clientship is a recognised relationship between agriculturists or pastoralists and hunter-gatherers. Clientship is defined here as the exchange of hunting or herding services for secondary products from livestock such as milk, or for livestock (eg Wilson, 1973:63). Client relationships between Sotho and hunter-gatherers are documented in accounts of the early nineteenth century in the

north-western Free State and on the Orange River (Ellenberger and Macgregor, 1912; Maggs, 1976; Jolly, 1994). Clientship is also described in the anthropological literature of the Kalahari in recent times. !Kung hunter-gatherers worked on Tswana cattle posts and performed domestic chores in return for food, clothing and protection in the Tswana courts. During the period between 1890 and 1925 Dobe area !Kung were partly incorporated into the Tswana mafisa system as they tended the herds and drank the milk but the Tswana owned the herds (Lee, 1979). However the !Kung were not given rights to the offspring of the cattle which was the common practice in the traditional mafisa system (Brooks et. al., 1984:296).

Intermarriage is not only used to consolidate relationships between groups but also to establish new alliances (eg. Maggs,1976; 306-307). Eldredge (1993: 128-131) has argued on the basis of evidence from oral traditions that women were important in establishing new political and military alliances through marriage amongst Sotho chiefs. It seems likely, therefore, that intermarriage with hunter-gatherers served the same purpose and would have lead to reciprocal obligations linking the woman's father and brothers and her husband. Eldredge points out that over the centuries several Sotho groups, including the Fokeng, Koena and Phuti forged alliances with hunter-gatherers in this way. Although some aspects of social relationships formed through marriage were probably different amongst agriculturists and hunter-gatherers due to the use of cattle for payment of brideprice amongst the former, the development of strong ties between the woman's husband and her brothers may have been common to both groups. For instance, among !Kung hunter-gatherers (Lee,1979; 453) husbands were expected to spend a period of bride service with the wife's band, and often stayed with the band indefinitely. Strong ties were usually formed with the men in the group, especially the brothers-in-law. Although most accounts of intermarriage describe hunter-gatherer women marrying agriculturist men an instance of the reverse arrangement is recorded by Dornan (1909:438). The husband in this case was also a 'chief' (Loubser & Laurens, 1994).

Kent (1992) has pointed out the temporal and spatial diversity amongst hunter-gatherers in the Kalahari. This diversity encompasses language, kinship, religion, settlement pattern, and economy (Kent, 1992:48). Nevertheless she contends that important similarities also exist between them. These similarities include an emphasis on social, political and gender equality

among groups that are mobile or were so recently. They also include an emphasis on hunting and gathering and on reciprocity and sharing amongst other traits (Kent, 1992:52). She extends her observation on diversity amongst hunter-gatherers to include the variability in intensity and kinds of contact between hunter-gatherers and neighbouring agriculturists. This leads her to conclude that although 'Basarwa contact and trade with Bantu-speakers has a long history, as has been conclusively demonstrated by Wilmsen and Denbow; however this contact has not been convincingly proven to have caused massive acculturation or assimilation' (Kent, 1992:55). Most importantly from the point of view of the archaeologist she has argued that if diversity is taken into account, 'Data from all these groups can be, and have been, used to formulate models of past foraging behaviour'. With this argument in mind, I attempt to identify models of interaction appropriate for reconstructing interaction between hunter-gatherers and agriculturists in the Caledon Valley.

Theoretical approaches to understanding hunter-gatherer agriculturist interaction

In Africa the potential of various models of interaction has been explored in the search for appropriate theoretical approaches to explain the mechanisms of contact between distinct cultural groups including hunter-gatherers and agriculturists. However, an understanding of the differences between the social organisation of hunter-gatherers and agriculturists is essential to any interpretation of interaction between them. Characterisation of hunter-gatherer social organisation has often been based on ethnographic data from hunter-gatherer groups in the Kalahari. Various authors have adopted a Marxist framework of historical materialism to analyse the political, social and economic structure of hunter-gatherer societies (eg Meillassoux 1972; Lee 1979, Mazel 1989). Foraging according to Lee (1979:436) was the original mode of production, although he concedes that Marx included it with other pre-class societies such as those based on fishing, horticulture and pastoralism in a category called 'Primitive Communism'. The political organisation of the !Kung is based on principals of egalitarian social relationships. According to Lee (1979:457), 'Leaders do exist, but their influence is subtle and indirect. They never order or make demands of others, and their accumulation of material goods is never more, and is often much less, than the average accumulation of other households in their camp'. Most immediate-return foragers have been characterised as assertively egalitarian societies (Woodburn

1982:431-432). These societies are also characterised by sharing both of consumable and non-consumable items (Woodburn, 1982:440-442). Susan Kent links the underlying reasons for sharing in general amongst strongly egalitarian groups to maintaining and reinforcing social relationships and shows that, 'Sharing within a strongly egalitarian society reinforces social bonds and perpetuates a perception of equality' (Kent, 1993:479). This interpretation has implications for the argument made by some authors that reciprocal exchange and even food sharing may have developed amongst hunter-gatherers as a way of coping with the incursion of agriculturists or other foreign forces (eg Walker, 1995:210; Schrire, 1984:18). Instead Kents observations on sharing in strongly egalitarian societies suggest that the practise is an important component of the social fabric essential to maintaining egalitarian values. It is therefore unlikely to be simply a response to a new social and economic challenge.

By comparison with hunter-gatherers, agriculturist societies are usually characterised as less egalitarian with social systems incorporating structures which allow for social stratification and the accumulation of wealth and power by some individuals. Concepts which have been used to describe such systems include that of the chiefdom (Hall 1987:63-65). Hall argues that the seventeenth to nineteenth century agriculturist settlement pattern reconstructed by Maggs for the southern highveld represents a society organised into chiefdoms. Characteristic aspects of this form of social organisation on the highveld include towns such as Ntsuanatsatsi and evidence of fission in the form of widespread later Type V settlements which were built as people moved away from the established centres (Hall 1987:64). In terms of the historical materialist approach the forces of production used by agriculturists in the highveld during the second millennium were dominated by livestock. Hall has pointed out that a 'Lineage Mode of Production' has been seen as prevalent amongst agriculturists during the second millennium (Hall, 1986:83). Marriage institutions were based on the exchange of cattle for wives and their putative children who provided labour to carry out agricultural production. The heads of some homesteads could have become dominant by accumulating cattle through natural increase thereby gaining political control through regulating marriage transactions (Hall, 1986:83). This would have facilitated the accumulation of wealth by the senior members of lineages, who controlled the distribution of livestock between villages, and therefore allowed unequal reciprocity between villages (Hall 1987:65).

Most pastoralist societies in southern Africa are also characterised by a more hierarchical social organisation than that of immediate return hunter-gatherer groups and the opportunity to accumulate wealth in the form of livestock is seen as another distinguishing factor (eg Smith, 1986:39). For instance the Cape Khoekhoe (Barnard, 1992:160) Korana (Barnard, 1992:166) and Nama (Barnard, 1992:183) had hereditary chiefs. Cattle were distributed as payment for brides (eg Barnard, 190) and were also inherited (Barnard, 1992:191). However Barnard (1992:241) points out that some socio-economic institutions are pan-Khoisan and therefore found amongst both hunter-gatherer and herder groups which he classifies as Khoisan. As an example he cites the practice of institutionalised gift giving which occurs amongst some Kalahari hunter-gatherers as well as amongst pastoralist Khoekhoe and Damara groups. This implies that gift exchange is linked to cultural aspects of these societies, rather than simply being an economic mechanism to facilitate redistribution of resources, and may therefore be characteristic of some of the culturally and linguistically related Khoi groups both past and present in southern Africa. These fundamental differences in social organisation between agriculturists and pastoralists on one hand and hunter-gatherers on the other are closely tied to the way that resources are distributed in such societies. This dichotomy may be particularly relevant after 1000 AD when more complex agriculturist societies were well established throughout southern Africa. This must therefore be borne in mind in the search for an appropriate theoretical approach to reconstructing interaction between hunter-gatherers and agriculturists in the Caledon Valley.

One possible approach to reconstructing interaction is the use of Frontier Theory. This approach, developed initially in the context of the European occupation of North America, has been adapted and used in several African historical contexts such as European penetration into indigenous African territories (Legassic,1989:360-361), indigenous local frontiers at the fringes of established African societies (Kopytoff, 1987:3) and indigenous farmer penetration into hunter-gatherer territories (Alexander, 1984).

In the South African context historians have defined the frontier in the early colonial period as a region of contact between two or more distinct communities where at least one community is in the process of attempting to control the others (Elphick & Malherbe, 1989:8). An initial open frontier phase when no authority exercises undisputed control over the area (Gillomee, 1989:427)

and characterised by exchange of goods and services between groups (Gillomee, 1989:460) is recognised. This is followed by a closed phase characterised by loss of liberty for groups to assert their interests and the establishment of hegemony over other groups either by one of the groups or by an external force such as the colonial government. Client relationships transform to serfdom with the closing of the frontier (Gillomee, 1989:450). However the applicability of this approach to pre-colonial situations of interaction between hunter-gatherers and farmers is questionable. The contrasting social and economic organisation of hunter-gatherer bands and indigenous sedentary farming communities are increasingly recognised to have resulted in long term interaction of various kinds including mutually beneficial exchange relationships (eg Wilmsen & Denbow, 1990; Junker, 1996). Thus in southern Africa interaction between indigenous groups might be expected to have a different course and outcome from the one predicted by Gillomee. His frontier definition has the added disadvantage that it concentrates on the political aspects of interaction which are more easily reconstructed from historical than archaeological sources. In chapter 3 I shall examine the historical evidence and assess its ability to suggest two phases of interaction in pre-colonial times. Mazel (1989:133-134) also questions the usefulness of this kind of approach in a pre-colonial context, pointing out that the explanatory value of the definition of 'open' and 'closed' frontiers is limited because it is so broad.

Kopytoff's (1987:9) concept of frontiers as 'politically open areas nestling between organised societies but "internal" to the larger regions in which they are found' seems of limited value when applied to a hunter-gatherer\farmer context as it too does not address the diverse social and economic organisation of the interacting societies.

Attempts have been made to develop frontier models specifically geared to understanding the dynamics of hunter-gatherer and farmer interaction. Alexander's (1984) frontier model has this advantage, but there are problems inherent in his reconstruction of the archaeologically detectable mechanisms of interaction, which concentrate on categorising possible responses to the phases of frontier formation he identifies. He divides frontier formation into a 'moving' and 'static ' phase (Alexander, 1984:17-21). According to Alexander the initial pioneering phase when farming technology is first introduced into a region is characterised by co-operative relationships between these groups, but the later settled phase involves higher populations and greater exploitation of

the environment often leading to conflict. From the hunter-gatherer point of view the possibilities are extinction, retreat into isolation, symbiotic relationships with or absorption into the dominant group. The underlying reasons for these different responses are not explored by Alexander and the model tells us little about how societies transform and change. Alexander's model has been criticised by Mazel (1989:133) because it does not address social and symbolic parameters and analyses relationships solely in economic and ecological terms. Mazel also points out that Alexander's application of this model to southern Africa presents a static view of the period between 500-1500 AD and suggests that changes and movements among farming communities in the Thukela Basin contradict this view (Mazel, 1989:134).

Mazel (1989:152) adopts a historical materialist approach to construct and understand the social history of the Thukela Basin. He accepts Martin Hall's (1987) interpretation of a farming community switch from a Primitive Communist to a Lineage Mode of Production to explain changes in the relationship between hunter-gatherers and farmers after 1000 AD (Mazel, 1989:146). He uses site distribution data to propose that the central Thukela Basin only became a focus of hunter-gatherer settlement after the arrival of farming communities (1989:141; 1993:32). During the period between approximately 400 AD and 1000 AD stone artefacts are found on most early farming community sites and though it is difficult to prove that they are contemporary with the settlements, Maggs (1980b) believes that at Msulusi Confluence this is the case. These factors lead Mazel to conclude that hunter-gatherer relationships with farmers during this period were more equitable and did not involve clientship (Mazel, 1989:141-142). Mazel (1989:150) argues that after 1000 AD, no marine shell, OES beads or stone flakes which occur on hunter-gatherer sites were recovered from farming community sites in the Thukela Basin. He concludes that material culture items (or their styles) only moved from the farming communities to the hunter-gatherers and not vice versa. Mazel suggests that after 1000 AD the two communities had a trading relationship or some form of clientship similar to relationships witnessed in historical sources in the eighteenth and nineteenth centuries (Mazel, 1989:151). The conclusion that hunter-gatherer artefacts found on farming community sites signify more equitable relationships may be at odds with evidence from the Caledon Valley discussed in chapter 3 of this work. Historical records cited in chapter 3 clearly point to client and trading relationships between farmers and hunter-gatherers in this region during the period between the

seventeenth and nineteenth centuries. In spite of this, hunter-gatherer artefacts are found in archaeological contexts on farming settlements dating to this period. Maggs documents ostrich eggshell beads from several farmer settlements in the highveld (1976:126;260;274) and attributes them to a hunter-gatherer source. Bone points from Thiela, a farming settlement in the Caledon Valley are said to resemble those from Stone Age rather than Iron Age contexts (Maggs, 1976:210). Stone artefacts also occur on some settlements but are attributed to former occupations of these sites. Presumably similar problems to those noted from the Thukela Basin apply to proving the contemporaneity of stone artefacts found on farming settlements in the highveld.

Simon Hall (1986; 1990 and 1994) documents archaeological evidence for forager reactions to pastoralist and agriculturist settlement of the eastern Cape. Although historical evidence from this area shows that at the time of European contact hunter-gatherers were confined to the mountain escarpments, Hall uses evidence from rock art and ceramic sequences to demonstrate that the assimilation and displacement of hunter-gatherers in areas favourable to pastoralism followed a complex course, including the possibility that occupation of these habitats by hunter-gatherers actually intensified during the period of initial contact with pastoralists and agriculturists (Hall, 1986:45; 1994:68). In an attempt to understand the social as well as the economic processes at work during the period of contact Hall employs models from Moore's (1985) study of hunter-gatherer farmer interaction. One of the concepts from Moore's study adopted by Hall concerns the increasing complexity of the social landscape in a contact situation. This leads hunter-gatherers to adopt new economic strategies including development of barter exchange relationships with agriculturists, in a departure from the traditional strategy which underpins their economic and social system, of mutual reciprocity within groups and regional exchanges between groups (Hall, 1986:48; 1994:63).

Both Mazel's and Hall's work indicates that at least during the early stages of contact hunter-gatherers may intensify occupation of areas inhabited by agriculturists. Although they have adopted different theoretical models to explain the processes underlying this phenomena, both approaches accept the pivotal role of the transformation of the hunter-gatherer system of reciprocal exchange in their explanation of social and economic mechanisms of interaction

between hunter-gatherers and farmers. This aspect of hunter-gatherer social and economic organisation also forms the central theme of my interpretation of the archaeological and historical evidence for interaction between the hunter-gatherers and farming communities of the Caledon Valley discussed below. The potential of Moore's model to explain the social and economic processes at work in hunter-gatherer\farmer interaction has already been recognised by Hall (1986; 1990; 1994). It is further explored in this study.

The archaeological implications of Moore's models of hunter-gatherer/farmer interaction

Moore (1985:94) defines sedentary farmer/mobile forager frontiers as 'a cultural mosaic of interspersed communities with varying subsistence and settlement requirements'. Farmers do not necessarily displace hunter-gatherers, and examples of long-term contact situations in Africa and Asia demonstrate this. The resulting pattern of synchronous and interspersed farming and hunter-gatherer settlement may therefore be archaeologically recoverable. Moore points out that the incursion of farmers into hunter-gatherer territory affects hunter-gatherer mobility patterns as farmers exploit and compete for plant and animal resources and their domestic animals affect the ecological balance. He uses computer modelling to simulate the effects of sedentary agricultural groups on the locational decision making and the seasonal locational costs of hunter-gatherer groups. This simulation demonstrates that 'even a small number of interspersed sedentary settlements disrupt the seasonal settlement shifts of hunter-gatherer groups' (Moore 1985:103). Archaeological evidence for reduced seasonal mobility from hunter-gatherer settlements might therefore be expected in a frontier context.

Various aspects of hunter-gatherer social life designed to maintain access to ecological and social resources through mobility would be affected by the frontier situation. These include ritual aggregation and fission/fusion, commonly referred to as aggregation and dispersal (Moore, 1985:108). Moore suggests that agriculturists are sometimes used by hunter-gatherers to settle disputes and as a source of information to compensate for the disruption of seasonal mobility and fission/fusion.

Lyn Wadley (1987 and 1989) has investigated the archaeological implications of the aggregation and dispersal model, and has attempted to recognise aggregation and dispersal phase camps in the archaeological record on the basis of features identified from ethnographic data. She describes the dispersal phase of band life as an informal time when ritual, travelling and subsistence work are minimised. Mending of arrows and manufacturing of gift exchange items also decreases. In contrast to the dispersal phase, the aggregation phase is characterised by intensification of socialising, making and exchanging gifts and ritual activities. She applies the aggregation and dispersal model to the archaeological record, and suggests that aggregation camps should be characterised by artefacts of standardised morphology that mirror formal public behaviour. They should include manufacturing debris from arrow and bead making and evidence of intensified ritual in the form of decorated artefacts, art and shamans equipment. The dispersal phase camp should have low densities of curated artefacts such as beads, arrows and decorated objects. A high proportion of the tools present should be informal and made from predominantly local raw materials.

At Jubilee Shelter in North West Province Wadley (1996:10) uses data from assemblages of stone tools, ostrich eggshell beads and fragments and bone artefacts in the mid-Holocene levels in conjunction with evidence of formalised use of space, the presence of ritual objects and seasonal indicators to argue that the site was an autumn/winter aggregation camp. She also identifies three subsequent separate phases of interaction with agriculturists. Changes in stone tool assemblages, faunal assemblages and seasonal occupation are interpreted as evidence for the disappearance of aggregation and dispersal behaviour by the second phase of contact, when the Iron Age village of Broederstroom nearby became a substitute for the Stone Age aggregation camp (Wadley, 1996:11). Archaeological evidence for the disappearance of aggregation phase hunter-gatherer sites could therefore be expected in a frontier situation in terms of the aggregation and dispersal model.

The practice of band dispersal and periodic aggregation is an important aspect of seasonal mobility amongst 'San' in the Kalahari (Lee, 1979:364-369,447; Wadley, 1989:43). However this behaviour takes different forms amongst different 'San' groups. The !Kung aggregate several bands in the dry season and disperse into family groups in the wet season. The G/wi disperse into

family units in the dry season and aggregate as band size units in the wet season (Barnard, 1992:101-102). It has also been pointed out that aggregation and dispersal is not universal amongst hunter-gatherers in the Kalahari (Walker,1995:213), for instance the Nharo are described in more traditional areas near Kalkfontein as 'permanently aggregated' all year round because these territories possess permanent natural waterholes (Barnard, 1992:140-141). Walker argues that the implication of this observation for archaeological interpretations based on the aggregation and dispersal model is that synchronic differences between sites may be due to factors other than aggregation and dispersal behaviour, such as repeated occupation of different sites at different seasons involving different activities (Walker 1995, 213). It is difficult to imagine, however, that a seasonal occupation could exactly replicate the suite of activities needed to generate the substantial list of archaeological attributes required by Wadley's model to signify an aggregation camp. It is more likely that in this situation, none of the resulting residues would reflect all of the attributes required by the model to justify the aggregation camp designation.

Hunter-gatherers can adopt a variety of strategies to overcome the problem of reduced mobility. Farming settlements are social resources for hunter-gatherers and offer new solutions to the problem of reduced mobility. One of the solutions open to hunter-gatherers in this situation is the development of new social relationships with the sedentary farming groups leading to clientship (Moore 1985:108). Ceramics produced by farmers found in archaeological contexts on hunter-gatherer settlements might conceivably be explained as payment for services performed for farmers by hunter-gatherer clients, although historical and ethnographic evidence from the region does not suggest this form of payment. Historical sources document herding and hunting services performed by hunter-gatherer clients for agriculturists (Ellenberger & Macgregor 1912:56), and ethnographic data describe payment of milk to hunter-gatherer clients for herding services (Lee 1979:79-80; Cashdan 1987:127). The historical evidence from the study area for this aspect of interaction is discussed in detail in chapter 3.

Another possible solution is barter exchange relationships with farming communities. Amongst hunter-gatherers in the Kalahari, gifts of non-consumable items are exchanged between individuals in a system of delayed reciprocity known as *hxaro* by the !Kung and *//ai* by the Nharo (Lee 1979:456; Weissner 1982; Barnard 1992:141). The system signifies an underlying reciprocal

right of access to water and plant resources available to exchange partners who may be resident at a considerable distance from each other. Susan Kent's work (1993:481) amongst G/wi, G//ana and Kua Basarwa at Kutse shows that these Central Kalahari groups do not have *hxaro* relationships between bands in different territories. Instead they have intra-band sharing networks within a territory. This leads her to conclude that *hxaro* is a form of exchange to ensure subsistence security should the area inhabited by the band be unable to support it. Although this interpretation emphasises the economic aspect of *hxaro* it does not necessarily deny the role of establishing and maintaining social relationships involved in *hxaro* reciprocal exchange (Kent, 1993:498).

There are indications that the practice of reciprocal exchange has a considerable time depth in southern Africa. At Rose Cottage Cave Lyn Wadley and Sven Ouzman (1997) have argued that a representation of mormyrid fish in the rock art at the site and a perforated marine shell from Level A suggests hunter-gatherer visiting and exchange networks extending eastwards into Kwa-Zulu-Natal dated to approximately 600 BP. Documented evidence from accounts collected by Bleek and Lloyd in the 1870s shows that a system of reciprocal exchange also existed amongst the /Xam in the Northern Cape approximately 500 km south-west of the Caledon Valley. One account describes the exchange of springbok skin bags for black and red colouring materials and poisoned arrows (Bleek & Lloyd, 1911:281-283). Another account details the exchange of a dog and a pot for which the recipient gave a jackal skin kaross in return (Bleek & Lloyd, 1911:375).

In a frontier situation hunter-gatherers can transform this reciprocal exchange system to a system of barter, by exchanging goods such as meat or animal skins obtained by traditional hunting methods in return for domestic carbohydrates such as grain from farmers (Moore 1985:106). For the purposes of this study barter relationships are defined as the exchange of goods obtained by traditional hunting methods in return for domesticated produce and items of material culture including ceramics. Perhaps the main underlying difference between barter and reciprocal exchange is the absence in the case of barter of any implied social network signifying reciprocal rights of access to subsistence resources. Furthermore the barter process results in an immediate return, and does not involve any further ties between exchanging parties. This contrasts for instance with delayed reciprocity amongst the !Kung and Nharo which Barnard (1992:141)

argues is 'never immediate. for that would imply that the relationship is ended; the delay keeps it alive'. Consumable items such as meat are exchanged reciprocally amongst hunter-gatherers as a way of reducing social tension (Moore 1985:106). Moore points out that barter exchange of foodstuffs between hunter-gatherers is nearly unheard of. However, Barnard documents a tendency towards buying and selling meat rather than exchanging it between band clusters amongst the Nharo (Barnard, 1992:244). He also notes that they give meat freely in the traditional manner within the bands that make up a given band cluster. Barnard points out that it is tempting to regard buying/selling relationships as indicative of social change, because they have not occurred before. He argues however that they could instead define long standing traditional divisions between social and territorial units which would not previously have had any contact with each other. The implication of this observation is that trading relationships rather than reciprocal exchange are improvised and used for interaction between groups which do not have close social ties. In the context of the frontier this new behaviour involving a trading exchange of perishable materials with agriculturists may not necessarily be archaeologically recoverable on hunter-gatherer or farmer settlements. However, the presence of characteristic agriculturist ceramics as well as domesticated plant remains in archaeological contexts on hunter-gatherer settlements can reasonably be interpreted as evidence of barter exchange. Barter exchange between the !Kung and Tswana involved trading of hides, furs, biltong, and honey by the !Kung in return for tobacco, clay pots, ironware, beads and sometimes corn (Marshall 1976:306; Lee 1979:78-79). Goods used by hunter-gatherers for barter exchange with agriculturists may even be obtained through client services. The Basarwa hunter-gatherers on the lower Botletli River obtain maize from the Bateti and Kalanga in exchange for milk from the cattle they tend as clients, and for the berries and firewood that they collect (Cashdan 1987:128-129).

Interaction and the identification of boundaries through material culture

The barter exchange model discussed here is the mechanisms whereby material culture items including ceramics might be expected to pass between hunter-gatherers and agriculturists. However the symbolic and social role of these items is also an important factor in any attempt

to understand the processes of interaction represented by them. The difficulty of reconstructing interaction and boundaries from material culture left behind on archaeological sites has been acknowledged by various authors. Hodder's (1982) study of the symbolic role of material culture in human societies shows the complexity of the factors underlying material culture patterning. He argues that:

> Different groups manipulate material culture boundaries in different ways depending on the social context, the economic strategies chosen, the particular history of the socio-economic relations, and the particular history of the cultural traits which are actively articulated within the changing system. (Hodder,1982:103).

Even so, it is widely accepted that material culture items including some ceramic types can be used as 'symbolic markers of group identity' (Hodder, 1982:48).

In spite of this, identifying the material culture items which can be said to represent group identity can be problematic. For example the feasibility of distinguishing between hunter-gatherer and herder assemblages in the archaeological record has been debated by several authors (Parkington, 1984; Smith *et al.*, 1991; Schrire & Deacon, 1989; Schrire, 1992). In the south-western Cape the combination of historical information on the Dutch outpost known as Oudepost I, with the evidence of stone tool assemblages from stratified contexts characterised by a relatively large component of formal tools made mostly from fine grained silcrete leads the excavators to conclude that these artefacts are attributable to Khoi pastoralists (Schrire & Deacon, 1989). This conclusion is disputed by Smith *et al.* (1991:90) who believe that this kind of stone assemblage in conjunction with small ostrich eggshell beads and characteristic predominantly wild fauna is attributable to hunter-gatherers in this region (Smith *et al.*, 1991:71).

Even documented distinctions between hunter-gatherer groups can be difficult to recover archaeologically For instance in the Northern Cape, Janette Deacon (1994:4) has pointed out the problems of reconstructing interaction between distinct dialectal groups of 'Bushmen' on the basis of material culture without direct ethnographic information. Although the question of the interpretation of certain characteristics of stone tool assemblages as stylistic markers is complex and controversial (eg Deacon, 1994:5) the use of differences in ceramic technology and style to signify identity has gained wider acceptance. For instance Janette Deacon acknowledges that

ceramic differences are useful in distinguishing between earlier hunter-gatherer and pastoralist sites in the Cape. Ceramics have also been used in this way by Sampson (1984 and Sampson *et. al.* 1989) in the Seacow River Valley.

In this study I will consider whether distinctive ceramics attributable to hunter-gatherers and to agriculturists may be useful in documenting interaction, including exchange relationships, between hunter-gatherers and agriculturists in the Caledon Valley. Hunter-gatherer ceramics have been described by Sampson (1988:55). They comprise grass-tempered bowl shaped vessels decorated from the rims to the edge of the bases (Figure 1.2) with stamp-impressed motifs (Figure 1.3) which vary geographically and through time. These motifs are thought to have been executed with notched ostrich egg or mussel shell edges and stylus tips made from various materials. Grass-tempered plain ware comprising undecorated bowls and bag shaped pots is also found throughout the sequence in hunter-gatherer contexts (Sampson *et.al.*, 1989:4). In spite of recent uncertainty about the association of some of the decorated grass-tempered wares in the Seacow River Valley with herders rather than 'Bushmen' (Sampson & Vogel 1995:93-94), the distinction between this type of pottery and agriculturist ceramics from the Caledon Valley (Maggs 1976) is evident and useful for the purposes of my argument.

Agriculturist ceramics have been described by Maggs (1976) and those relevant to this study include his Type N, Type V and Caledon Valley ceramics which are all tempered with grit and sometimes with pottery grog. Type N ceramics (Figure 1.5) are characterised by spherical and bag shaped pots as well as open bowls. Decoration is predominantly comb stamping (executed using an unknown implement) in pendant triangles or horizontal bands just below the rim often combined with burnishing or ochre burnish. Other motifs found include rim notches, miscellaneous rim and body impressions and applied bands (Maggs, 1976:292-293). Type V ceramics (Figure 1.6) comprise spherical to sub-spherical pots and bowls as well as large bag shaped and U shaped pots. There is a small proportion of comb stamping in bands and pendant triangles often combined with ochre burnishing. Rim notches, finger impressed decoration on rims, bodies or on applied bands just below the rim also occur (Maggs, 1976:293). Caledon Valley ceramics (Figure 1.7) comprise bag or U shaped pots and bowls, some of which are spherical with short upright necks. There is no comb stamped decoration. Rim notching is found

sometimes combined with ochre burnishing, and finger impressions on rims are also common (Maggs 1976:294).

I will attempt to reconstruct a ceramic sequence from hunter-gatherer sites in the eastern Free State frontier zone. I will then attempt to determine whether changes in the ceramic sequence on hunter-gatherer sites are due to interaction between hunter-gatherers and agriculturists in a frontier situation. To achieve this aim archaeological data from excavated sites within the proposed frontier zone will be examined for evidence of social transformation involving barter exchange and possibly client relationships. The results will be compared with data from contemporary hunter-gatherer sites south of the proposed frontier in territory further from frontier influences. I now turn to the historical evidence for the existence of distinct groups which may be characterised as agriculturists, pastoralists and hunter-gatherers in the Caledon Valley.

3 HISTORICAL EVIDENCE FOR INTERACTION IN THE CALEDON VALLEY

This synthesis of evidence from historical sources aims to establish the nature and course of interaction between hunter-gatherers and agriculturists in the Caledon Valley. To achieve this aim the identities and locations of the various population groups resident in the Caledon Valley through time must be established. One of the most important issues for reconstructing interaction is that of identity. This is the issue which historical data can address most successfully in comparison with the other available sources of evidence, although its inherent complexity must be recognised. Even though the scope of the historical data is limited to the last three hundred years, it can provide models to be tested against the archaeological evidence from periods beyond the time range covered by the historical sources.

Because some of the archaeological evidence resulting from this study can be attributed to the recent past, historical sources are of particular relevance to this research. Therefore where possible, accounts relating directly to locations of archaeological sites described in this study are used to reconstruct the evidence for 'Bushman' occupation and final abandonment of the Caledon Valley.

In this chapter I will use terminology taken directly from the historical sources to delineate the groups identified in the Caledon Valley. Although I am classifying these groups as agriculturists, pastoralis hunter-gatherers, I do not replace original terms from historical accounts referred to here as this may obscure the subtlety of interpretations of identity inherent in them.

Early hunter-gatherer\agriculturist interaction in the Caledon Valley

Oral traditions of the earlier farming communities to occupy the Caledon Valley record that the area was already inhabited by hunter-gatherers and that co-operative relationships were formed with them. This tolerant attitude on the part of pioneering farmers and resident hunter-gatherers has been discussed by Walton (1965:21), Maggs (1976:307) and by Jolly (1994). The earliest agriculturists to enter the Caledon Valley, around 1600 AD according to oral tradition, included the Nguni speaking Phetla, Phuti and Polane who eventually settled in south-eastern Lesotho

(Maggs,1976:306; Ellenberger & Macgregor, 1912:21). The Phetla were said to have had friendly relationships with the 'Bushmen' and to have married their daughters and employed their sons as herdsmen. The Polane however 'lost no time in bringing the Bushmen under their rule' (Ellenberger & Macgregor, 1912:24). Ellenberger also records the arrival of the Sotho speaking Fokeng and later the Koena in the Caledon Valley at about this time (Ellenberger & Macgregor, 1912:24). Komane who was the leader of one of the early Fokeng groups in the Caledon Valley, was said to have lived 'on friendly terms with Bushmen who dwel. in a cave called Ngo-ngo-ngong' near Futhane in the north-eastern Caledon Valley (Ellenberger & Macgregor, 1912:68).

The most important Sotho group for the purposes of this review of historical evidence for interaction between hunter-gatherers and agriculturists in the Caledon Valley is the Taung. Accounts of the close relationship between the Sotho speaking Taung and their 'San allies' come from several sources. Ellenberger & Macgregor detail traditions concerning the southward movement of the Taung as far as the Vet River (Figure 1.1) during the seventeenth century:

> On their arrival at Motloangtloang, the Bataung found a great number of nomadic Bushmen who lived on game, which was very plentiful on the vast plains. Some of them remained independent, while others attached themselves to the Bataung and became their herds and hunters. (Ellenberger & Macgregor, 1912:56)

Ellenberger claims that the Taung 'went further than most (tribes)' in intermarriage with other groups including 'Bushmen'. Stow (1905:309) also documents friendly relations between 'Legoya' (Taung) and hunter-gatherers in the area of the Vet and Vaal Confluence and claims that the 'Bushmen' here 'possessed an abundance of cattle and were inclined to live at peace with their neighbours'.

Moletsane who became an influential leader of the Taung during the nineteenth century, was sent as an infant to a cattle post where he was cared for by the 'Bushmen herds of his father' (Ellenberger & Macgregor, 1912:58). Several of his siblings had died in infancy and his mother hoped to evade the evil spirits by entrusting Moletsane to the 'Bushmen'. Moletsane established his authority amongst his people, located between the Vaal and Sand Rivers, in the early nineteenth century. During this period a clan of 'independent Bushmen' was incorporated as his subject (Ellenberger and Macgregor, 1912:60). In 1836 the missionaries Arbousset and Dumas

travelling south of the Vet River passed 'two small kraals occupied by very poor and wild Bushmen. Further on we came across a few more families of this unhappy tribe. They had established themselves on a mountain slope, surrounded by a hundred Lihoja (Taung) or so' (Germond, 1967:44).

The Ramokhele Taung who according to Ellenberger and Macgregor, had formed a separate branch in the seventeenth century (Maggs 1976:309; Ellenberger & Macgregor, 1912:394), also seem to have maintained close relationships with 'Bushmen'. Ellenberger and Macgregor (1912:64) record that a Kuena chief was 'wounded in the leg by a poisoned arrow from the bow of a Bushman in the service of Ramokhele'. This relationship may have become strained later and Walton (1965:30) quotes an informant of Stow who says that friendly relations continued until 'the original emigrant Leghoya were attacked by the hordes of Mozelkatze'. Jolly observes that the Ramokhele fought with 'Bushmen' at Koesberg during the 'mfecane' period (Ellenberger & Macgregor, 1912:132; Jolly, 1994:6).

Accounts of interaction between hunter-gatherers and Koena seem to be less frequent, and suggest that a less co-operative relationship may have existed. Dornan (1907:438) describes Moshoeshoe's attempts after settling at Thaba Bosiu (around 1824), to induce two 'Bushmen' clans from Queme and Qoaling (Figure 3.3) to settle by giving them oxen to herd for him. The 'Bushmen' disappeared into the mountains with the cattle and Moshesh seized two 'Bushmen' girls who had remained behind as compensation. Ellenberger and Macgregor (1912:235) give a slightly different version apparently of the same incident, and state that Moshesh did have two 'Bushwomen' wives in confirmation of this story.

Hunter-gatherer\agriculturist interaction during the 'mfecane'

Jolly (1994) has pointed out that the 'mfecane' period, during the 1820s is likely to have affected relationships between the Nguni, Sotho and 'San' inhabitants of the Caledon Valley. Mobile hunter-gatherers have an advantage over sedentary agriculturists in times of political turmoil because the crops and livestock of agriculturists make them more vulnerable to attack. The

mobility and lack of possessions of hunter-gatherers is an advantage in a situation where quick escapes are required, and where possessions may attract enemies.

This advantage lead to symbiotic relationships between 'San' hunter-gatherers and some agriculturists (Jolly, 1994:6). The Phuti even became subservient to the 'San' for a while and were forced to give them cattle acquired by raiding (Ellenberger & Macgregor, 1912:160). Jolly argues that 'San' fighting skills were respected and utilised by black farming communities during the 'mfecane' (Jolly, 1994:6). He cites examples given by Ellenberger of 'San' fighting with the Phetla against the Tlokoa (Ellenberger and Macgregor, 1912:134) and the Koena chief, Makhetha, using a corps of 'San' archers (Ellenberger & Macgregor, 1912:197). Jolly argues that relationships between 'San' and agriculturists who were assisted by them would have been strengthened during the 'mfecane' (Jolly, 1994:7) and that this would have been advantageous to the 'San' when they came under pressure during the nineteenth century.

Hunter-gatherer\agriculturist interaction and the European advance into the Caledon Valley

Evidence discussed below points to continued interaction between hunter-gatherers and agriculturists in the Caledon Valley until Boer encroachment displaced both groups south of the Caledon River. The struggle by the Basotho to remain in the area north of the Caledon where the archaeological sites included in this study are situated, is well documented. Although hunter-gatherers were evidently living in the increasingly disputed territory of the Caledon Valley they do not appear to have been considered separately in the treaties negotiated between the Cape government and the inhabitants of various parts of the Caledon Valley. Historical sources indicate that they were simply regarded as subjects of the Basotho or the Griqua chiefs. Theal (1904:421) claims that Moshoeshoe's son, Letsie, 'described the Bushmen in Lesotho as being Moshesh's subjects in the same way that the jackals were, that they lived in the country, but were not under its laws'. Dr Philip, superintendent of the London Society's missions is said by Theal (1904:413) to have given the district of Philiopolis to the Griquas under Adam Kok on condition that they should protect the 'Bushmen' from the Boer farmers.

The first Europeans to settle in the middle Caledon Valley area were missionaries of the Paris Evangelical Missionary Society who established a station at Morija in 1833 (Germond, 1967:26) (Figure 3.1). Germond, quoting Theal, points out that C.J. van Schalkwyk had been to the area around Morija on a hunting expedition in 1821 and had only seen 'Bushmen' there. Later in 1833 Wesleyan mission stations were established at various locations in the Caledon Valley including Lishuane, Merumetsu and Platberg-on-Caledon (Figure 3.1) (Germond, 1967:165; Thompson, 1973:402). The site of Lishuane is approximately 18 km north-west of Ladybrand (Maggs, 1976:227 and Fig.5) (1:250000 map of Lesotho, 1978) and Platberg is 5 km south-west of Ladybrand on the farm Pinekloof (1:250000 map of Lesotho, 1978; Ambrose, 1993). A group of mixed race under C. Baatje settled with the Wesleyan missionaries at Platberg-on-Caledon (Figure 3.1) and lived alongside the population of eleven villages of Basotho subjects of Moshoeshoe (Germond, 1967:165-6). Barends Barends (succeeded by Peter Davids) with a group of Griqua settled with the Wesleyan missionaries at Lishuane (Figure 3.1) alongside ten villages of Basotho. Jan Kaptein (sometimes known as Jan Taaibosch and succeeded by Gert Taaibosch) with a group of Kora (Korana) settled with Wesleyan missionaries at Merumetsu (Figure 3.1) in the Korannaberg alongside twenty two villages of Basotho (Stow, 1905:301; Thompson, 1973:402). Presumably the Korannaberg (Figure 3.3) owes its name to this influx of Korana inhabitants. A Wesleyan mission was also established at Mpukani (Clocolan) (Figure 3.1) among the Tlokoa under Sekonyela, a traditional enemy of Moshoeshoe. The Wesleyan stations were established with the agreement of Moshoeshoe, and according to the French missionaries his supremacy in the area was acknowledged through a tribute of cattle (Germond, 1967:166). The English Wesleyan missionaries on the other hand claimed that this payment was not a tribute. Instead they argued that the Rolong, Griqua, 'Bastard' and Korana chiefs associated with their missions had become owners of the land they occupied north of the Caledon on payment of cattle to Moshoeshoe (Thompson, 1973:403). The French mission station at Mequatling, which served the Taung, was not established until 1837 (Germond, 1967:52). The dichotomy between groups served by French and Wesleyan missionaries was therefore partly based on old rivalries between Moshoeshoe and his Taung allies on one hand and Sekonyela and the Taung's traditional enemies the Rolong on the other (Thompson, 1973:402). These various missionaries are the source of valuable documentation of the history of the area from the 1830s onwards.

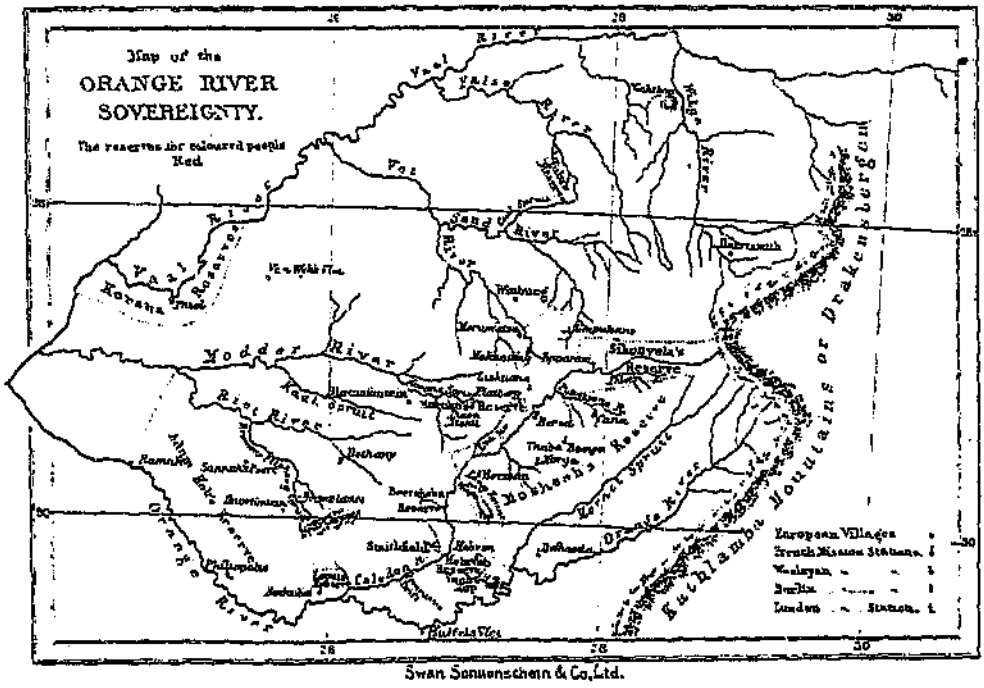


Figure 3.1 Map of the Orange River Sovereignty showing the locations of mission stations (from Theal 1908:299).

The missionaries monitored the encroachment of Boer farmers into Transorangia (between the Orange and Vaal Rivers) with mounting trepidation from the mid 1830s. They realised that their attempts to win black converts would conflict with the interests of Boer farmers, whose hunger for land could only result in the displacement of potential converts. Their interest has resulted in a detailed record of the encroachment of the Boers into the Caledon Valley area, and until the Lesotho border was finally fixed at the River Caledon in 1869 it is possible to ascertain accurately which areas in the Caledon Valley were retained largely under the control of Basotho groups owing allegiance to Moshoeshoe.

By the mid 1820s seasonal trekking by Boer farmers across the Orange River from the north-eastern parts of the Cape colony was common (Theal 1904:412) and 'they believed they had a right to graze their cattle in the country along the Riet and Modder Rivers by virtue of agreements with certain individuals who claimed to be chiefs' (Theal, 1904:416). Some Boers began to settle

in Transorangia (Davenport, 1973:292), especially around Philippolis where the Griquas leased land to them (Theal, 1904:416; Germond, 1967:147). Although the great trek in 1836-7 resulted in an influx of Boers across the Orange River, their main objective was access to the sea, and they mostly trekked eastward to KwaZulu-Natal (Thompson, 1973:355), passing to the west of the Caledon Valley. In 1837 eighteen hundred Boers assembled around Thaba Nchu to the west of the Caledon Valley and launched an attack against Moselekatse (Germond, 1967:136). A few hundred families of Boers remained along the lower Caledon (Theal, 1904:405). In 1837 two Boers 'perpetrated an outrage at the mission station Beersheba (in the lower Caledon Valley), by forcibly carrying off some Bushman children with a view of making servants of them' (Theal, 1904:405).

By 1840 the presidential address to the 5th Annual Conference of French Protestant Missionaries contained a reference to Dutch farmers invading the country of the Tlokoa under Sekonyela at the northern end of the Caledon Valley (Figure 3.1) (Germond1967:149). The French missionary Dumas wrote in 1840, while based in the Caledon Valley at Mequatling, that the Boers had permanently established themselves on the Vet River north of the Caledon Valley 'Chief Makuana has personally surrendered the neighbouring Mountain of Mopororo to them (the Boers) for 40 head of horned cattle' (Germond, 1967:149). Moshoeshoe, realising the seriousness of this situation signed a letter written by the French missionary Casalis asking for a treaty relationship with the government of the Cape Colony (Theal 1904:407). This request was granted and the governor of the colony, Sir George Napier, issued a proclamation discouraging any encroachment on the territories of the Basotho, Barolong, Batlapin (Tlhaping), Griquas and subjects of C. Baatje by Boer farmers. By 1843 Napier had signed two treaties (Theal, 1904:420), one with Adam Kok, leader of the Griquas, and the other with Moshoeshoe (Figure 3.2). The treaty with the Griqua only defined the southern boundary of Griqua territory, but the treaty with Moshoeshoe defined his territory bounded by the Orange River from its source to its junction with the Caledon, and by a line about twenty five to thirty miles north-west of the Caledon from Bethulie to the country occupied by Sikonyela's Batlokoa (Theal, 1904:420). The treaty between the Cape Colony and the Griqua led to conflict with Boers inside the territory assigned to the Griqua, culminating in a skirmish at Zwartkopjes in 1845 between the Griqua supported by British forces on one hand and Boers on the other (Theal, 1904:428). Boer farmers living along

the lower Caledon at this time however were willing to submit to Moshoeshoe's authority and to acknowledge his claim to the land they were settled on (Theal, 1904:429). Another treaty between the British and the Griquas was signed in 1846 and Captain Warden was appointed as British Resident in the Griqua territory west of the confluence of the Orange and Caledon Rivers, under the leadership of Adam Kok (Figure 3.2). The Rolong and Gert Taaibosch would not acknowledge Moshoeshoe's sovereignty and they were backed by the Wesleyan missionaries in their unsettled dispute with Moshoeshoe, who was supported by the French missionaries (Theal, 1904:430). Moshoeshoe was willing to give up a 'triangular piece of ground between the Caledon and the Orange, stretching upwards from the junction of those rivers to a line drawn from Commissie Drift to Buffels Vlei' (Figure 3.1) (Theal, 1904:433). He wanted the 447 Boer families, then resident on the remainder of his territory agreed under the 1843 Napier treaty, to be moved. The Governor of the Cape Colony appointed a commissioner in 1845 to report on the situation in the disputed area. The commissioner (Mr Joubert) reported finding no Basotho south of Koesberg on the lower Caledon, but between Koesberg and the southern limit of the territory claimed by Moshoeshoe he reported there were 72 farms occupied by 289 Boers (Theal, 1904:435). Even allowing for Theal's undoubted bias against Moshoeshoe and the French missionaries, this account clearly indicates that the middle Caledon Valley, from Beersheba Mission northwards, had not yet been settled by Boer farmers, and that the only direct European contact with the inhabitants of the middle Caledon (including 'Bushmen') up until this time was either with missionaries or possibly passing hunters and traders.

The period between 1848 and 1854 in Transorangia was characterised by continuing strife between the Sotho and Griqua groups who were reluctant to accept Moshoeshoe's sovereignty and between the Boers and the British who attempted to impose their administration on the area with the declaration of British sovereignty over the country between the Orange and the Vaal eastward to the Drakensberg mountains (Figure 3.1) (Theal, 1908a:267). The British resident, Major Warden attempted to settle the disputed boundary between Moshoeshoe and the Boers in the lower Caledon area with the 'Warden Line' which greatly reduced the area occupied by Moshoeshoe under the Napier Treaty of 1843. Warden also imposed boundaries around areas north of the Caledon Valley and west of the Caledon recognising territories of the Tlokoa, Rolong, Kora and Griqua groups led by Taaibosch and Davids. Moshoeshoe agreed to these

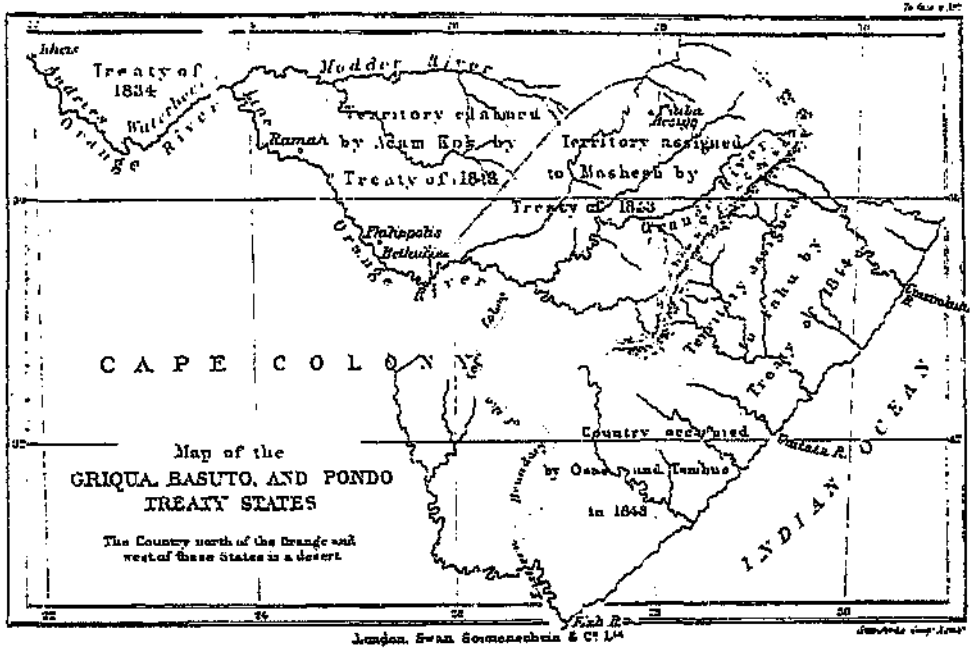


Figure 3.2 Map of territory assigned to the Griqua and Basotho by treaties signed in 1843 (from Theal 1904:421).

boundaries in 1849 with great reluctance (Theal, 1908a:296; Thompson, 1973:418-19). Although the lower Caledon and areas north of the Caledon were locations of continuing territorial dispute between Moshoeshoe and their occupants, the middle Caledon area was still largely under Moshoeshoe's control, with the aid of the Taung, and there is no record of significant Boer settlement in their territory at this time. One of the aims of the declaration of British sovereignty articulated by Sir Harry Smith, Governor of the Cape Colony, was to prevent encroachment on the lands of the hereditary chiefs (Theal, 1908a:264). One of the few references to 'Bushmen' by Theal during this period records the murder of a family of Boers on the lower Caledon. The 'Bushmen' were said to have been incited to commit the murders by Moshoeshoe's son Poshuli who had taken many 'Bushmen' under his protection in the area of Vechtkop (Figure 3.1). Theal (1908a:303) records that Major Warden called out a commando in 1850 'for the purpose of clearing the Caledon River district (the lower Caledon) of Bushmen'.

Attempts by the British Resident to intervene in deputes between Moshoeshoe and the Tlokoa and Rolong during this period resulted in battles with Moletsane's Taung at Viervoertberg near Mequatling (Figure 3.3) in 1850 (Theal, 1908a:330) and a battle with Moshoeshoe's forces at Thaba Bosiu in 1852 (Theal, 1908a:330). By 1854 the British had withdrawn from sovereignty between the Orange and Vaal Rivers (Theal 1908a:357) and the Boer occupants of the territory proclaimed the area they controlled a republic known as the Orange Free State (Theal, 1908b:2-3).

In 1858 war broke out between the Boers and Moshoeshoe due to continuing disagreement over territorial claims recognised under the Napier Treaty but retracted with the introduction of the 'Warden Line'. Moshoeshoe's victory over the Boers at Thaba Bosiu in 1858 resulted in a treaty recognising the 'Warden Line' in the north but transferring territory between the lower Caledon and the Orange to Moshoeshoe's sovereignty (Theal, 1908b:74; Thompson, 1973:432). Throughout the 1860s the disputed territories caused periodic wars between the Boers and the Sotho. In 1865 fighting was taking place around Mabolela (Figure 3.3) in the middle Caledon Valley, which was occupied at that time by Mopeli, one of Moshoeshoe's sons (Theal, 1908b:166). In 1866 Moshoeshoe signed the Treaty of Thaba Bosiu ceding the greater part of his territory, including all the lands north of the Caledon. Lands south of the Caledon and west of Maseru were also ceded under this treaty (Theal, 1908b:209; Chart XIV). The site of Tienfontein 2 (Figure 3.3) (Brooker, 1980) dated to the late nineteenth century (Table 4.1) was possibly occupied by hunter-gatherers during this period. It would have been within the area disputed between Moshoeshoe and the Free State until 1869, when this territory was finally ceded to the Free State under the agreement of Aliwal North (Theal 1908b:311). Between 1866 and 1869 (Theal, 1908b:271) the Sotho were still in control of several strategic mesas which contained stores of grain in the middle and lower Caledon Valley. These mesas included Queme (Figure 3.3), Tandjiesberg (the location of the sites of Rooikrans and Tandjiesberg Figure 1.1) and Makwai's mountain 20 km south-east of Wepener (Theal 1908b: Chart XIV). These strongholds were finally taken by Boer commandos during the course of 1868, and extensive fortifications at Platberg and Koranaberg were also destroyed (Theal, 1908b:277-287). Theal's (1908b:284) account of the storming of Tandjiesberg is of particular interest as it is evident that the Sotho fortifications were on top of the mesa.' Jooste seized the opportunity to climb up to the top of the

great mound. The rocks were full of sconces'. It is therefore unlikely that the site of Rooikrans (Figure 3.3), at the foot of Tandjiesberg, was used as a refuge or grain store during this conflict but the shelter Tanjiesberg excavated by Emby (1991) may have been such a refuge.

Hunter-gatherer interaction with the Sotho in the Platberg and Korannaberg (Mequatling)

There are several historical sources relating to the Basotho occupants of the Mequatling and Mabolela areas of the middle Caledon Valley (Figure 3.3) during and after the 'mfecane'. These sources are directly relevant to Rooikrans, one of the excavated sites described in this study as well as to Mauermanshoek in the Korannaberg (excavated by Wadley *pers. comm.* and Domleo, 1993). Rooikrans is close to Mequatling and Mabolela (Figure 3.3), and dates approximately to the same period, after the 'mfecane' until the arrival of European farmers in the area (Table 4.1). Mauermanshoek is also thought to have been occupied at this time (Domleo, 1993:28) and is only three km south of the Wesleyan Mission station of Merumetsu (Figure 3.1) which was established in the 1830s to serve the Korana who had just moved into the area (Thompson, 1973:402).

The Mabolela area (Figure 3.3) was settled by the Hlakoana, a Koena group, and the Ramokele Taung before the 'mfecane' (Maggs, 1976:309 & 310; Ellenberger & Macgregor, 1912:67). The Hlubi occupied Mabolela during the 'mfecane' (Ellenberger & Macgregor, 1912:154). In 1837, after the 'mfecane' Moletsane's Taung settled at Mequatling (Figure 3.3) (Casalis,1861:77). Maggs (1976:227) locates most of Moletsane's villages west and south of Mequatling. Rooikrans is apparently situated just south-east of the ol. district of Mequatling based on a sketch map dated 1837 which is reproduced here from the Journal des Mission Evangeliques:12 (Figure 3.4). According to Moletsane (1967:4) there were a number of 'San' families living in amicable association with the Taung. Father Norton (1910 b) details an account by a Mokoena woman living at Modderpoort (Figure 3.3), who said that 'when she was a child (pointing to a child of about eight) the Bushmen were everywhere'. Norton estimates that this must have been about 1814. She claimed that after the 'mfecane' the 'Bushmen' 'taught the broken and scattered Basotho tribes to trap game in pits'. She said that they 'had come from Matatiele, but approached Modderpoort from the north, i.e., from Mequatleng' (Matatiele is in Cape province south of

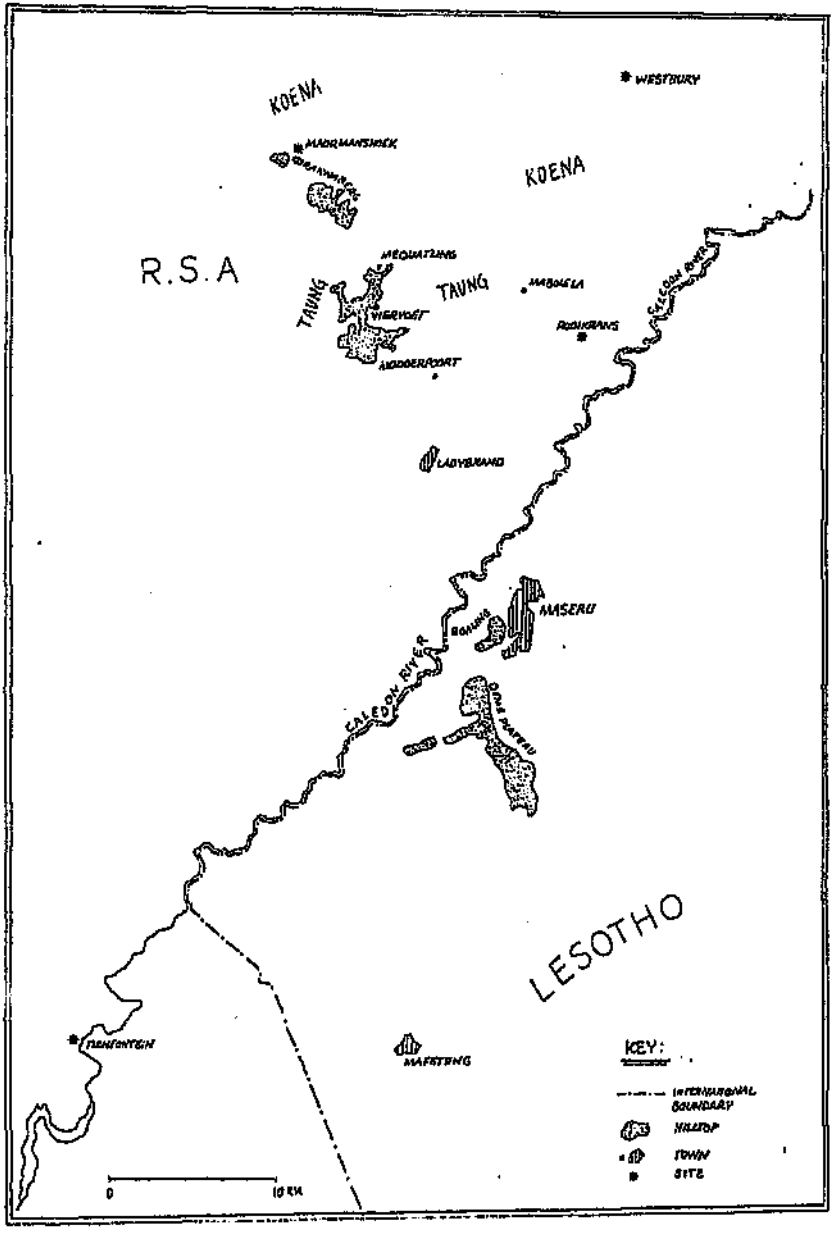


Figure 3.3 Map of the Caledon River Valley showing Mequatling, Mabolela and areas occupied by the Taung (information from Maggs 1976:304-305).

Lesotho).The Modderpoort Valley is described as 'the country of their allies, the Bataung of Ramokhele' in this account. Rooikrans is at the eastern end of the valley about 16 km from Modderpoort (Figure 3.3). Hunter-gatherers were apparently becoming integrated into the social system of their Taung allies, and accepting cattle in payment of brideprice. A Bataung informed Norton (1910b:244) that when a relative married a 'Bushman' woman he offered three cattle which the 'Bushmen' accepted.

Joseph Orpen's account of an incident involving 'Bushmen' while he was serving as Landrost of the districts of Winburg and Harrismith in the Free State in 1855 describes their relationships with Korana and Basotho groups living beyond the Orange Free State boundaries at that time, in the area around Mequatling Mission (Figure 3.1). It also reveals many significant details about the lifestyle of these 'Bushmen' and their relationship with Europeans around Winburg in the newly formed Orange Free State. Several references are made in this account to various farmers around Winburg who had 'Bushmen' servants (Orpen, 1964:272, 280, 281 and 283). In his account Orpen describes the eviction of a group of 'Bushmen' who were living on a farm known as Vaalbank about 32 km from Winburg in the direction of Bloemfontein (Orpen, 1964:272).

The account includes a description of kraal inhabited by the 'Bushmen' which 'consisted of about a score of hemispherical huts made of curved boughs covered with large rush mats'. On the night of the incident described by Orpen the kraal housed 'about 60 Bushmen, besides women and children' (1964:274). Orpen (1964:276) remarks on the size of these people describing them as 'fierce little fellows' armed with guns and arrows. They owned cattle which were 'carried off' by the commando which raided their kraal (Orpen, 1964:279).

After the confrontation which resulted in the deaths of ten men and five women from the kraal as well as three Europeans it was reported to Orpen that the 'Bushmen had all trekked during the night over the border towards Moletsani's and that they had carried off with them the whole of the stock from Jan van Coller's farm'. The European view of the relationship between the 'Bushmen', Koranas and Basotho living in the Mequatling area is expressed in their decision not to repossess van Collier's cattle which the 'Bushmen' were holding on Vecht Kop just beyond the border of the area controlled by the Orange Free State at that time (probably the modern Vegkop

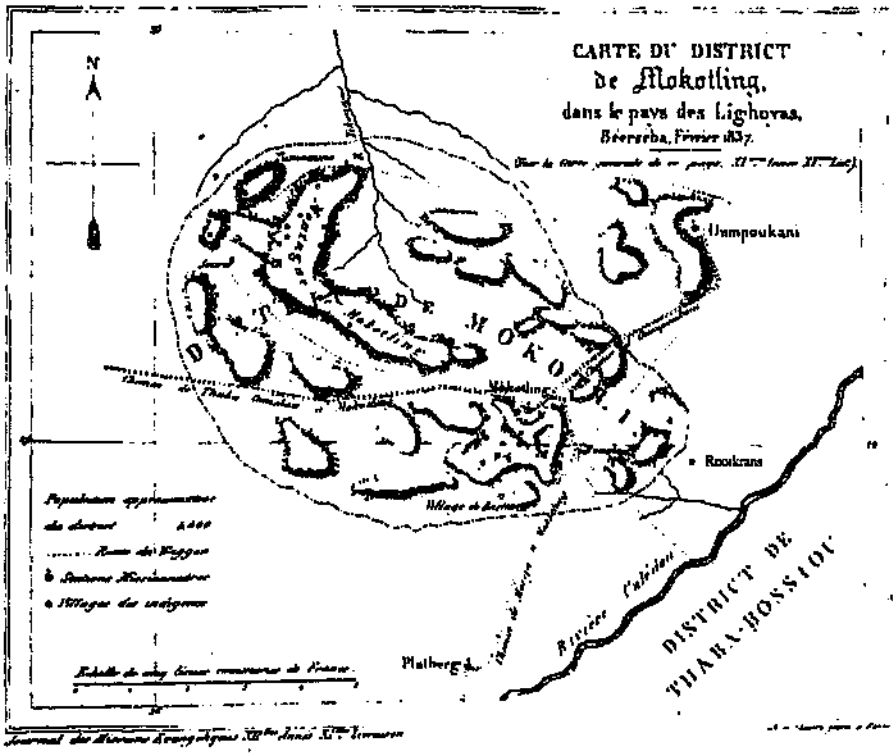


Figure 3.4 Map of the old district of Mequatling showing the location of Rooikrans Rock Shelter (from Journals des Missions Evangeliques:12).

at 27° 12' East 28° 47' South which is 25 km north-west of Mequatling). The decision was made on the grounds that 'the Bushmen were connected with the Koranas, these with Moletsani and he again with Moshesh' (Orpen, 1964:282). It is interesting that Orpen links these 'Bushmen' in the first instance with the Korana, since so much other evidence points to a strong tie between 'Bushmen' and Taung. However Stow's evidence for alliances between 'Bushmen' groups and Korana in the Vaal area suggests that this possibility cannot be completely rejected here (Stow, 1905:301). Orpen attempted to persuade Moletsane to hand over the 'Bushmen' but was told by Moletsane that his people were 'from of old, deadly afraid of Bushmen and avoided by all means any row with them, conciliating them to the utmost of their power and making them presents, especially of tobacco' (Orpen, 1964:282-283). These protestations of fear are belied by the fact that he did agree to retrieve and return the cattle. A fascinating account of a meeting held at

Mequatling Mission concerning the incident is given by Orpen (Orpen:1964:300). The meeting included Orpen, Mr Kock who was the resident missionary at Mequatling, Moletsane, Mosheshoe's messenger, Basotho inhabitants of the neighbourhood, the Korana chiefs and people and 'the little Bushman chief and his interpreter' (Orpen, 1964:300). The composition of this assembly is a clear indication of the composition of the local population in the area of Mequatling in the year 1855. Interestingly the tone of Orpen's account of these events is shamefaced and the author admits that the violence which ensued during the eviction resulted from his lack of understanding of the people involved. A local Boer farmer admonished him after the events for 'coming on the Bushmen suddenly as you did. They are a wild and wary people. I have a Kraal of them here, but I would only approach them gently, otherwise they would shoot'. Orpen agreed and admitted that he would blame himself deeply (Orpen, 1964:283). The poignancy of this story is not only highlighted by Orpen's description of the discovery of a live baby buried with its dead mother in one of the shallow graves dug by the inhabitants of the Kraal before they left in the night (Orpen 1964, 280), but also by Orpen's admission that the farmer on whose land they were living said he had never complained about the 'Bushmen' and they had been doing no harm (Orpen, 1964:280).

Historical accounts of the middle Caledon Valley indicate that the hunter-gatherers survived as distinct communities until the end of the 'Basotho wars' and the establishment of European farms. Stow (1905) records traditions about the last 'Bushmen' inhabitants of the Korannaberg (Mequatling) and Platberg on the Caledon. The Platberg referred to by Stow is likely to be the hill just south of Ladybrand (Figure 3.3), although there is another Platberg between Modderport and Ladybrand. Stow (1905:189) was unable to establish the names of their 'chiefs' in the Korannaberg, but claims that they were 'still, however, very numerous, and held possession of their caves up to the time of the last Free State and Basotho war', presumably from 1865-1867 (Theal,1908b:164-287). Stow writes that 'At that time they were attacked by a commando under Commandants Fick and Dreyer'. According to Theal (1908b:208) Dreyer was killed in 1866. Stow records an incident related to him by a Korana eye witness during the fighting, which involved an attempt by a lone 'Bushman' to steal a horse from the Boer commando. According to Stow the 'Bushmen' finally withdrew to the most rugged part of the Maluti Mountains at this time.

The conflict with the Boers for possession of the Mequatling area in the 1860s is documented by other sources besides Stow, and includes further evidence for the active role played by hunter-gatherers in this desperate struggle. Dornan (1907;438) interviewed a 'Bushman' woman who said she was born in a cave at Mequatling (Figure 3.3) and was chased away from there by the Boers (about 1858). This group then joined a clan living at Queme in Lesotho (Figure 3.3). Theal (1908b:271-272), in an account of the commando operations in 1867 to clear the Basotho out of the neighbourhood of Viervoet (Figure 3.3) and from the ceded territory between the Caledon and the Orange Rivers, describes how 'Two Bushmen who had fired poisoned arrows upon the burghers and who were made prisoners were afterwards shot by some miscreants in cold blood'. Norton (1910b:242) states that 'they (the Bushmen) were cleared out of Mequatling by the farmers, presumably after the conquest in 1868'. It seems that at least some of them went with the Taung who left the area in 1869 after the treaty demarcating the new borders of Lesotho was signed at Aliwal North (Theal,1908b:311). Moletsane (1967:4) states that 'San' accompanied the Taung under Moletsane when he left Mequatling for southern Lesotho and settled between Mafeteng and Mohale's Hoek (Walton, 1965:2).

Stow's informant concerning the 'Bushmen' of the Platberg (Di-tse-thlong) is referred to as 'a half-caste Mosutu belonging to the clan of the petty Basotho captain Ramanape'. This informant claimed that his grandfather, Rama'kale, sought refuge among the 'Bushmen' before any other Basotho were in this part of the country. He married the daughter of the last 'great Bushman captain of the mountain' named Kabasisi, and his children including the informant's father were born in a cave opposite Tennant's Kop which was once covered with paintings (Stow, 1905:191). Although no feature called Tennant's Kop is marked in the Platberg on the 1:250,000 scale map of the area there is a Tenniskop which is opposite the large cave on the farm De Hoop, which may be the site referred to. In support of this suggestion this site has been excavated by Klatzow (1996:331) and has deposits which are thought to represent interaction between Sotho and hunter-gatherers during the 1830s. The site is very close to the farm Pinekloof where the Wesleyan mission station of Platberg-on-Caledon was established in 1833.

Discussion

The historical sources detailed here clearly show that in the area referred to here as the middle Caledon Valley frontier zone, where the archaeological sites considered in this study are situated (Figure 1.1), the fate of the 'Bushmen' inhabitants was intimately linked with that of Basotho agriculturists from at least the sixteenth century onwards. The various groups living in the lower middle and northern Caledon Valley are clearly identified in the historical sources which also give some indication of the timing of their arrival in these areas. Details of the identity and history of Sotho and Nguni groups in the Caledon Valley are easily reconstructed. The Korana inhabitants of the Mequatling area were recent arrivals who came with the missionaries during the 1830s. Although they came into conflict with the Sotho over the issue of their status in the area, they seem to have been largely subordinate to Moletsane, the Sotho chief at Mequatling who in turn was answerable to Moshoeshoe.

The identity of the 'Bushmen' described in these accounts is more problematic. Although they are distinguished from the pastoralist Korana and Griqua groups by the use of the term 'Bushman', they share various traits which are often used to define pastoralists in southern Africa. These include living in kraals (Germond, 1967:44) and the use of huts constructed from wooden frames covered with reed mats (Orpen, 1964). However there are also several references in this chapter to 'Bushmen' who are born in caves or who occupy caves. Some 'Bushmen' are said to have kept livestock in the Caledon Valley area at Platberg around the time of the 'mfecane' (Stow, 1905:191) and some groups living east of the Caledon between Komet Spruit and the Queme Plateau in present day Lesotho (Figures 3.1 and 3.3) were said by the Basotho to have owned cattle (Stow,1905:183). To the west of the Caledon Valley around the Riet River hunter-gatherers seem to have developed a hierarchical pastoralist system reflected in their settlement layout around byres (Humphreys,1988). This does not seem to be the case in the Caledon Valley, even in the lower Caledon area where stone circles described by Loubser and Laurens (1994) have no associated occupation deposit.

European accounts particularly that of Stow (1905:32-33) but also Dornan (1907:438, 439, 441) refer to 'Bushmen' chiefs. As Loubser and Laurens (1994) have already pointed out these writers

may have been influenced by their knowledge of agriculturist societies when referring to 'Bushmen' chiefs although there is more direct evidence for a 'Bushman' chief from the north-eastern Cape. Ngqabayi was said to have more wives than his followers and to have controlled the production and distribution of arrow poison (Stanford, 1909:438). This 'chief' was also said to mediate in disputes. Interestingly though, Dornan (1907:442) also claims 'The Bushmen were communists in the sense that the game killed by a member of the clan was shared by the whole of it'. This may indicate that the sharing ethic was still a feature of Caledon Valley hunter-gatherer social organisation. It seems likely then that hunter-gatherers in the Caledon Valley mentioned in these accounts were in the process of transforming their strongly egalitarian social relationships, which may have been originally similar to those of assertively egalitarian hunter-gatherers in the Kalahari (Woodburn, 1982; Kent, 1993) into a more hierarchical social system allowing for accumulation of wealth and power by some individuals.

Relationships between hunter-gatherer and agriculturist groups can be reconstructed in some detail from the historical sources described in this chapter. Hunter-gatherers were involved in client relationships with agriculturists and herded livestock for them according to these accounts. Although some accounts suggest that 'Bushmen' were universally despised (Archbell, 1833:517) it is apparent from this review of historical sources that their relationships with some agriculturists in the Caledon Valley and surrounding areas were close and harmonious up until the twentieth century. Wadley (1992:8) mistakenly presumes that the 'Bushmen' referred to by Archbell in his account were met with on the Modder River near present day Modderpoort in the Caledon Valley. In fact Archbell's account containing this statement was written during a journey from the old Platberg-on-Vaal (Figure 3.5) (Archbell, 1833:517) along the Modder River to Thaba Nchu where he met Moseme (Mosema) the local chief there (Archbell, 1833:519). This location is therefore considerably further west than Wadley supposes. Archbell was most familiar with Koranna pastoralists and 'Bechuana' groups including the Rolong under chief Moroka (Germond, 1964:188) who were the occupants of the original Platberg Mission on the Vaal River (Figure 3.5) and emigrated with him to Thaba Nchu west of the Caledon Valley in 1833 (Germond, 1967:165). It is possible that his experience of the relationships between these groups, especially between Korana and 'Bushmen', was more negative than relationships documented between hunter-gatherers and agriculturists further east in the Middle Caledon area. Stow

(1905:301) claims that the various Korana groups when they were living on the Vaal had 'three different modes of treatment which the bushmen received at their hands'. These were firstly fraternisation and intermarriage, secondly alliance and finally and most commonly, deep-rooted animosity. In contrast with the latter alternative, the Taung in particular can be seen to have had a close relationship with hunter-gatherers who followed them when they moved from one area to another.

Historical evidence from the Caledon Valley discussed in this chapter is not adequate to confirm whether Gillomee's (1989) prediction of two phases of frontier interaction, comprising first an open then a closed phase, occurred between hunter-gatherer and agriculturists in the Caledon Valley before the arrival of Europeans. Relationships between the various indigenous groups varied over time and space but co-operative interaction especially between hunter-gatherers and the Taung seem to have continued until the occupation of the area by Europeans in 1869. Instead the historical evidence may indicate that the balance of power between these groups fluctuated with circumstances rather than conforming to a sequence of an open followed by a closed frontier situation.

Most importantly the final occupation of the middle Caledon area west of the river by hunter-gatherers and agriculturists can be firmly dated to the 1860's. Thus the existence of a mosaic of interspersed hunter-gatherer, agriculturist and pastoralist communities with varying relationships in the middle Caledon Valley is firmly established from historical accounts and the implications of this evidence for interpreting the archaeological data from hunter-gatherer sites in the middle Caledon Valley will be considered further in chapter 7. I now turn to an account of the archaeological data from the hunter-gatherer sites in the middle Caledon Valley.

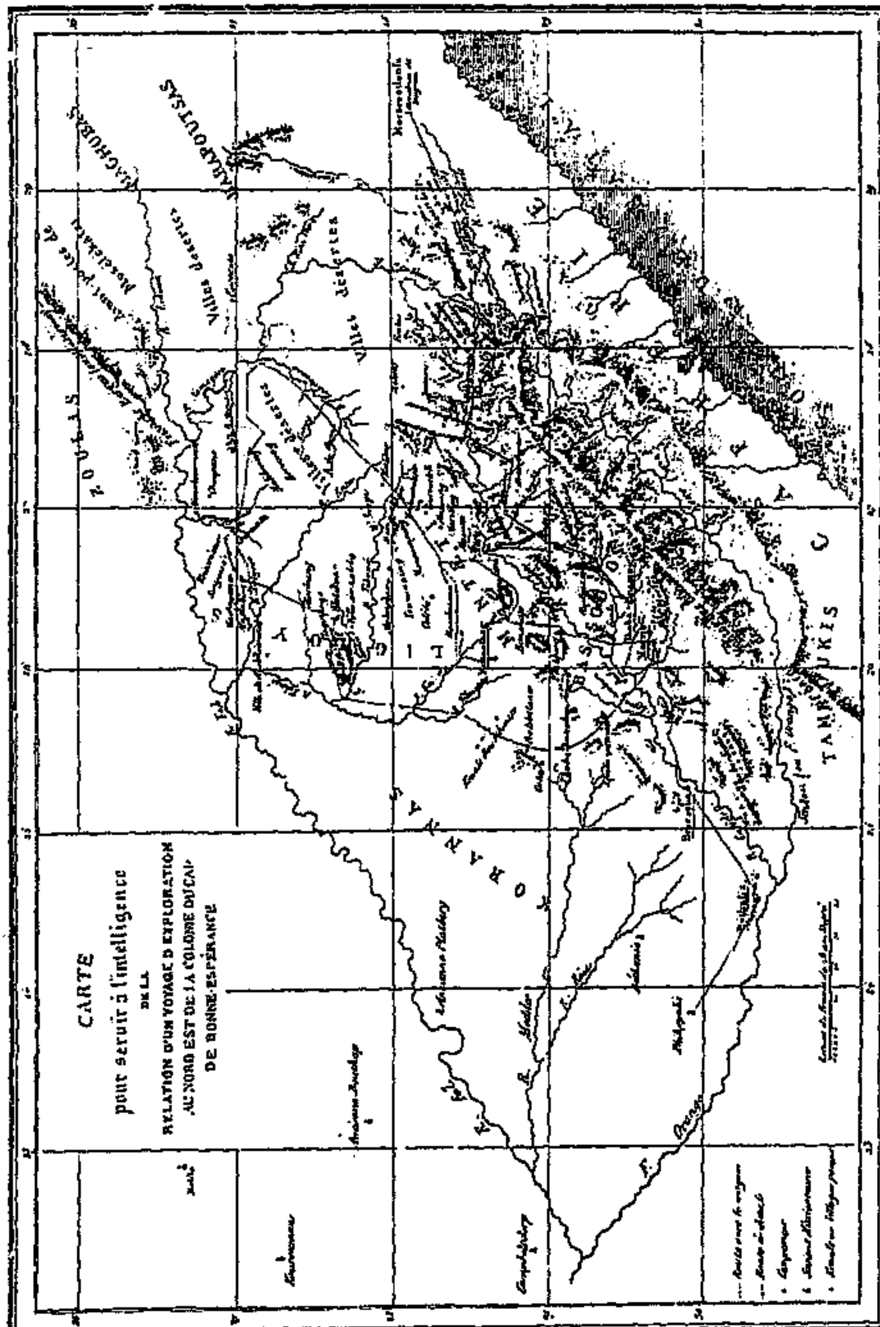


Figure 3.5 Map of Thomas Arbousset's journey through the highveld in 1833 showing the locations of mission stations and the area inhabited by the Taung (Lighoyas) at that time (from Arbousset & Daumas, 1836).

4 EXCAVATED HUNTER-GATHERER SITES IN THE CALEDON VALLEY

The excavated hunter-gatherer sites in the proposed Caledon Valley frontier zone which are the source of the archaeological data on interaction to be interpreted in this study are described here and the relevant radiocarbon dates are listed in Table 4.1. Dates considered relevant are from ceramic levels within the last 2000 years; several of the sites discussed here have earlier dates but these are excluded. The site descriptions include brief summaries of the stratigraphic contexts of the archaeological material including stone tools and ceramics discussed in the following chapters. Sites which had already been excavated before this research began and sites with relevant material excavated by others are described first from the literature. These sites are Roosfontein, Tandjiesburg, Rose Cottage Cave and Mauermanshoek. They are described in chronological order, starting with the oldest occupations relevant to this research. Sites excavated by myself as part of this project are then described, once again in chronological order. These sites are Orange Springs, Rooikrans and Westbury.

Roosfontein Rock Shelter

Roosfontein is a large, north-facing cave between Clocolan and Ficksburg (28°49'S; 27°44'E) (Figure 1.1). Three separate areas in the cave RW, RM and RE (Klatzow, 1994:Figure 2), totalling forty-two square metres have been excavated by Wadley (RW and RE) and Klatzow (RM) (Klatzow, 1994; Wadley, 1995). In the RM excavation Klatzow identifies three levels : Surface, Light Hard Grey and Ashy, with a rich stone industry dominated by small convex scrapers and including bladelets, borers and bifacially pressure-flaked bladelets in all levels (Klatzow, 1994:Figure 3). A date of 1920 ± 60 BP, calibrated age 112 AD came from the deepest layer of the Ashy level. There was no pottery associated with charcoal from this level but pottery was found in the upper levels of Ashy (Klatzow, 1994:10). No details of the stone assemblage from RW or RE are available yet.

For the purposes of the ceramic analysis in chapter 6 of this work I have divided the stratigraphy of RW into four levels: Level 1 includes surface deposit from all squares, Brown found in

squares L7 and G6 as well as Yellow Orange from L7. Level 2 includes Hard Grey from M6, K6 and G8, as well as Brown Powder from a pit in M6 and Brown Ash 2 in H9. Level 3 comprises Hard Orange from M6 and Beach Sand in G7. Pale Light Brown from G6 and Light Brown from K6, G6 and G8 are also included in Level 3.

.e stratigraphy of the Roosfontein East (RE) excavation was simpler, comprising three levels: Surface, Black Ash and Black Ash 2. A date of 1290 ± 50 BP, with a calibrated age of 770 AD (Table 4.1) came from charcoal taken from the Black Ash level associated with ceramics (Klatzow, 1994:10). The Black Ash level from RE could correlate with the Ashy level from RM, although Klatzow notes that these two units may represent chronologically separate occupations. The ceramic assemblages from the three areas are described separately because of the difficulties in correlating the stratigraphic units from each area.

Tandjiesberg Rock Shelter

Tandjiesberg is a small west facing shelter (29°05'S; 28°24'E) (Figure 1.1) best known for its paintings (Loubser, 1993). Excavation of four square metres (Emby, 1990; Wadley, 1995) produced a small stone assemblage dominated by small end scrapers and a hearth at a depth of 300 mm was dated to 860 ± 60 BP (Table 4.1). Ceramics were found in all but the bottom levels (Table 6.2) (Emby, 1990).

Table 4.1 Charcoal and plant material dates from ceramic levels of excavated sites in the eastern Free State

SITE	LAB NO.	14C age (BP)
Roosfontein Rock Shelter (Level B. Ash) (calibrated age AD 770, 685-852)	Pta-5931	1290 ± 50
Tandjiesberg Rock Shelter (Level GH) (calibrated age AD 1190, 1040-1260)	Wits-2004	860 ± 60
Rose Cottage Cave (Level ? Beaumont's excavation) (calibrated age AD 1390, 1360 or 1320)	Pta-350	610 ± 50
Rose Cottage Cave (Level A) (calibrated age AD 1300, 1283-1391)	Pta-5622	680 ± 50
Rose Cottage Cave (Level Mn) (calibrated age 1436 AD, 1419-1456)	Pta-6788	500 ± 50
Mauermanshoek Rock Shelter (Level Dash) (calibrated age AD 1678, 1720-1829 range and AD 1950 also possible)	Pta-5929	200 ± 50
Rooikrans Rock Shelter (Level 3 Sarah) (calibrated age AD 1470, AD 1443-1633)	OxA-3386	415 ± 65
Rooikrans Rock Shelter (Level 2 Sad/Wi) (calibrated age AD 1900, AD 1876-1924)	Pta-5761	100 ± 45
Rooikrans Rock Shelter (Level 2 R/Malt) (calibrated age AD 1900, 1818-1929)	Pta-5762	100 ± 60
Westbury Rock Shelter (Level 2 Dats) (calibrated age AD 1900, AD 1812-1934)	Pta-5764	120 ± 45
Tienfontein 4A Rock Shelter (Upper-most layer) (calibrated age AD 1829, AD 1838, AD 1876, AD 1799-1897)	Pta-1585	150 ± 45
Tienfontein 2 Rock Shelter (Level 2) (calibrated age between AD 1894 and AD 1909)	Pta -1583	80 ± 40

Rose Cottage Cave

Rose Cottage Cave is on the Platberg a few km east of Ladybrand (Fig 1.1) (29°13'S; 27° 28'E). The site was excavated by Malan in the 1940's, and Beaumont in the 1960's. Ongoing excavation is now being carried out by Wadley (1991). Wadley identifies two levels of occupation (A & Mn), containing post classic Wilton stone tool assemblages with ceramics. The earlier level (A) has been dated (Table 4.1) to the fourteenth century (Wadley, 1991; Wadley & Vogel, 1991). The date from Beaumont's excavation (Table 4.1) is from a grass-tempered sherd in a level thought to be the equivalent to the A level of Wadley's excavation (Wadley, 1992:9). Initially the most recent layer (Mn), was assumed to date to the nineteenth and twentieth centuries (Behrens, 1992). However the character of the indigenous ceramic assemblage described in this work indicated an earlier date for most of the material from this level (Thorp, 1996) and a radiocarbon date obtained from inclusions in the grass-tempered pottery has subsequently confirmed that the ceramic assemblage is dated to the fifteenth century (Table 4.1) (Wadley, 1995:576). European artefacts from this level (Behrens, 1992; Wadley, 1992:9) suggest that a nineteenth and twentieth century occupation is superimposed.

Mauermanshoek Rock Shelter

Mauermanshoek is a two lobed shelter on top of the Korannaberg (28°51'S; 27°14'E) (Figure 1.1). The smaller lobe is named Horse Annex (HA) because it has white finger paintings of mounted horsemen (Wadley, 1995). This area was excavated by Domleo who has described the stone tool assemblages from HA and the main shelter (1993). The main shelter was excavated by Wadley (1995) and the ceramic assemblage from this excavation is described in this study.

A seventeenth to eighteenth century date was obtained in the main shelter from the Dash level (Domleo, 1993:Figure 3) associated with ceramics (Table 4.1). I have correlated the stratigraphy of each square using Wadley's notes and cross sections (unpublished), and identified four main levels. Level 1 includes Surface 1 and 2, Lash, Hard Grey and Brown. Level 2 comprises HGW, Dash/Oash, Brown Ash and Stoney Grey. Level 3 is Speckled Ash and Level 4 is Hard Orange.

Orange Springs Rock Shelter

Orange Springs is located on the southern flank of Viervoetberg overlooking the valley of a tributary of the Modderpoortspruit approximately 15 km north-west of Ladybrand. The shelter faces south and is painted with a group of human figures dancing and clapping. Two square metres (Figure 4.1) were excavated apparently to bedrock or decomposing bedrock containing few artefacts.

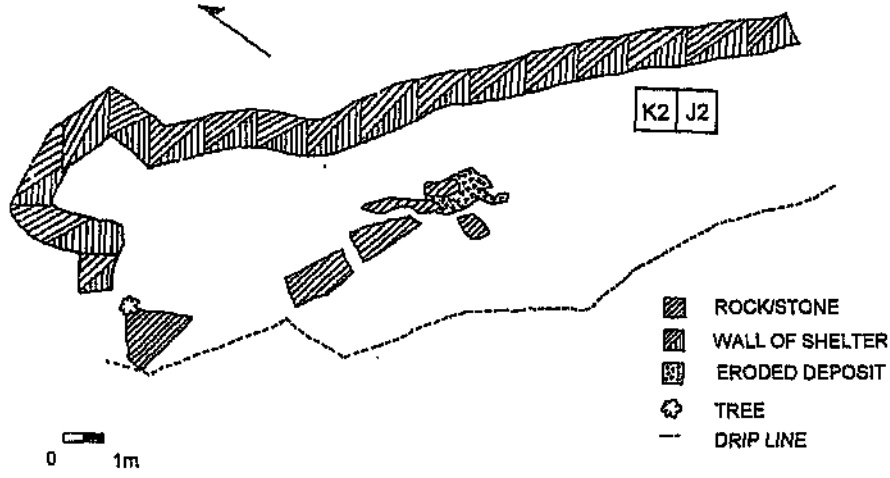


Figure 4.1 Orange Springs Rock Shelter site plan.

Stratigraphy

Five natural stratigraphic levels were recognised (Figure 4.2) and some of these were further subdivided by colour and texture, although it was not possible to determine the vertical relationship of these subunits in the small area excavated. The deposit reached a maximum depth of approximately 500 mm.

Level 1 - The surface of the shelter (Philip) was compacted dry khaki soil.

Level 2 - This charcoal rich layer (John) was softer and dark grey.

Level 3 - In the eastern half of the excavation this level (David & Susan) was damp red clay. In the western half (Muray) it was light khaki damp sand.

Level 4 - This black damp lens (Lyn) in the eastern half of the excavation contained a scatter of charcoal.

Level 5 - In the eastern half of the excavation the base of the deposit was damp red clay (Sarah) and khaki and red decomposing sandstone (Taole) in the north-east corner of the trench.

Dating

A charcoal sample collected from a scatter that occurred throughout Level 2 (John) in square J2 was dated to:

Wits No. 2002 (square J2, Level 2, 16 cm deep) 2790 ± 70
(calibrated age 2920 BP; 2909 BP; 2881 BP)

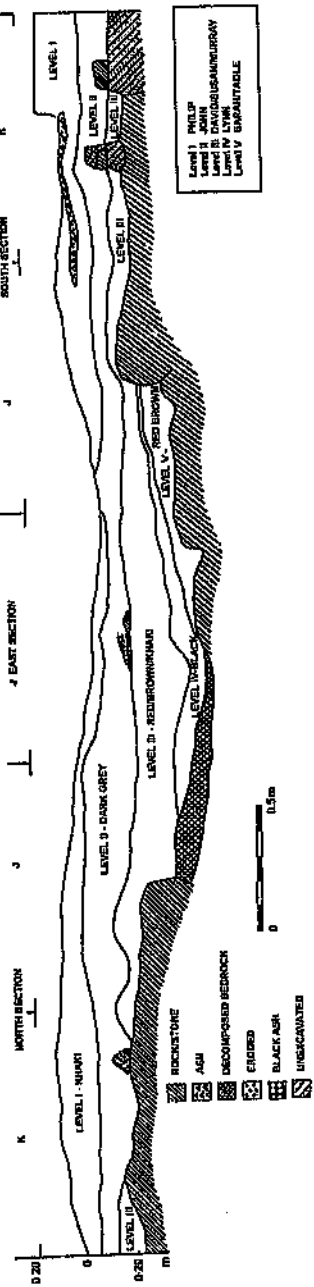


Figure 4.2 Orange Springs Rock Shelter stratigraphy.

Rooikrans Rock Shelter

Rooikrans is located on the eastern flank of Tandjiesberg approximately 20 km north-east of Ladybrand (29°35'S; 27°36'E) (Figure 1.1). The shelter is under a huge boulder at the base of a sandstone cliff and faces north-east overlooking the Caledon River Valley. There are rock paintings on the shelter wall which have been recorded by J. Loubser and include a possible domestic cow. The shelter was excavated by R. Engela and C. Thorp in 1990.

A considerable area of deposit had been removed by an unauthorised excavator and the resulting spoil heap contained pottery, animal bone and stone tools indicating a possible contact horizon (Figure 4.3). Excavation was carried out in two areas, one adjacent to the unauthorised excavation which proved to be the deepest area of deposit (Figures 4.3 and 4.4). Five square meters were excavated to bedrock, and square I3 was partially excavated (Figure 4.5). The stratigraphy in square D5, adjacent to the unauthorised excavation, indicated disturbance in this square (Figure 4.4). This was confirmed by the vertical distribution of ceramics in the square (Table 6.6).

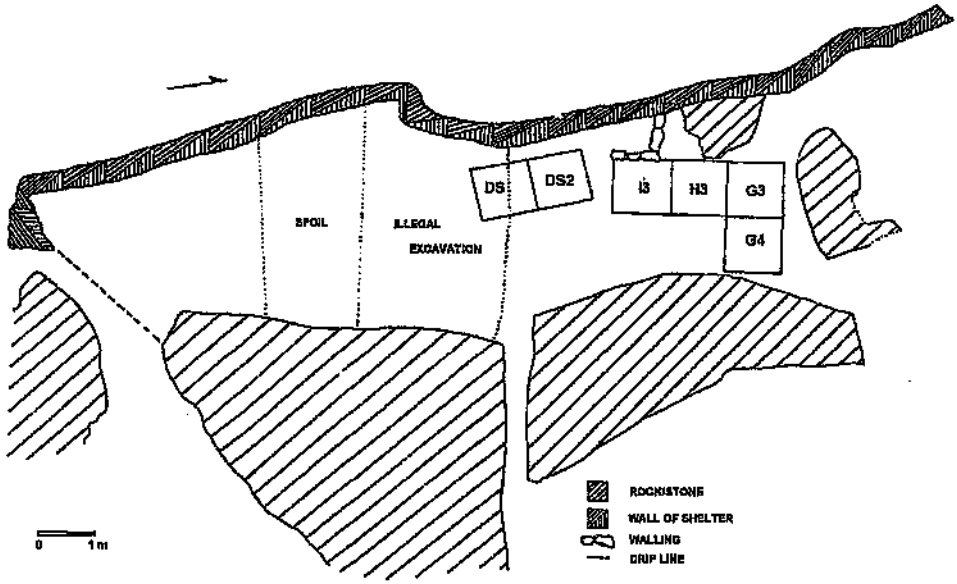


Figure 4.3 Rooikrans Rock Shelter site plan.

Stratigraphy

The stratigraphy was divided into five natural units which were excavated in 50mm and 100mm spits (figure 4.4). The deposit reached a maximum depth of 1000mm.

Level 1 (Surface/Katreyna) - The surface of the shelter was loose cow and dassie dung overlying a hard orange/grey compacted layer of cow dung showing that the site was used to kraal cattle. A drystone bench at the back of the shelter was probably used at this time (Figure 4.3).

Level 2 (Sadat/Wimpey/Rolf/Maltitz/Linde) - This layer of soft grey/brown soil contained a rockfall which was most noticeable in squares DS and DS2.

Level 3 (Sarah) - A black fine ashy layer with some dark grey patches which fades out at the northern end of the shelter in square G3 where it overlies Level 5.

Level 4 (Elizabeth/Sigrid/Smog/Theo/Johan/PB/Jaqui) - Fine brown compacted soil although powdery in DS1 and DS2. This layer does not extend beyond Square I3 at the northern end of the shelter

Level 5 (Solet/Rooikrans Red) - Compacted orange/brown or pink soil resting on bedrock in the deepest area of deposit.

Dating

Three charcoal dates and two bone dates are available from the site. The dates on charcoal (Table 4.1) are:

OxA-3386 (square DS2, Level 3) 415 ± 65
Pta-5761 (square DS2, Level 2) 100 ± 45
Pta-5762 (square I3, Level 2) 100 ± 60

The bone dates are from square DS1 which appears to have a disturbed stratigraphy and is adjacent to the unauthorised digging which probably caused the disturbance. There is a discrepancy between the charcoal and bone dates for Level 3, but because the bone date is from square DS, it is less likely to be reliable than the charcoal date which came from an apparently undisturbed context in square DS2 (Table 4.1). The bone dates are:

Wits No. 2005 (square DS1, Level 3) 3740 ± 280
Wits No. 2003 (square DS1, Level 4) 6150 ± 100

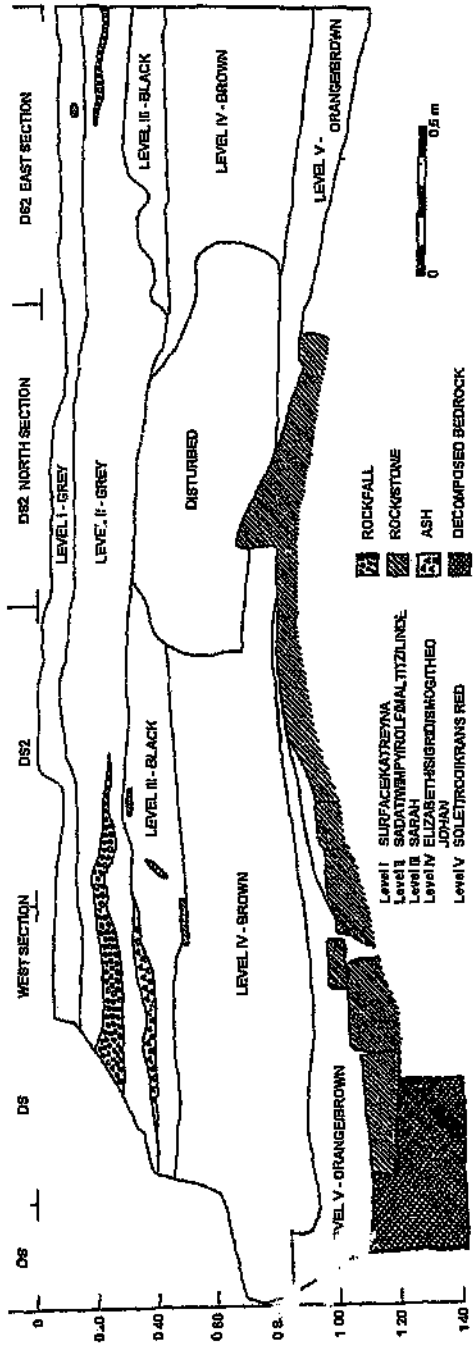


Figure 4.4 Rooikrans Rock Shelter DS and DS2 stratigraphy.

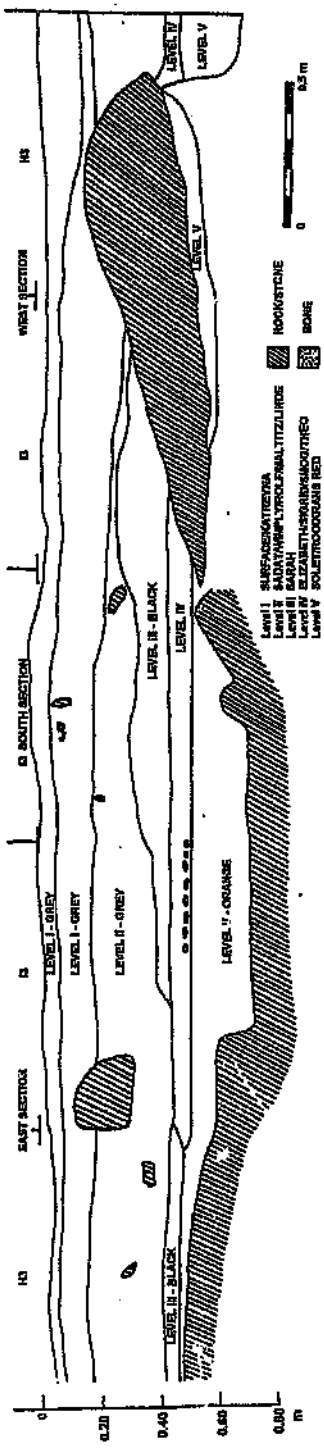


Figure 4.5 Rooikrans Rock Shelter squares H3 and I3 stratigraphy.

In square DS2 (Figure 4.3) a pit had been dug from the base of Level 2, which cut through Levels 3 and 4 (Figure 4.6). The pit was filled with the grey/brown soil of Level 2 and contained pottery, fragments of ostrich eggshell, animal bone and a badly choroded iron object which may have been an arrowhead. In Level 3 a shallow bowl shaped hearth with a white ash and charcoal fill, and hardened edges was found (Figure 4.6). A quartz crystal was found in the hearth. The charcoal date of 415 ± 65 OxA-3386 came from this hearth. It was surrounded by a grey ashy area probably deposited when the hearth was cleaned out during use. In the centre of the square in Level 3 the top of a wooden stake was found in a hole (Figure 4.6) which appeared to have been dug from the base of Level 3 into Level 4. The wood is probably Buffalo-Thorn (*Ziziphus mucronata*) (M. Esterhuysen, *pers. comm.*).

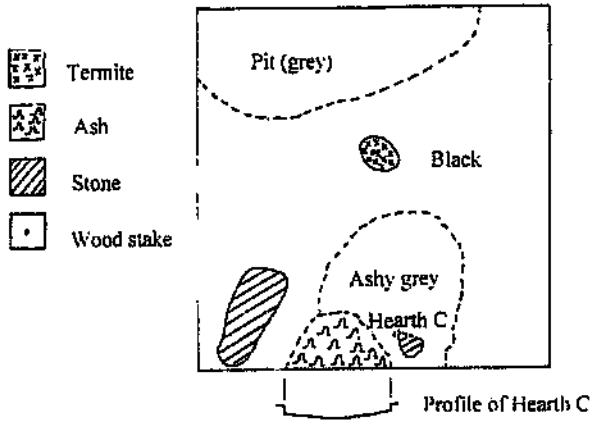


Figure 4.6 Rooikrans Rock Shelter square DS2 (1 x 1 metre) Level 3.

In square I3 a small pit about 150 mm in diameter, which appears to have been a post hole, had been dug from the surface. Towards the base of this feature in Level 3 (depth 580 mm) large pieces of wood were found. At the base of Level 3 a pit filled with soft black/grey ashy deposit

from Level 3 had been dug into Levels 4 and 5 (Figure 4.7). Another feature which seems to have been a post hole dug from the surface into decomposed bedrock and filled with recent debris was found on the intersection of squares G3 and G4.

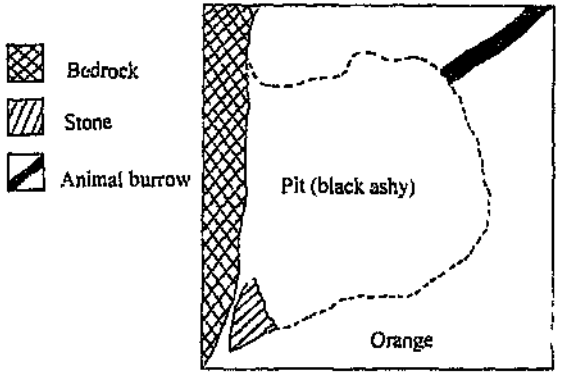


Figure 4.7 Rooikrans Rock Shelter square I3 (1 x 1 metre) Level 5.

Westbury Rock Shelter

Westbury Rock Shelter is located at (28°45'S; 27°40'E) (Figure 1.1) on the southern flank of Goewerneurskop. It faces south-east and overlooks the valley of the Rantsho River. Four square metres were excavated to bedrock at a maximum depth of 400 mm (Figure 4.8).

Stratigraphy

The stratigraphy was divided into three natural units. One unit (Level 2 and 2a) was excavated in 50 and 100 mm spits (Figure 4.9).

Level 1 (Surface & Rolls Royce) - The surface was loose brown soil, twigs and dassie dung which covered a soft brown layer of decomposed cow dung, compacted in patches.

Level 2 (Peugeot & Datsun) - Fine black ashy soil which was compacted in patches.

Level 2a (Fiat) - Fine slightly lighter black ashy soil.

Level 3 (Westbury Khaki) - Khaki coloured fine granular sand containing lumps of white siliceous sinter.

Dating

A radiocarbon date was obtained from charcoal in hearth B in Level 2 (Figure 4.10):

Pta-5764 (square E4, Level 2, 20 cm deep) 120 ± 45

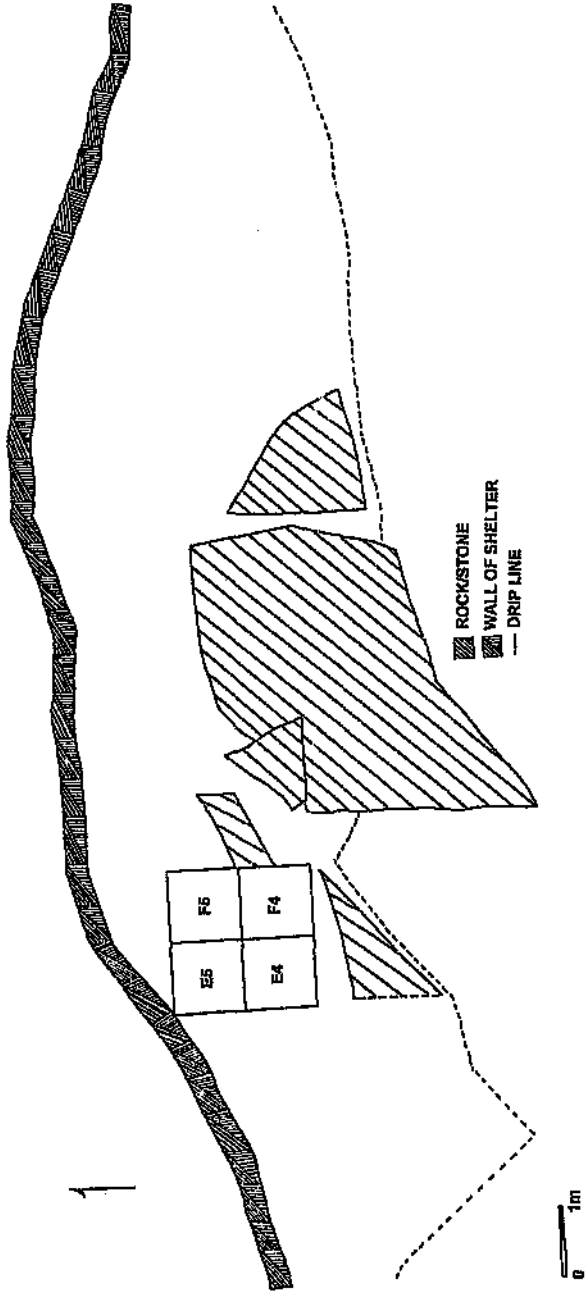


Figure 4.8 Westbury Rock Shelter site plan.

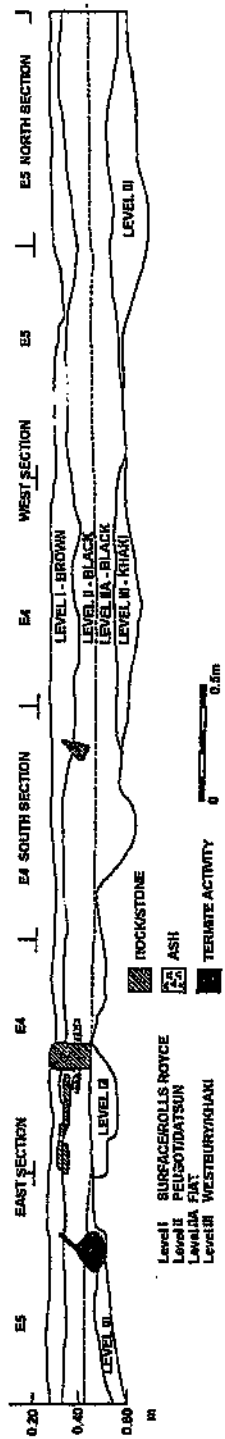


Figure 4.9 Westbury Rock Shelter stratigraphy.

Features

In square E4, Level 2 (Figure 4.10), large stones had been arranged in groups of three around two hearths. Hearth B was the best defined, and the core of the hearth was found in a shallow pit. The base of the pit had been dug into Level 2a. Two layers of bedding grass were found adjacent to hearth B, in the north-east quadrant of the square on top of two large flat stones. The bedding grass extended into the same level of square F4 underneath a large stone removed from the layer above (Figure 4.10).

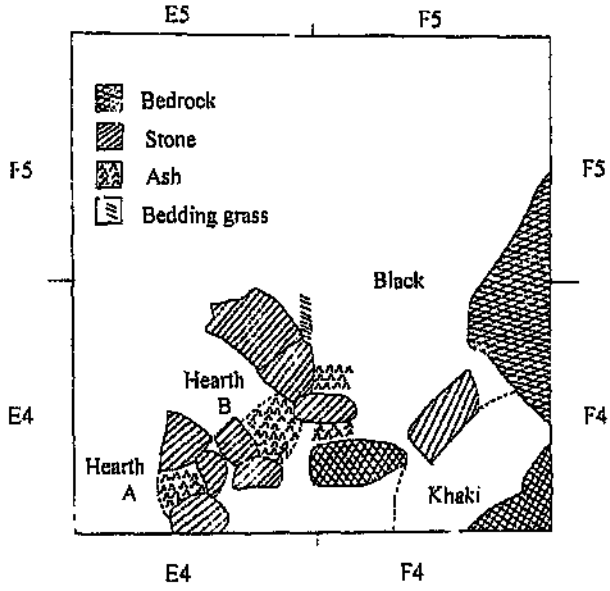


Figure 4.10 Westbury Rock Shelter plan of features in Level 2.

Activity areas

On the basis of the arrangement of the hearths and the adjacent area of bedding, combined with data on the horizontal frequency of stone artefacts and ceramics, well defined activity areas could be identified in Level 2 (Figure 4.10). Most of the ceramics were recovered from the hearth area in square E4 (Table 6.9) and three sherds were found inside the hearth as well as a fragment of

choroded iron. Many of the sherds were covered in soot and had obviously been used for cooking on the hearth. Stone tools and waste in Level 2 were distributed horizontally in a well defined pattern (Tables 4.2). A concentration of formal tools comprising mostly endscrapers and waste came from square E5, immediately behind the hearth (Table 4.2 Figure 4.10) indicating that this was the main working area, both for manufacturing and possibly using the stone tools. A fragment of woodshaving and two pieces of haematite also came from this area. Significantly less stone tools and waste were found in square F5, but one upper grindstone and one fragment of a lower grindstone or palette were recovered. A considerable quantity of stone waste came from the hearth area in square E4, and a black animal hair 850 mm long which may be horsehair, was found in the bedding grass under a stone in the north-eastern corner (Figure 4.10) of this square. Square F4 contained few stone artefacts and bedding grass was recovered from the area adjacent to hearth B in F4, indicating that this area was used for sleeping.

Table 4.2 Horizontal distribution of stone artefacts in Level 2 at Westbury.

Square E5	**Square F5**
stone tools 14 stone waste 125 ground stone 1 ochre 2	stone tools 2 stone waste 35 ground stone 2
Square E4	**Square F4**
stone waste 59 ground stone 1	stone waste 20 ground stone 1

Discussion

These seven sites situated in the proposed frontier zone in the middle Caledon Valley are the source of the various strands of evidence for interaction discussed in the following chapters on

ceramics and stone tools. Although all three sites which I excavated were selected on the basis of their potential for contributing data on hunter-gatherer interaction with agriculturists inside the frontier zone, the excavation of Orange Springs demonstrated that surface traces of ceramics and frontier zone location are not necessarily conclusive indicators of a contact horizon. It is possible that because of the small scale of the Orange Springs excavation an activity area associated with ceramics is present but may have been missed. This possibility is emphasised by the evidence from Westbury for a highly patterned distribution of ceramics in the contact horizon centred on the hearth. A larger scale excavation at Orange Springs is required to conclusively demonstrate that no occupation horizon associated with ceramics exists there.

5 STONE, METAL, GLASS, FAUNAL AND PLANT ASSEMBLAGES FROM HUNTER-GATHERER SITES AS EVIDENCE FOR INTERACTION IN THE CALEDON VALLEY

In this chapter selected archaeological evidence for interaction with agriculturists is assessed from hunter-gatherer sites in the Caledon Valley. The types of assemblages considered here include excavated stone artefact assemblages, as well as metal, glass, fauna and plant assemblages. Earlier pre-contact stone artefact assemblages are considered so that any changes in the assemblages through time can be identified and interpreted in the light of the possible impact of interaction.

The stone artefacts were classified according to Deacon's (1984) scheme with minor modifications. Plant material was identified using a small comparative collection in the University of Witwatersrand Archaeology Department with assistance from the University Herbarium. The glass bead and faunal assemblages were analysed by Dr Sharma Saitowitz and Dr Ina Plug respectively and their methodologies are detailed in appendices A and B.

The stone artefact assemblages as evidence for contact

I begin with a description of stone artefact assemblages from the sites I have excavated and then compare these assemblages with other excavated samples from hunter-gatherer sites in the Caledon Valley and surrounding regions. The sites are discussed in chronological order starting with the site containing the oldest relevant occupation layer.

Orange Springs Rock Shelter (stone artefacts)

A total of 1292 stone artefacts including 57 formal tools was recovered from the excavation (Figure 5.1) (Tables 5.1 and 5.2). The proportion of retouched to non-retouched artefacts is considerably higher in Level 2, dated 2790 ± 20 BP, where approximately 5% of the artefacts are retouched compared to 2% in Level 1 (Table 5.1). When the Level 3 samples are combined

approximately 7% of the artefact assemblage is retouched. No retouched artefacts were found in Level 4, and the high percentage of retouch in Level 5 (20%) probably relates to the small sample size from this level. Formal tool densities were highest in Levels 2 and 5, which each had 2 formal tools per bucket of deposit. This is probably not significant in the case of the small Level 5 sample. However the decrease in tool density from Level 2 to Level 1 supports the data on the proportion of retouched artefacts in these assemblages and suggests a decline in formality after aproximately 3000 BP. Formal tools are mostly made from fine grained opalines apart from a small percentage of other materials in Level 2 (Table 5.3). Other raw materials, except for hornfels which was only found in Level 2, form a small percentage of the waste in all levels. Local sandstone and siltstone is less common in Level 3 than in the Level 4, and most common in Levels 1 and 2. The contrast between the formal tool components of Level 1 (Phillip) which comprises almost exclusively small end scrapers (Table 5.1) (Figure 5.1: 1-5) and Level 2 (John) with a wider spectrum of formal tool types including medium scrapers (Figure 5.1: 8, 13, 14, 26, 27), an adze and spokeshave and a segment (Figure 5.1: 30) as well as backed bladelets (Figure 5.1: 10, 32) is probably significant in spite of the small samples represented. No date was obtained from Level 1, but the apparent absence of pottery (although two body sherds were found on the surface) places it somewhere between the third millennium and the first millennium before present.

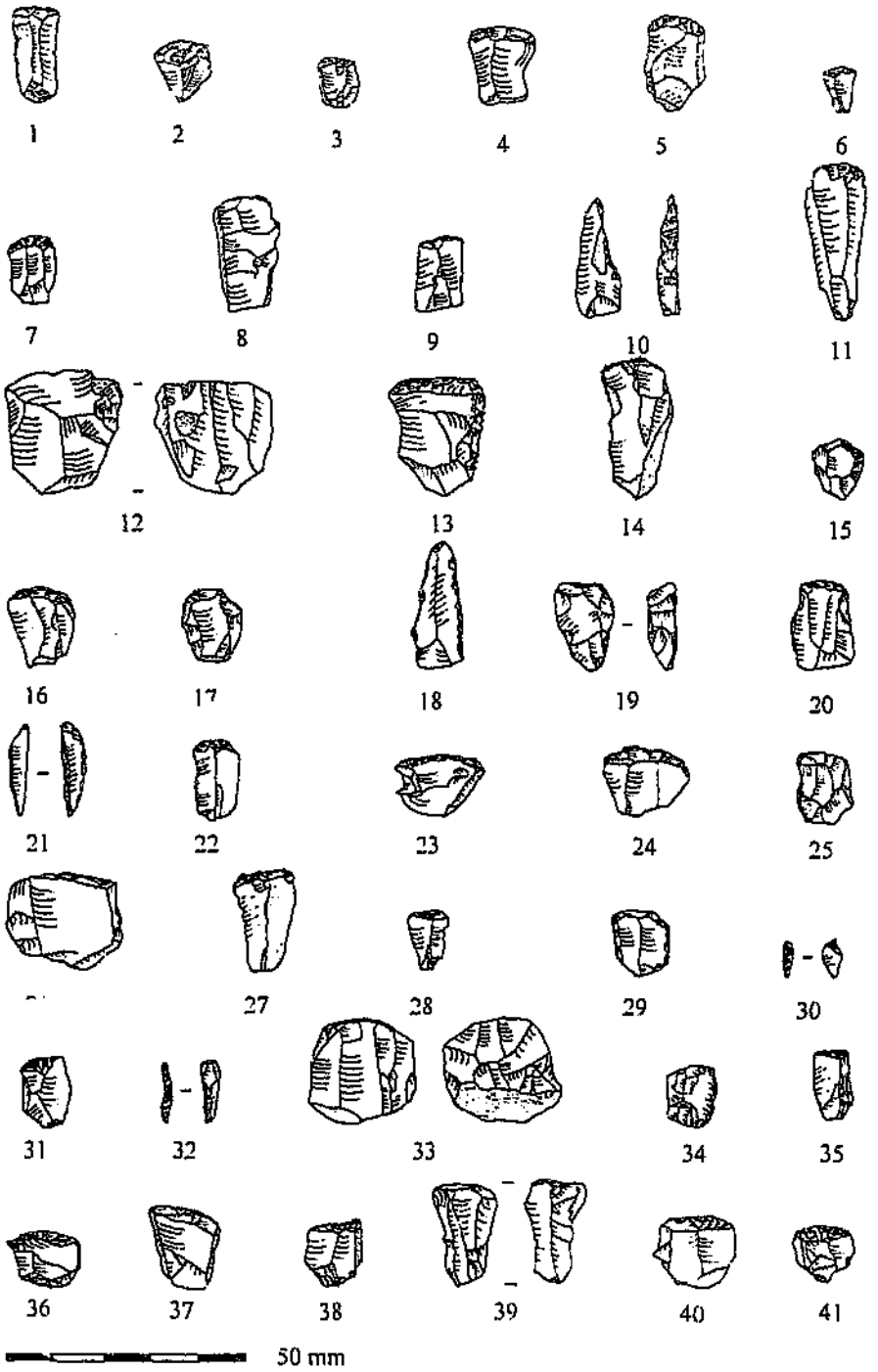


Figure 5.1 Orange Springs Rock Shelter stone artefacts.

Figure 5.1 Orange Springs Rock Shelter stone artefacts.

1 - 5 Level 1 - small end scrapers

6 - 7 Level 2 - small end scrapers

8 Level 2 - medium end scraper

9 Level 2 - small end scraper

10 Level 2 - backed bladelet

11 Level 2 - antique scraper

12 Level 2 - irregular core

13 Level 2 - medium end scraper and adze

14 Level 2 - medium end scraper

15 Level 2 - small end and side scraper

16-17 Level 2 - small end scrapers

18 Level 2 - borer

19 Level 2 - small end scraper and adze

20 Level 2 - small end scraper

21 Level 2 - borer

22-24 Level 2 - small end scrapers

25 Level 3 - small side scraper

26-27 Level 2 - medium end scrapers

28 Level 2 - small end scraper

29 Level 2 - small end and side scraper

30 Level 2 - small segment

31 Level 2 - small side scraper

32 Level 2 - backed bladelet

33 Level 2 - irregular core

34 Level 2 - small end scraper

35-38 Level 3 - small end scrapers

39 Level 3 - bladelet core

40-41 Level 3 - small end scrapers

Table 5.1 Orange Springs Rock Shelter vertical distribution of formal tools.

c:\data\tools\op-orsh.tbl wk4

Stone Tools	1 PhilUp		2 John		3 David		3 Murray		3 Susan		4 Lyn		5 Sarah		5 Toole		TOTAL	
LARGE SCRAPERS (>30mm)																		
End & side	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
MEDIUM SCRAPERS (20-30mm)																		
End	0	0.0%	4	9.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	7.0%
End & adzing	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
SMALL SCRAPERS (<20mm)																		
End	5	83.3%	17	39.5%	1	100.0%	0	0.0%	5	83.3%	0	0.0%	1	100.0%	0	0.0%	29	50.9%
Side	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	16.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
End & side	0	0.0%	4	9.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	7.0%
End & adzing	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
BACKED TOOLS (<25mm)																		
Backed bladelet	0	0.0%	4	9.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	7.0%
Segment	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
OTHER TOOLS																		
Adze flake/s	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
Spokeshave	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
Borer	0	0.0%	3	7.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	5.3%
Broken tool	0	0.0%	1	2.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
Miscellaneous retouch	0	0.0%	2	4.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	3.5%
MSA tool	1	16.7%	3	7.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	7.0%
TOTAL	6	100.0%	43	100.0%	1	100.0%	0	0.0%	6	100.0%	0	0.0%	1	100.0%	0	0.0%	57	100.0%
Total stone	284		849		8		8		75		48		8		4		1292	
% of formal tools	2		5.3		12.5		0		0.1		0		20		0			
ground stone work	0		1		0		0		0		0		0		0		1	
buckets of deposit	8.25		22		1.5		3.75		4.5		2		0.5		0.25		42.75	
formal tools per bucket	0.7		2		0.7		0		1.3		0		2		0			

Table 5.2 Orange Springs Rock Shelter vertical distribution of debris.

s: fcms debris orgrngsdebagrp2 wk4

Type	Level 1 Phillip		Level 2 John		Level 3 David		Level 3 Murray		Level 3 Susan		Level 4 Jan		Level 5 Sarah		Level 5 Trude		TOTAL	
chunk	109	37.8%	330	41.0%	2	28.6%	1	12.5%	28	41.8%	28	54.9%	1	25.0%	2	50.0%	501	40.6%
pebble	0	0.0%	3	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.2%
chip (<10mm	65	22.6%	186	23.1%	0	0.0%	1	12.5%	12	17.9%	6	11.8%	0	0.0%	0	0.0%	270	21.9%
quartz crystal	0	0.0%	1	0.1%	0	0.0%	0	0.0%	1	1.5%	0	0.0%	0	0.0%	0	0.0%	2	0.2%
CORE																		
irregular	5	1.7%	12	1.5%	0	0.0%	0	0.0%	0	0.0%	2	3.9%	3	75.0%	0	0.0%	22	1.8%
bladelet (1 platform)	0	0.0%	3	0.4%	1	14.3%	0	0.0%	3	4.5%	0	0.0%	0	0.0%	0	0.0%	7	0.6%
blade	0	0.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
core reduced (3 plat)	0	0.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
BLADE																		
parallel sided	2	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.2%
pointed	0	0.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
thick triangular	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.5%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
irregular	1	0.3%	2	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.2%
BLADELET (<10mm)																		
parallel sided	4	1.4%	3	0.4%	0	0.0%	0	0.0%	0	0.0%	1	2.0%	0	0.0%	0	0.0%	8	0.6%
pointed	2	0.7%	2	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.3%
thick triangular	1	0.3%	2	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.2%
irregular	0	0.0%	4	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.3%
BROKEN BLADE																		
distal	0	0.0%	1	0.1%	2	28.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.2%
medial	0	0.0%	3	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.2%
proximal	0	0.0%	3	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	0.2%
BROKEN BLADELET																		
distal	5	1.7%	6	0.5%	1	14.3%	1	12.5%	1	1.5%	2	3.9%	0	0.0%	0	0.0%	14	1.1%
medial	2	0.7%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	0.4%
proximal	6	2.1%	15	1.9%	0	0.0%	0	0.0%	1	1.5%	0	0.0%	0	0.0%	0	0.0%	22	1.8%
FLAKES																		
core rejuvenation flake	2	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.2%
cortical flake																		
sidestruck (30+mm)	0	0.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
endstruck (>30mm)	0	0.0%	5	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	0.4%
cortical flake																		
sidestruck (<30mm)	3	1.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.3%
endstruck (<30mm)	2	0.7%	8	1.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	10	0.8%
endstruck (>30mm)	30	10.4%	58	7.2%	0	0.0%	1	12.5%	7	10.4%	8	15.7%	0	0.0%	0	0.0%	104	8.4%
sidestruck (30+mm)	1	0.3%	5	0.6%	0	0.0%	0	0.0%	2	3.0%	1	2.0%	0	0.0%	0	0.0%	9	0.7%
sidestruck (<30mm)	13	4.5%	44	5.5%	1	14.3%	2	25.0%	4	6.0%	1	2.0%	0	0.0%	1	25.0%	66	5.3%
BROKEN FLAKE																		
distal	8	2.8%	53	6.6%	0	0.0%	1	12.5%	1	1.5%	2	3.9%	0	0.0%	1	25.0%	66	5.3%
medial	3	1.0%	4	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	0.6%
proximal	22	7.6%	41	5.1%	0	0.0%	1	12.5%	6	9.0%	0	0.0%	0	0.0%	0	0.0%	70	5.7%
lateral	2	0.7%	5	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	0.6%
TOTAL	288	100.0%	804	100.0%	7	100.0%	8	100.0%	67	100.0%	51	100.0%	4	100.0%	4	100.0%	1234	100.0%
hexanine	0		0		0		0		0		0		0		0		0	
other	0		0		0		0		0		0		0		0		0	

Table 5.3 Orange Springs Rock Shelter vertical distribution of raw materials.

c:\mine\rawmaterials9.wk4

	1 Philip		2 John		3 David		3 Mary		3 Susan		4 Lyn		5 Sarah		5 Tasie		TOTAL	
TOTAL																		
Quartz	0	0.0%	1	0.1%	0	0.0%	0	0.0%	1	1.3%	0	0.0%	0	0.0%	0	0.0%	2	0.2%
Opaline clear	22	7.5%	57	6.7%	2	25.0%	0	0.0%	7	9.3%	3	6.1%	0	0.0%	0	0.0%	91	7.0%
Opaline not clear	169	57.5%	452	53.2%	3	37.5%	7	87.5%	48	64.0%	32	65.3%	4	80.0%	3	75.0%	718	55.5%
Subtotal (Opaline)	191	65.0%	509	59.9%	5	62.5%	7	87.5%	55	73.3%	35	71.4%	4	80.0%	3	75.0%	809	62.6%
Hornfels	0	0.0%	6	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	0.5%
Tuffaceous rock	23	7.8%	134	15.8%	2	25.0%	1	12.5%	9	12.0%	6	12.2%	0	0.0%	0	0.0%	155	12.0%
Siltstone	13	4.4%	26	3.1%	1	12.5%	0	0.0%	4	5.3%	0	0.0%	0	0.0%	0	0.0%	44	3.4%
Sandstone	66	22.4%	188	22.1%	0	0.0%	0	0.0%	5	6.7%	7	14.3%	1	20.0%	1	25.0%	268	20.7%
Quartzite	0	0.0%	5	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	0.4%
Other	1	0.3%	1	0.1%	0	0.0%	0	0.0%	1	1.3%	1	2.0%	0	0.0%	0	0.0%	4	0.3%
TOTAL	294	100.0%	850	100.0%	8	100.0%	8	100.0%	75	100.0%	49	100.0%	5	100.0%	4	100.0%	1293	100.0%
INVENTORY:DEBRIS																		
Quartz	0	0.0%	1	0.1%	0	0.0%	0	0.0%	1	1.4%	0	0.0%	0	0.0%	0	0.0%	2	0.2%
Opaline clear	20	6.9%	54	6.7%	2	28.6%	0	0.0%	7	10.1%	3	6.1%	0	0.0%	0	0.0%	86	7.0%
Opaline not clear	165	57.3%	416	51.7%	2	28.6%	7	87.5%	42	60.9%	32	65.3%	3	75.0%	3	75.0%	690	56.3%
Subtotal (Opaline)	185	64.2%	470	58.4%	4	57.1%	7	87.5%	49	71.0%	35	71.4%	3	75.0%	3	75.0%	776	63.3%
s	0	0.0%	6	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	0.5%
ous rock	23	8.0%	113	14.0%	2	28.6%	1	12.5%	9	13.0%	6	12.2%	0	0.0%	0	0.0%	154	12.6%
Siltstone	13	4.5%	24	3.0%	1	14.3%	0	0.0%	4	5.8%	0	0.0%	0	0.0%		0.0%	42	3.4%
Sandstone	66	22.9%	187	23.2%	0	0.0%	0	0.0%	5	7.2%	7	14.3%	1	25.0%	1	25.0%	267	21.8%
Quartzite	0	0.0%	4	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.3%
Other	1	0.3%	0	0.0%	0	0.0%	0	0.0%	1	1.4%	1	2.0%	0	0.0%	0	0.0%	3	0.2%
Subtotal	288	100.0%	805	100.0%	7	100.0%	8	100.0%	69	100.0%	49	100.0%	4	100.0%	4	100.0%	1234	100.0%
INVENTORY:FORMAL																		
Opaline clear	2	33.3%	1	6.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	3.5%
Opaline not clear	4	66.7%	36	80.0%	1	100.0%	0	0.0%	6	100.0%	0	0.0%	1	100.0%	0	0.0%	48	81.4%
Subtotal (Opaline)	6	100.0%	39	86.7%	1	100.0%	0	0.0%	6	100.0%	0	0.0%	1	100.0%	0	0.0%	53	89.8%
Hornfels	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tuffaceous rock	0	0.0%	1	2.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.7%
Siltstone	0	0.0%	2	4.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	3.4%
Sandstone	0	0.0%	1	2.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.7%
Quartzite	0	0.0%	1	2.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.7%
Other	0	0.0%	1	2.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.7%
Subtotal	6	100.0%	45	100.0%	1	100.0%	0	0.0%	6	100.0%	0	0.0%	1	100.0%	0	0.0%	59	100.0%
TOTAL	294		850		8		8		75		49		5		4		1293	

Rooikrans Rock Shelter (stone artefacts)

This analysis focuses on the stone artefact assemblages associated with ceramics excavated from Rooikrans. Most of the material from pre-contact levels of the excavation have been analysed by Ronette Engela (unpubl. notes). I have analysed a sample of pre-contact tools from Level 4 of square DS2, which is described here for comparative purposes (Table 5.4) (Figure 5.2:20-24). A total of 3616 stone artefacts including 154 formal tools was recovered from the contact levels 1-3 (Table5.4) (Figures 5.2 and 5.3). A further 2800 stone artefacts were recovered from the pre-contact levels (Engela, unpl. notes). The vertical distribution of formal tools in square DS is documented separately (Table5.5) for comparison with the remainder of the excavation (Table 5.6). This comparison shows that in spite of the stratigraphic evidence for disturbance in square DS, the compositions of the assemblages in the contact levels are not very different, although the sample from Level 1 in square DS is too small to make a meaningful comparison. The data from

square DS has therefore been combined with the rest of the excavation for an analysis of assemblage compositions in the contact levels (Table 5.4).

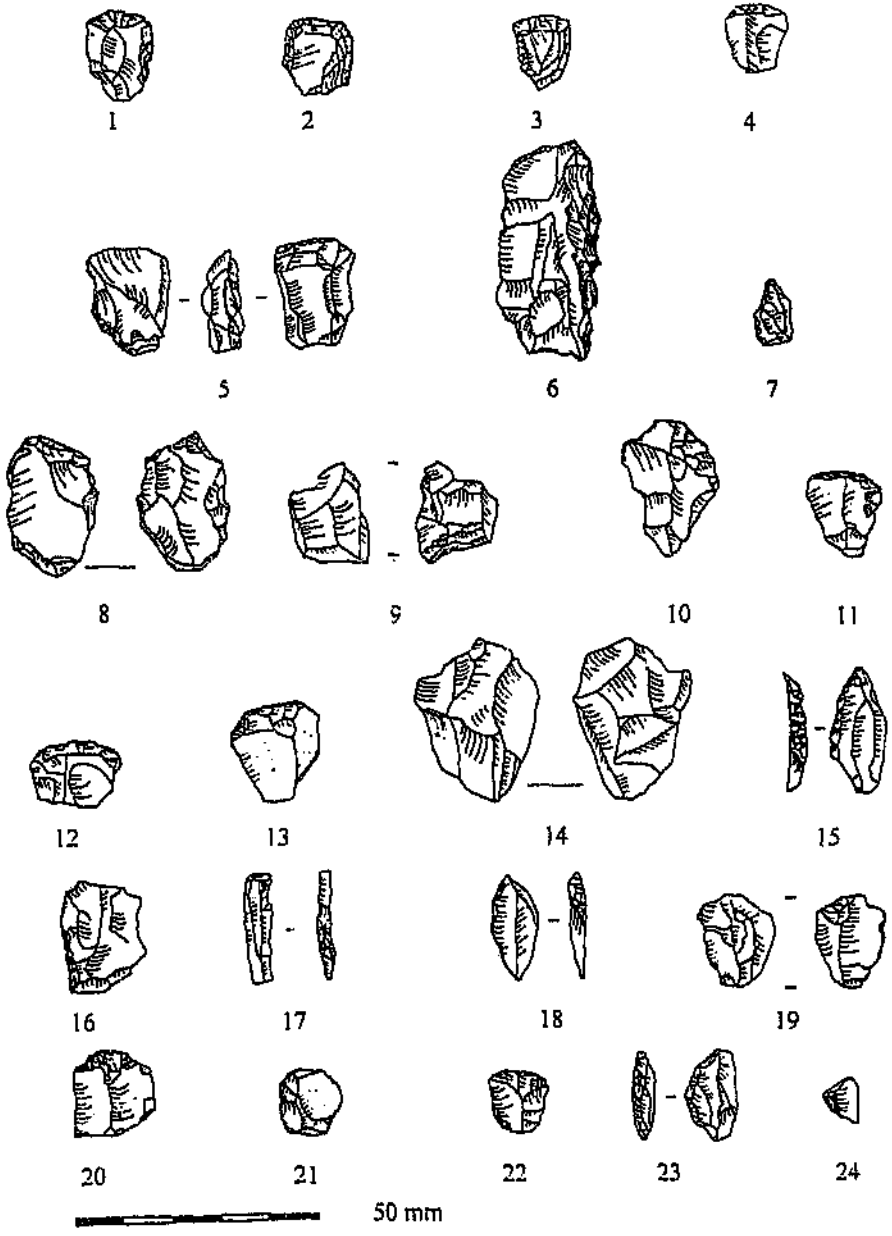


Figure 5.2 Rooikrans Rock Shelter square DS2 stone artefacts.

Figure 5.2 Rooikrans Rock Shelter square DS2 stone artefacts.

1-2 Level 2 - small end and side scrapers

3 Level 2 - small end scraper and adze

4 Level 2 - small end scraper

5 Level 2 - medium end scraper and adze

6 Level 2 - adze

7 Level 2 - borer

8-9 Level 2 - irregular cores

10 Level 3 - medium end scraper

11-12 Level 3 - small end scrapers

13 Level 3 - small end scraper and adze

14 Level 3 - irregular core

15 Level 3 - backed blade

16 Level 3 - adze

17 Level 3 - backed bladelet

18 Level 3 - borer

19 Level 3 - core-reduced piece (2 platforms)

20 Level 4 - small end scraper

21 Level 4 - small side scraper

22 Level 4 - small end scraper

23-24 Level 4 - small segments

Table 5.4 Rooikrans Rock Shelter vertical distribution of formal tools from all squares.
c:\lotus\tools\rkrans\tlsalsq.wk4

Stone Tools	Level 1		Level 2		Level 3		Level 4		TOTAL	
LARGE SCRAPERS (>30mm)										
end & 2 sides	0	0.0%	1	1.3%	0	0.0%	0	0.0%	1	0.6%
end & adzing	0	0.0%	1	1.3%	1	1.8%	0	0.0%	2	1.2%
naturally backed	0	0.0%	0	0.0%	1	1.8%	0	0.0%	1	0.6%
MEDIUM SCRAPERS (20-30mm)										
end	0	0.0%	1	1.3%	2	3.6%	1	8.3%	4	2.4%
side	1	4.8%	1	1.3%	1	1.8%	1	8.3%	4	2.4%
end & side	2	9.5%	0	0.0%	1	1.8%	0	0.0%	3	1.8%
end & 2 sides	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
end & adzing	0	0.0%	2	2.6%	1	1.8%	0	0.0%	3	1.8%
high-backed	0	0.0%	0	0.0%	2	3.6%	0	0.0%	2	1.2%
SMALL SCRAPERS (<20mm)										
end	4	19.0%	23	29.9%	15	26.8%	4	33.3%	46	27.7%
side	0	0.0%	2	2.6%	0	0.0%	1	8.3%	3	1.8%
end & side	2	9.5%	8	10.4%	1	1.8%	1	8.3%	12	7.2%
end & 2 sides	0	0.0%	3	3.9%	2	3.6%	0	0.0%	5	3.0%
end & adzing	0	0.0%	6	7.8%	2	3.6%	0	0.0%	8	4.8%
high-backed	0	0.0%	1	1.3%	2	3.6%	0	0.0%	3	1.8%
small backed	1	4.8%	0	0.0%	1	1.8%	0	0.0%	2	1.2%
BACKED TOOLS (>25mm)										
backed blade	0	0.0%	0	0.0%	1	1.8%	0	0.0%	1	0.6%
broken backed	0	0.0%	1	1.3%	0	0.0%	0	0.0%	1	0.6%
BACKED TOOLS (<25mm)										
backed bladelet	0	0.0%	1	1.3%	2	3.6%	0	0.0%	3	1.8%
segment	1	4.8%	2	2.6%	0	0.0%	2	16.7%	5	3.0%
obliquely backed	0	0.0%	0	0.0%	0	0.0%	1	8.3%	1	0.6%
OTHER TOOLS										
adze	4	19.0%	12	15.6%	9	16.1%	1	8.3%	26	15.7%
spokeshave	2	9.5%	1	1.3%	0	0.0%	0	0.0%	3	1.8%
borer	0	0.0%	1	1.3%	1	1.8%	0	0.0%	2	1.2%
broken tool	2	9.5%	6	7.8%	5	8.9%	0	0.0%	13	7.8%
miscellaneous ret.	2	9.5%	1	1.3%	4	7.1%	0	0.0%	7	4.2%
MSA tool	0	0.0%	3	3.9%	1	1.8%	0	0.0%	4	2.4%
MSA tool recycled	0	0.0%	0	0.0%	1	1.8%	0	0.0%	1	0.6%
TOTAL	21	100.0%	77	100.0%	56	100.0%	12	100.0%	166	100.0%
Total stone (all squares)	371		2039		1206		317		3933	
% formal tools (all squares)	5.66		3.92		4.87		3.93			
ground stone work	2		7		3		1		13	
buckets of deposit	74.5		128		51.3		12.8		266	
formal tools per bucket	0.28		0.6		1.09		1.06			

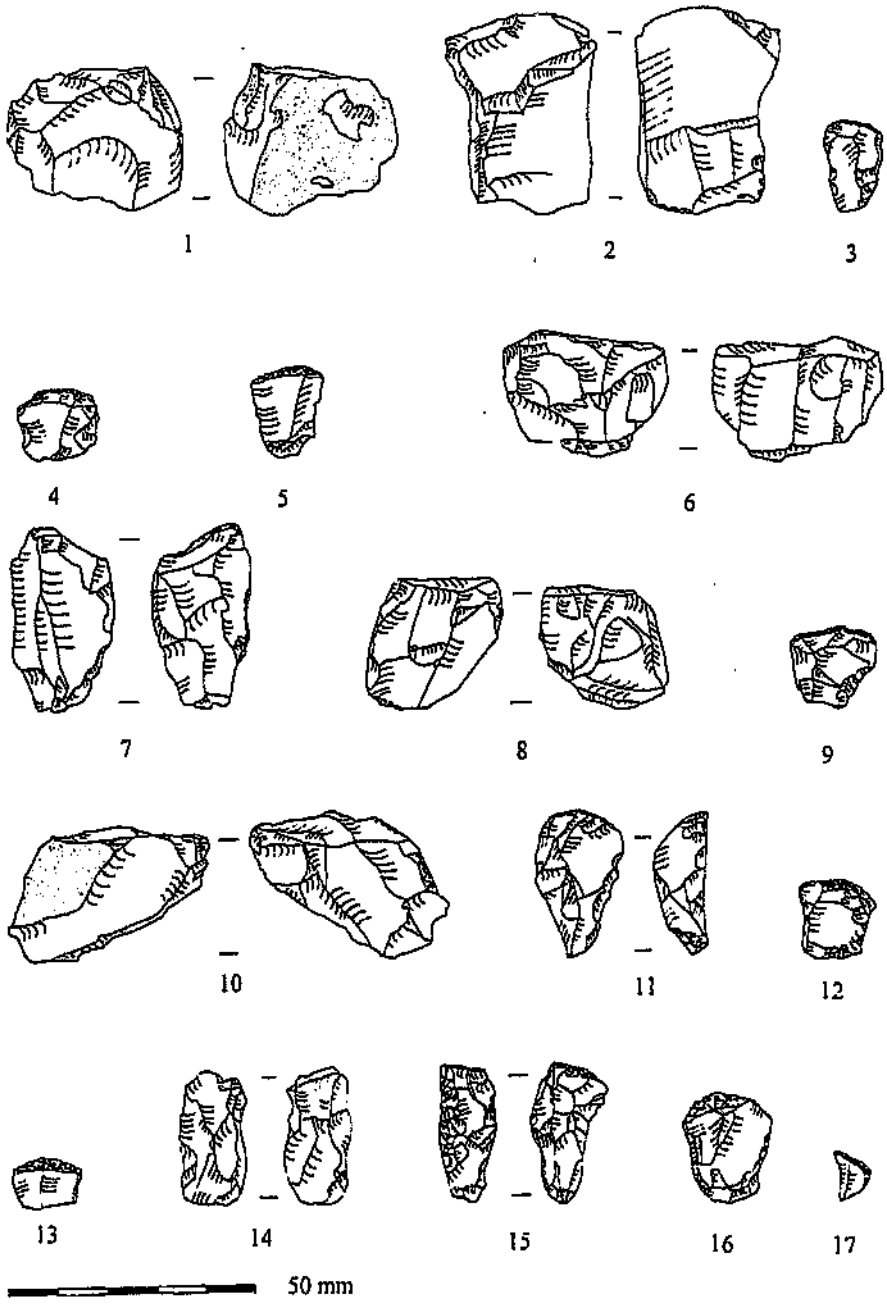


Figure 5.3 Rooikrans Rock Shelter squares I3 and G4 stone artefacts.

Figure 5.3 Rooikrans Rock Shelter squares I3 (numbers 1-16) and G4 (number 17) stone artefacts.

1-2 Level 1 - irregular cores

3-5 Level 2 - small end scrapers

6-8 Level 2 - irregular cores

9 Level 3 - small end and side scraper

10 Level 2 - irregular core

11 Level 3 - medium high backed scraper

12 Level 3 - small end and side scraper

13 Level 3 - small backed scraper

14 Level 3 - irregular core

15 Level 3 (pit) - medium high backed scraper

16 Level 3 (pit) - small end scraper

17 Level 2 - small segment

Table 5.5 Rooikrans Rock Shelter vertical distribution of formal tools in square DS.
c:\lotus\tools\rkrans\tlsds.wk4

Stone Tools	Level 1		Level 2		Level 3		TOTAL	
LARGE SCRAPERS (>30mm)								
end & 2 sides	0	0.0%	1	5.0%	0	0.0%	1	2.6%
end & adzing	0	0.0%	0	0.0%	1	6.3%	1	2.6%
naturally backed	0	0.0%	0	0.0%	1	6.3%	1	2.6%
MEDIUM SCRAPERS (20-30mm)								
end & side	0	0.0%	0	0.0%	1	6.3%	1	2.6%
end & adzing	0	0.0%	1	5.0%	1	6.3%	2	5.3%
SMALL SCRAPERS (<20mm)								
end	1	50.0%	9	45.0%	4	25.0%	14	36.8%
end & side	0	0.0%	1	5.0%	0	0.0%	1	2.6%
end & 2 sides	0	0.0%	1	5.0%	1	6.3%	2	5.3%
end & adzing	0	0.0%	1	5.0%	0	0.0%	1	2.6%
high-backed	0	0.0%	0	0.0%	2	12.5%	2	5.3%
BACKED TOOLS (<25mm)								
backed bladelet	0	0.0%	1	5.0%	0	0.0%	1	2.6%
OTHER TOOLS								
adze	0	0.0%	2	10.0%	3	18.8%	5	13.2%
spokeshave	1	50.0%	0	0.0%	0	0.0%	1	2.6%
broken tool	0	0.0%	2	10.0%	2	12.5%	4	10.5%
MSA tool	0	0.0%	1	5.0%	0	0.0%	1	2.6%
							0	
TOTAL	2	100.0%	20	100.0%	16	100.0%	38	100.0%
ground stone work	1		1		0		2	

Table 5.6 Rooikrans Rock Shelter vertical distribution of formal tools (except square DS).
c:\lotus\tools\rkrans\phdtabl1.wk4

Stone Tools	Level 1		Level 2		Level 3		Level 4		TOTAL	
LARGE SCRAPERS (>30mm)										
end & adzing	0	0.0%	1	1.8%	0	0.0%	0	0.0%	1	0.8%
MEDIUM SCRAPERS (20-30mm)										
end	0	0.0%	1	1.8%	2	5.0%	1	8.3%	4	3.1%
side	1	5.3%	1	1.8%	1	2.5%	1	8.3%	4	3.1%
end & side	2	10.5%	0	0.0%	0	0.0%	0	0.0%	2	1.6%
end & 2 sides	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
end & adzing	0	0.0%	1	1.8%	0	0.0%	0	0.0%	1	0.8%
high-backed	0	0.0%	0	0.0%	2	5.0%	0	0.0%	2	1.6%
SMALL SCRAPERS (<20mm)										
end	3	15.8%	14	24.6%	11	27.5%	4	33.3%	32	25.0%
side	0	0.0%	2	3.5%	0	0.0%	1	8.3%	3	2.3%
end & side	2	10.5%	7	12.3%	1	2.5%	1	8.3%	11	8.6%
end & 2 sides	0	0.0%	2	3.5%	1	2.5%	0	0.0%	3	2.3%
end & adzing	0	0.0%	5	8.8%	2	5.0%	0	0.0%	7	5.5%
high-backed	0	0.0%	1	1.8%	0	0.0%	0	0.0%	1	0.8%
small backed	1	5.3%	0	0.0%	1	2.5%	0	0.0%	2	1.6%
BACKED TOOLS (>25mm)										
backed blade	0	0.0%	0	0.0%	1	2.5%	0	0.0%	1	0.8%
broken backed	0	0.0%	1	1.8%	0	0.0%	0	0.0%	1	0.8%
BACKED TOOLS (<25mm)										
backed bladelet	0	0.0%	0	0.0%	2	5.0%	0	0.0%	2	1.6%
segment	1	5.3%	2	3.5%	0	0.0%	2	16.7%	5	3.9%
obliquely backed	0	0.0%	0	0.0%	0	0.0%	1	8.3%	1	0.8%
OTHER TOOLS										
adze	4	21.1%	10	17.5%	6	15.0%	1	8.3%	21	16.4%
spokeshave	1	5.3%	1	1.8%	0	0.0%	0	0.0%	2	1.6%
borer	0	0.0%	1	1.8%	1	2.5%	0	0.0%	2	1.6%
broken tool	2	10.5%	4	7.0%	3	7.5%	0	0.0%	9	7.0%
miscellaneous ret.	2	10.5%	1	1.8%	4	10.0%	0	0.0%	7	5.5%
MSA tool	0	0.0%	2	3.5%	1	2.5%	0	0.0%	3	2.3%
MSA tool recycled	0	0.0%	0	0.0%	1	2.5%	0	0.0%	1	0.8%
TOTAL	19	100.0%	57	100.0%	40	100.0%	12	100.0%	128	100.0%
ground stone work	1		6		3		1		11	

In Levels 1-3 where interaction is evident, the proportion of retouched to non-retouched artefacts varies between 5.6% and 3.9% of all stone (Table 5.4). The steep decline in stone artefacts in Level 1 coupled with the relatively high percentage of formal tools shows that less stone working was taking place in the final occupation of the shelter and that formal tools were more carefully curated in Level 1. Formal tool densities were highest in Level 3, dated 415 ± 65 BP, with 1.09 tools per bucket (Table 5.4). Level 2, dated 100 ± 45 BP and 100 ± 60 BP, and Level 1 which

was undated had 0.60 and 0.28 tools per bucket respectively. This shows a decrease in formality through time. Small scrapers, particularly end scrapers dominate the formal tool assemblages from all three contact levels. They comprise between 33% and 56% of the formal tools in these levels. Large and medium scrapers are found in small numbers in most levels. The highest proportion of adzes occurs in Level 1. All of the contact levels have a higher percentage of adzes than the pre-contact level sample, dated 6150 ± 100 BP in disturbed square DS1, although the small size of this sample may account for this difference in assemblage composition. Small segments occur in Levels 1 and 2 and in the pre-contact Level 4. The vertical distribution of debris is documented separately for all squares except DS (Table 5.7) and for square DS (Table 5.8). The compositions of these two assemblages of debris are similar in spite of the stratigraphic evidence for disturbance in square DS. The cores are mostly irregular in all levels, but include a small number of bladelet cores and core-reduced pieces (Tables 5.7 and 5.8).

Table 5.7 Pooikrans Rock Shelter vertical distribution of debris (except square DS).

C:\LOTUS\DEBRIS\RKRANS\rkdebag1.WK4

Type	Level 1		Level 2		Level 3		Level 4		TOTAL	
chunk	132	39.5%	565	38.9%	216	30.8%	86	28.2%	999	35.8%
pebble	17	5.1%	21	1.4%	2	0.3%	0	0.0%	40	1.4%
chip (<10mm)	84	25.1%	384	26.4%	143	20.4%	92	30.2%	703	25.2%
quartz crystal	3	0.9%	9	0.6%	2	0.3%	3	1.0%	17	0.6%
CORE										
irregular	8	2.4%	23	1.6%	15	2.1%	13	4.3%	59	2.1%
bladelet (2 platform)	1	0.3%	2	0.1%	0	0.0%	0	0.0%	3	0.1%
core-reduced (1 plat)	0	0.0%	0	0.0%	0	0.0%	1	0.3%	1	0.0%
core-reduced (2 plat)	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.0%
BLADE										
parallel sided	0	0.0%	1	0.1%	1	0.1%	1	0.3%	3	0.1%
irregular	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.0%
BLADELET (<25mm)										
parallel sided	0	0.0%	3	0.2%	1	0.1%	5	1.6%	9	0.3%
pointed	0	0.0%	5	0.3%	2	0.3%	2	0.7%	9	0.3%
thick triangular	0	0.0%	1	0.1%	0	0.0%	0	0.0%	1	0.0%
irregular	2	0.6%	5	0.3%	4	0.6%	0	0.0%	11	0.4%
BROKEN BLADE										
distal	0	0.0%	2	0.1%	0	0.0%	2	0.7%	4	0.1%
medial	1	0.3%	2	0.1%	2	0.3%	0	0.0%	5	0.2%
proximal	0	0.0%	10	0.7%	4	0.6%	1	0.3%	15	0.5%
BROKEN BLADELET										
distal	1	0.3%	13	0.9%	7	1.0%	1	0.3%	22	0.8%
medial	1	0.3%	5	0.3%	2	0.3%	0	0.0%	8	0.3%
proximal	2	0.6%	20	1.4%	21	3.0%	8	2.6%	51	1.8%
FLAKES					0					
core rejuven. flake	0	0.0%	1	0.1%	3	0.4%	0	0.0%	4	0.1%
cortical flake										
endstruck (30+mm)	0	0.0%	1	0.1%	1	0.1%	0	0.0%	2	0.1%
endstruck (<30mm)	1	0.3%	6	0.4%	6	0.9%	7	2.3%	20	0.7%
cortical flake										
sidestruck (30+mm)	0	0.0%	1	0.1%	0	0.0%	0	0.0%	1	0.0%
sidestruck (<30mm)	3	0.9%	37	2.5%	5	0.7%	2	0.7%	47	1.7%
endstruck (30+mm)	2	0.6%	3	0.2%	6	0.9%	2	0.7%	13	0.5%
endstruck (<30mm)	22	6.6%	114	7.9%	91	13.0%	26	8.5%	253	9.1%
sidestruck (30+mm)	0	0.0%	8	0.6%	3	0.4%	0	0.0%	11	0.4%
sidestruck (<30mm)	18	5.4%	73	5.0%	76	10.8%	29	9.5%	196	7.0%
					0		0			
BROKEN FLAKE										
distal	4	1.2%	26	1.8%	22	3.1%	4	1.3%	56	2.0%
medial	3	0.9%	9	0.6%	3	0.4%	1	0.3%	16	0.6%
proximal	20	6.0%	75	5.2%	54	7.7%	13	4.3%	162	5.8%
lateral	9	2.7%	27	1.9%	8	1.1%	6	2.0%	50	1.8%
TOTAL	334	100.0%	1452	100.0%	702	100.0%	305	100.0%	2793	100.0%
haematite	0		0		0		0		0	
ochre	0		2		1		1		4	

Table 5.8 Boikrans Rock Shelter vertical distribution of debris in square DS.
C:\LOTUS\DEBRIS\RKRANS\rkdsdbs.WK4

Type	Level 1		Level 2		Level 3		TOTAL	
chunk	3	18.8%	165	32.4%	175	39.1%	343	35.2%
pebble	3	18.8%	5	1.0%	4	0.9%	12	1.2%
chip (<10mm)	2	12.5%	159	31.2%	126	28.1%	287	29.5%
quartz crystal	0	0.0%	3	0.6%	0	0.0%	3	0.3%
CORE								
irregular	0	0.0%	11	2.2%	7	1.6%	18	1.8%
bladelet (1 platform)	0	0.0%	1	0.2%	0	0.0%	1	0.1%
bladelet (2 platform)	0	0.0%	1	0.2%	1	0.2%	2	0.2%
blade	0	0.0%	0	0.0%	0	0.0%	0	0.0%
core-reduced (1 plat)	0	0.0%	0	0.0%	1	0.2%	1	0.1%
core-reduced (2 plat)	1	6.3%	0	0.0%	0	0.0%	1	0.1%
BLADE								
pointed	0	0.0%	1	0.2%	0	0.0%	1	0.1%
irregular	0	0.0%	2	0.4%	0	0.0%	2	0.2%
BLADELET (<26mm)								
parallel sided	0	0.0%	1	0.2%	0	0.0%	1	0.1%
thick triangular	0	0.0%	1	0.2%	0	0.0%	1	0.1%
irregular	0	0.0%	5	1.0%	3	0.7%	8	0.8%
BROKEN BLADE								
distal	0	0.0%	1	0.2%	0	0.0%	1	0.1%
proximal	0	0.0%	2	0.4%	0	0.0%	2	0.2%
BROKEN BLADELET								
distal	0	0.0%	1	0.2%	3	0.7%	4	0.4%
medial	0	0.0%	1	0.2%	0	0.0%	1	0.1%
proximal	0	0.0%	8	1.6%	1	0.2%	9	0.9%
FLAKES								
core rejuven. flake	0	0.0%	0	0.0%	1	0.2%	1	0.1%
cortical flake								
endstruck (30+mm)	0	0.0%	1	0.2%	0	0.0%	1	0.1%
endstruck (<30mm)	0	0.0%	0	0.0%	3	0.7%	3	0.3%
cortical flake								
sidestruck(<30mm)	0	0.0%	1	0.2%	4	0.9%	5	0.5%
endstruck (30+mm)	1	6.3%	5	1.0%	3	0.7%	9	0.9%
endstruck (<30mm)	4	25.0%	53	10.4%	50	11.2%	107	11.0%
sidestruck (30+mm)	0	0.0%	4	0.8%	0	0.0%	4	0.4%
sidestruck (<30mm)	2	12.5%	47	9.2%	51	11.4%	100	10.3%
BROKEN FLAKE								
distal	0	0.0%	10	2.0%	1	0.2%	11	1.1%
medial	0	0.0%	2	0.4%	0	0.0%	2	0.2%
proximal	0	0.0%	15	2.9%	6	1.3%	21	2.2%
lateral	0	0.0%	4	0.8%	8	1.8%	12	1.2%
TOTAL	16	100.0%	510	100.0%	448	100.0%	974	100.0%
haematite	0		0		0		0	
ochre	0		2		1		3	

Fine grained opalines were used as raw material for manufacture of most of the formal tools in assemblages from all four levels described here (Table 5.9) although a small percentage of tools in levels 2 and 3 were made from hornfels. Small quantities of hornfels occurred in the debris category from all levels. The small pre-contact combined tool and debris sample has a higher percentage of hornfels (6%) than the contact levels (1-2%) (Table 5.9). This trend is confirmed by Engela's data (Engela unpublished notes) from the pre-contact Level 4, where hornfels comprises between 3% and 8% of the combined tool and debris samples from her spits within this level. The percentage of local siltstone and sandstone in the combined tool and debris sample from the contact levels and the small pre-contact level sample shows no clear pattern of increase through time, and the percentage fluctuates slightly (Table 5.9). Engela does not quantify this type of material separately in her analysis of the larger pre-contact level sample.

The small pre-contact level sample from square DS2 (Table 5.4) is basically similar to the contact levels in composition, with small scrapers comprising 50% of the formal tools. Although small segments are found in the contact levels (Figure 5.3:17), there is a higher percentage of small segments in the pre-contact sample (25%) (Table 5.4). This difference may indicate that this is a Classic Wilton assemblage although it could also be due to the small sample size.

Table 5.9 Rooikrans Rock Shelter vertical distribution of raw materials in all squares.
c:\lotus\rawmat\rkrmalsq.wk4

	Level 1		Level 2		Level 3		Level 4		TOTAL	
TOTAL										
Quartz	3	0.8%	12	0.6%	2	0.2%	3	0.9%	20	0.5%
Opaline Clear	21	5.7%	187	9.2%	138	11.4%	71	22.4%	417	10.6%
Opaline not clear	295	79.5%	1525	74.8%	845	70.1%	175	55.2%	2840	72.2%
Subtotal (Opalines)	316	85.2%	1712	84.0%	983	81.5%	246	77.6%	3257	82.8%
Hornfels	5	1.3%	48	2.4%	28	2.3%	21	6.6%	102	2.6%
Tuffacious rock	11	3.0%	47	2.3%	38	3.2%	10	3.2%	106	2.7%
Siltstone	7	1.9%	19	0.9%	15	1.2%	11	3.5%	52	1.3%
Sandstone	22	5.9%	185	9.1%	78	6.5%	23	7.3%	308	7.8%
Other	7	1.9%	16	0.8%	62	5.1%	3	0.9%	88	2.2%
TOTAL	371	100.0%	2039	100.0%	1206	100.0%	317	100.0%	3933	100.0%
INVENTORY:DEBRIS										
Quartz	3	0.9%	12	0.6%	2	0.2%	3	1.0%	20	0.5%
Opaline Clear	21	6.0%	176	9.0%	133	11.6%	71	23.3%	401	10.6%
Opaline not clear	274	78.3%	1463	74.6%	798	69.4%	163	53.4%	2698	71.6%
Subtotal (Opalines)	295	84.3%	1639	83.5%	931	81.0%	234	76.7%	3099	82.3%
Hornfels	5	1.4%	45	2.3%	26	2.3%	21	6.9%	97	2.6%
Tuffacious rock	11	3.1%	47	2.4%	36	3.1%	10	3.3%	104	2.8%
Siltstone	7	2.0%	19	1.0%	15	1.3%	11	3.6%	52	1.4%
Sandstone	22	6.3%	184	9.4%	78	6.8%	23	7.5%	307	8.1%
Other	7	2.0%	16	0.8%	62	5.4%	3	1.0%	88	2.3%
Subtotal	350	100.0%	1962	100.0%	1150	100.0%	305	100.0%	3767	100.0%
INVENTORY:FORMAL										
Opaline Clear	0	0.0%	11	14.3%	5	8.9%	0	0.0%	16	9.6%
Opaline not clear	21	100.0%	62	80.5%	47	83.9%	12	100.0%	142	85.5%
Subtotal (Opalines)	21	100.0%	73	94.8%	52	92.9%	12	100.0%	158	95.2%
Hornfels	0	0.0%	3	3.9%	2	3.6%	0	0.0%	5	3.0%
Tuffacious rock	0	0.0%	0	0.0%	2	3.6%	0	0.0%	2	1.2%
Siltstone	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sandstone	0	0.0%	1	1.3%	0	0.0%	0	0.0%	1	0.6%
Other	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Subtotal	21	100.0%	77	100.0%	56	100.0%	12	100.0%	166	100.0%
TOTAL	371		2039		1206		317		3933	

Westbury Rock Shelter (stone artefacts)

A total of 737 stone artefacts including 57 formal tools were recovered from the excavation and surface collection (Figure 5.4) (Tables 5.10 and 5.11). The proportion of retouched to non-retouched artefacts from Westbury was between 6% and 7% in Levels 1 to 2a suggesting an

emphasis on curating formal tools. Level 2 is dated to 120 ± 45 BP. The small stone artefact assemblage in Level 3 was probably intrusive and the 9.5% figure for the proportion of retouched artefacts is therefore distorted. Formal tool densities were low in all levels at around 0.6 tools per bucket of deposit indicating little stone tool manufacture. All of the formal tools were manufactured from fine grained opalines (chalcedony) (Table 5.12). Disregarding the Level 3 assemblage the percentage of local sandstone and siltstone increases in the contact Levels 1 and 2 compared to the pre-contact Level 2a. Hornfels formed a small percentage of the material used for the waste category in all levels and the percentage of hornfels increased very slightly in the final contact level. Small end scrapers dominated the formal tool assemblages from all levels and comprised between 40% and 56% of the assemblages. Medium scrapers occur in small numbers in Levels 1 and 2 and one large scraper came from Level 1. No large or medium scrapers were recovered from Level 2a, and the highest frequency of adzes occurred in this level. A backed blade was also recovered from this level and since this tool type is apparently less frequent in the most recent hunter-gatherer assemblages from the region, the Level 2a assemblage may be considerably earlier than the Level 1 and 2 assemblages. The lack of ceramics in Level 2a lends further support to this interpretation, although the small sample size from Level 2a may explain the difference in assemblage composition.

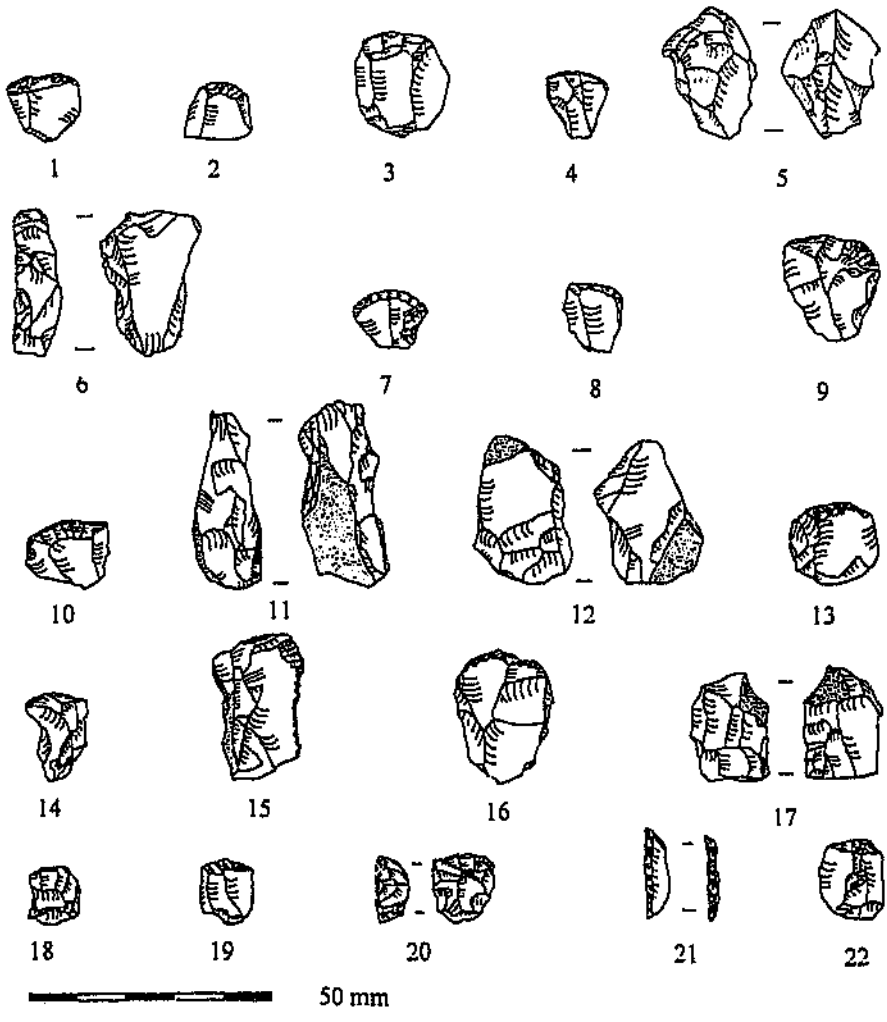


Figure 5.4 Westbury Rock Shelter stone artefacts.

Figure 5.4 Westbury Rock Shelter stone artefacts from square E5.

1-2 Level 1 - small end scrapers

3 Level 1 - medium end scraper

4 Level 1 - small end scraper

5 Level 1 - irregular core

6 Level 1 - medium end scraper and adze

7-8 Level 2 - small end scrapers

9 Level 2 - medium side scraper

10 Level 2 - small end scraper

11 Level 2 - adze

12 Level 2 - irregular core

13-14 Level 2 - small end scrapers

15-16 Level 2 - medium end and side scraper

17 Level 2a - bladelet core (2 platforms)

18 Level 2a - irregular core

19 Level 2a - small end scraper

20 Level 2a - small end and side scraper

21 Level 2a - backed bladelet

22 Level 3 - small end scraper

Table 5.10 Westbury vertical distribut[illegible]rmal tools.

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Stone Tools	Surface outside excavation		Level 1		Level 2		Level 2a		Level 3		TOTAL	
LARGE SCRAPERS (>30mm)												
end	0	0.0%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
MEDIUM SCRAPERS (29-30mm)												
end	0	0.0%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
side	0	0.0%	0	0.0%	1	5.6%	0	0.0%	0	0.0%	1	1.8%
end & side	0	0.0%	1	3.7%	2	11.1%	0	0.0%	0	0.0%	3	5.3%
end & 2 sides	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
end & edging	0	0.0%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
SMALL SCRAPERS (<20mm)												
end	1	100.0%	13	48.1%	10	55.6%	4	40.0%	1	50.0%	29	50.9%
side	0	0.0%	1	3.7%	1	5.6%	0	0.0%	0	0.0%	2	3.5%
end & side	0	0.0%	2	7.4%	2	11.1%	1	10.0%	0	0.0%	5	8.8%
end & edging	0	0.0%	1	3.7%	0	0.0%	1	10.0%	0	0.0%	2	3.5%
small backed	0	0.0%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
BACKED TOOLS (<35mm)												
backed bladelet	0	0.0%	0	0.0%	0	0.0%	1	10.0%	0	0.0%	1	1.8%
OTHER TOOLS												
adze	0	0.0%	3	11.1%	2	11.1%	2	20.0%	0	0.0%	7	12.3%
burin on truncation	0	0.0%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
miscellaneous retouched	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MSA tool	0	0.0%	0	0.0%	0	0.0%	1	10.0%	1	50.0%	2	3.5%
MSA tool re-cycled	0	0.0%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	1	1.8%
TOTAL	1	100.0%	27	100.0%	18	100.0%	10	100.0%	2	100.0%	57	100.0%
Total stone	22		265		257		172		21		737	
% of formal tools	4.5		6.8		7		6		9.5			
ground stone work	0		1		5		3		0		9	
buckets of deposit	n.a.		41		29		16		21		106	
formal tools per bucket	n.a		0.6		0.6		0.6		0.1			

[illegible] = not applicable

Table 5.11 Westbury Rock Shelter vertical distribution of debris.

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Type	Surface outside excavation		Level 1		Level 2		Level 2a		Level 3		TOTAL	
chunk	3	14.3%	83	34.9%	60	25.1%	49	30.2%	5	26.3%	200	29.5%
pebble	1	4.8%	2	0.8%	0	0.0%	1	0.6%	0	0.0%	4	0.6%
chip (<10mm)	6	28.6%	38	16.0%	43	18.0%	40	24.7%	3	15.8%	130	19.1%
quartz crystal	0	0.0%	1	0.4%	2	0.8%	0	0.0%	0	0.0%	3	0.4%
CORE												
irregular	0	0.0%	9	3.8%	6	2.5%	1	0.6%	0	0.0%	16	2.4%
bladelet (1 platform)	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	1	0.1%
bladelet (2 platform)	0	0.0%	0	0.0%	0	0.0%	1	0.6%	0	0.0%	1	0.1%
core-reduced (2 plat)	0	0.0%	1	0.4%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
BLADE												
thick triangular	0	0.0%	1	0.4%	1	0.4%	0	0.0%	0	0.0%	2	0.3%
irregular	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	1	0.1%
BLADELET (<26mm)												
parallel sided	0	0.0%	3	1.3%	1	0.4%	1	0.6%	0	0.0%	5	0.7%
pointed	0	0.0%	0	0.0%	2	0.8%	0	0.0%	0	0.0%	2	0.3%
thick triangular	0	0.0%	1	0.4%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
irregular	0	0.0%	1	0.4%	4	1.7%	2	1.2%	0	0.0%	7	1.0%
BROKEN BLADE		0.0%										
distal	0	0.0%	1	0.4%	2	0.8%	1	0.6%	0	0.0%	4	0.6%
medial	0	0.0%	1	0.4%	1	0.4%	0	0.0%	0	0.0%	2	0.3%
proximal	1	4.8%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	2	0.3%
BROKEN BLADELET												
distal	1	4.8%	3	1.3%	4	1.7%	7	4.3%	1	5.3%	16	2.4%
medial	0	0.0%	2	0.8%	5	2.1%	0	0.0%	0	0.0%	7	1.0%
proximal	1	4.8%	7	2.9%	5	2.1%	3	1.9%	1	5.3%	17	2.5%
FLAKES												
core rejuven. flake	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	1	0.1%
cortical flake												
endstruck (30+mm)	0	0.0%	1	0.4%	0	0.0%	0	0.0%	0	0.0%	1	0.1%
endstruck (<30mm)	0	0.0%	2	0.8%	3	1.3%	0	0.0%	0	0.0%	5	0.7%
cortical flake												
sidestruck (30+mm)	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	1	0.1%
sidestruck (<30mm)	0	0.0%	1	0.4%	1	0.4%	1	0.6%	0	0.0%	3	0.4%
endstruck (30+mm)	0	0.0%	3	1.3%	2	0.8%	2	1.2%	0	0.0%	7	1.0%
endstruck (<30mm)	0	0.0%	14	5.9%	34	14.2%	19	11.7%	3	15.8%	70	10.3%
sidestruck (30+mm)	1	4.8%	3	1.3%	1	0.4%	1	0.6%	0	0.0%	6	0.9%
sidestruck (<30mm)	3	14.3%	29	12.2%	31	13.0%	16	9.9%	4	21.1%	83	12.2%
BROKEN FLAKE												
distal	1	4.8%	6	2.5%	5	2.1%	5	3.1%	1	5.3%	18	2.7%
medial	0	0.0%	7	2.9%	2	0.8%	0	0.0%	0	0.0%	9	1.3%
proximal	2	9.5%	12	5.0%	13	5.4%	5	3.1%	1	5.3%	33	4.9%
lateral	1	4.8%	6	2.5%	6	2.5%	7	4.3%	0	0.0%	20	2.9%
TOTAL	21	100.0%	238	100.0%	239	100.0%	162	100.0%	19	100.0%	679	100.0%
haematite	0		1		0		0		0		1	
ochre	0		0		2		0		0		2	
iron oxide	0		1		0		0		0		1	

Table 5.12 Westbury Rock Shelter vertical distribution of raw materials.
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	Level 1		Level 2		Level 2a		Level 3		TOTAL	
TOTAL										
Quartz	1	0.4%	2	0.8%	0	0.0%	0	0.0%	3	0.4%
Opaline Clear	27	10.2%	25	9.7%	19	11.0%	0	0.0%	71	9.9%
Opaline not clear	179	67.5%	192	74.7%	134	77.9%	15	71.4%	520	72.7%
Subtotal (Opalines)	206	77.7%	217	84.4%	153	89.0%	15	71.4%	591	82.7%
Hornfels	5	1.9%	3	1.2%	2	1.2%	1	4.8%	11	1.5%
Tuffacious rock	7	2.6%	11	4.3%	5	2.9%	2	9.5%	25	3.5%
Silstone	0	0.0%	3	1.2%	0	0.0%	0	0.0%	3	0.4%
Sandstone	43	16.2%	14	5.4%	7	4.1%	2	9.5%	66	9.2%
Other	3	1.1%	7	2.7%	5	2.9%	1	4.8%	16	2.2%
TOTAL	265	100.0%	257	100.0%	172	100.0%	21	100.0%	715	100.0%
INVENTORY:DEBRIS										
Quartz	1	0.4%	2	0.8%	0	0.0%	0	0.0%	3	0.5%
Opaline Clear	22	9.2%	19	7.9%	18	11.1%	0	0.0%	59	9.0%
Opaline not clear	157	66.0%	180	75.3%	126	77.8%	13	68.4%	476	72.3%
Subtotal (Opalines)	179	75.2%	199	83.3%	144	88.9%	13	68.4%	535	81.3%
Hornfels	5	2.1%	3	1.3%	2	1.2%	1	5.3%	11	1.7%
Tuffacious rock	7	2.9%	11	4.6%	4	2.5%	2	10.5%	24	3.6%
Silstone	0	0.0%	3	1.3%	0	0.0%	0	0.0%	3	0.5%
Sandstone	43	18.1%	14	5.9%	7	4.3%	2	10.5%	66	10.0%
Other	3	1.3%	7	2.9%	5	3.1%	1	5.3%	16	2.4%
Subtotal	238	100.0%	239	100.0%	162	100.0%	19	100.0%	658	100.0%
INVENTORY:FORMAL										
Opaline Clear	5	18.5%	6	33.3%	1	10.0%	0	0.0%	12	21.1%
Opaline not clear	22	81.5%	12	66.7%	8	80.0%	2	100.0%	44	77.2%
Subtotal (Opalines)	27	100.0%	18	100.0%	9	90.0%	2	100.0%	56	98.2%
Hornfels	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tuffacious rock	0	0.0%	0	0.0%	1	10.0%	0	0.0%	1	1.8%
Silstone	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sandstone	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Subtotal	27	100.0%	18	100.0%	10	100.0%	2	100.0%	57	100.0%
TOTAL	265		257		172		21		715	

Raw material sources for stone artefact assemblages in the Caledon Valley

Fine grained opalines which form the bulk of the material used in the stone artefact assemblages from the Caledon Valley sites north of Wepener, originate in the Drakensberg volcanics and are found in the old river terraces and gravels of the Caledon River (Sampson, 1970:135; Brooker, 1975:8; Wadley, 1991a:128). The stone artefact assemblages described in this study are all within 40 km of the Caledon River, although most are no more than 10 km from the river (Figure 1.1).

The term opaline is used here to conform with the terminology adopted by Wadley (1991a:128). Wadley uses the generic term opaline which includes chalcedony, chert and agate. Other materials found in small quantities in these assemblages include tuff and hornfels. Tuffaceous nodules are found in the same contexts as opalines (Wadley, 1991a:128).

The source of the hornfels in these assemblages is more problematic. Hornfels (Lydianite) is metamorphosed rock formed around dolerite intrusions in shales or mudstones (Sampson, 1970:135; 1985:29; Brooker, 1975:8-9). No attempt was made to locate hornfels outcrops near sites excavated during this study and Sampson (1972:259) points out that sites north of Wepener are outside the main hornfels area of the Karoo. Outcrops near Wepener are said to have only poor quality material not ideal for use in stone tool manufacture (Sampson, 1970:135; Brooker 1975: 9). One assemblage from Hlolo Crossing in the Caledon Valley north of Wepener has an unusually high hornfels component and a hornfels quarry on a dolerite dyke is noted nearby (Mitchell *et al.*, 1994:39). It is possible that similar sources of hornfels also exist on the western side of the Caledon River north of Wepener. These sources may have been exploited by the inhabitants of the sites described in this study. Hornfels occurs as fragments in river gravels as well as outcropping around dykes and sills in the Seacow River Valley (Sampson, 1985:29). River gravels may have been the source of some of the hornfels used in the Caledon Valley assemblages north of Wepener. Alternatively this material may have come via hunter-gatherer exchange networks into areas north of its natural distribution. Sandstones and siltstones are found around all of the excavated sites.

The stone tool sequence and evidence for interaction in the Caledon Valley

The stone tool assemblages from Orange Springs Westbury and Rooikrans described here, with the exception of assemblages from Levels 4-6 at Rooikrans, fall within the period between approximately 3000 BP to the late nineteenth century and can all be classified as post-Classic Wilton. Although these assemblages represent small segments of time and probably also a wide range of activities, it is possible to construct reasonable explanations for some of the observations from these sites by comparing the assemblages with each other, and with assemblages from other excavated sites in the Caledon Valley and surrounding regions.

Earlier pre-contact stone assemblages are represented in Levels 2 and 3 at Orange Springs. The combined assemblage from the three sub-units (David, Muray and Susan) in Level 3 at Orange Springs is very small (Table 5.1). The formal tools are all scrapers although this could be due to sampling error. This level must predate 2900 BP but it is difficult to identify its typological affinities based on this sample. The assemblages from Levels 4 and 5 are too small to comment on.

The Level 2 assemblage from Orange Springs is dated to the 3rd millennium BP and can be assigned on typological as well as chronological grounds to the post-Classic phase of the Wilton Industry. The formal tools in this level are dominated by scrapers comprising 63% of the formal component but backed bladelets are present (Table 5.1). At Leliehoek, approximately 5 km south-east of Orange Springs, a comparable though undated assemblage occurs in the surface level (Esterhuysen *et al.*, 1994). In this assemblage which is also dominated by small convex scrapers, there are a few backed pieces including bladelets and small segments. Medium and small scrapers comprise 64% of the formal component in the surface level at Leliehoek.

In southern Lesotho similar though undated assemblages are described from Masitise Rock Shelter (Parkington,1987; Mitchell *et al.*, 1994). In Levels 1, 2 and 3a at Masitise the assemblage includes a backed point and is characterised by low adze and segment frequencies. In Levels 6 to 8, in a contemporary but different area of the excavation, scrapers are common, adzes virtually absent and backed bladelets rather than segments are present. Scrapers make up between 42% to 53% of the formal tools from these levels (Mitchell *et al.*, 1994: Table 6). This type of assemblage is said to characterise the period 4000 to 2000 BP (Deacon,1984).

The Orange Springs Level 2 assemblage is also comparable with contemporary assemblages from the Orange River Scheme in the western Free State (Sampson, 1972). Sampson defines a sequence in which backed crescents are progressively replaced by backed blades or straight-backed points during his 'Phases 3 and 4'. This trend is dated approximately to the third millennium BP although only one carbon-14 date of 1980 ± 120 BP (30 BC) is quoted for Phase 4 (Sampson, 1970:169; 1972:199). Assemblages from the Orange River Scheme area of this period do contrast with those from further north in one important aspect. In this area small

convex scrapers are gradually replaced by elongated endscrapers through time from the last half of the third millennium onwards. This development is linked to the increasing use of hornfels as a raw material (Sampson, 1972:257).

The period between approximately 2000 years ago and 1700 years ago is represented in the Caledon Valley by excavated and dated deposits at Roosfontein (RM) (Klatzow, 1994), Twyfelpoort (Wallace, 1993; Wadley, 1995) and Mauermanshoek (HA) (Domleo, 1993; Wadley, 1995). Although a date of 1290 ± 50 (Pta-5931) was also obtained from Roosfontein East, this part of the excavation has not yet been described. Formal tool assemblages of this period from these sites are dominated by small convex endscrapers but new tool types such as bifacially pressure-flaked bladelets are found at Roosfontein (RM) (Klatzow, 1994:12-13). At Roosfontein (RM) scrapers form a relatively high proportion (72%) of the formal tool component in the Ashy level which is dated to 1920 ± 60 BP. In roughly contemporary levels both named Lyn at Twyfelpoort (Wallace, 1993; Wadley, 1995) and Mauermanshoek (HA) (Domleo, 1993; Wadley, 1995) scrapers comprise 56% and 76% respectively of the formal tools.

A bifacially pressure-flaked backed bladelet and a tanged arrowhead were found in the undated surface level above Ashy, at Roosfontein (RM) (Klatzow, 1994: 11). In the eastern Caledon Valley in Lesotho, bifacially pressure-flaked points and backed bladelets have been found in undated levels at Leqhetsoana (Mitchell *et al.*, 1994:40). It has been suggested that these pressure-flaked artefact types date to around 1500 BP onwards and are stylistic markers restricted to the interior of South Africa (Mitchell, 1994:40; Humphreys, 1991; Wadley, 1995:578).

Excavated and dated deposits from Mauermanshoek (HA), Tandjiesberg, Rose Cottage Cave, Westbury and Rooikrans fall into the period between 900 BP and 100 BP approximately. All of these assemblages are also dominated by small convex endscrapers. Wadley (1992:11) points out the contrast in scraper morphology between the post-Classic Wilton assemblages of Rose Cottage Cave and Smithfield assemblages from the Seacow River Valley which are characterised by elongated endscrapers (Sampson, 1985:87; Wadley, 1992:11). Scraper morphology from contemporary sites in the Orange River Scheme area is largely comparable with Smithfield sites in the Seacow River Valley and have been classified as belonging to the Smithfield complex

(Sampson 1972, 287). These assemblages have been dated as early as the eighth century in the western Free State and to the fourteenth century in the northern Cape (Sampson, 1988:37). One exception in the Orange River scheme area is the Ventershoek assemblage which has a higher proportion of convex scrapers than the other sites. This may be linked to the higher proportion of opalines used in the assemblage (Sampson, 1970, 137). Some elongated endscrapers are also found at Tienfontein 2 (Brooker, 1975:8; 1980:37; Wadley, 1992:11). At Masitise in Lesotho an undated assemblage from Puddle A is characterised by some elongated endscrapers and is said to resemble a 'Smithfield B' occurrence from the Karoo (Mitchell, 1994:44). Recent assemblages with elongated endscrapers are also found in KwaZulu-Natal (Mazel, 1884:62; Wadley 1992:11).

Assemblages from the Caledon Valley show considerable variability in the percentage of scrapers represented in relation to other formal tool categories. At Tandjiesberg scrapers of all sizes comprise between 50% and 52% of the formal tools in levels dated to approximately 860 BP and later (Emby, 1990). At Rose Cottage Cave in Levels A and Mn dated between approximately 680 BP and 500 BP, scrapers of all sizes comprise 61% and 57% respectively of the formal tools.

The more recent assemblages from the contact levels at Rooikrans and Westbury are both dominated by small convex scrapers but the range of tools from Westbury is more restricted, almost exclusively comprising scrapers and adzes. The percentage of scrapers of all sizes in the contact levels (1-2) at Westbury is very high, comprising 81% of formal tools in Level 1 and 89% of formal tools in Level 2. By comparison the scraper component in the contact levels (1-3) at Rooikrans forms a smaller percentage of formal tools, comprising 47% in Level 1, 63% in Level 2 and 57% in Level 3.

Stone artefact assemblages from contact levels at Maurmanshoek (Domleo, 1993), and Twyfelpoort (Wallace, 1993) are also roughly contemporary. The contact levels (H, C and P) at Twyfelpoort are dated after 1836 AD on the basis of peach pips found in the deposit (Wallace, 1993:26; Backwell *et al*, 1996:86). All of these levels are dominated by small scrapers and scrapers of all sizes comprise 66% of the formal tool component in these levels. The only backed tools (1 small segment and 1 bladelet) are found in the oldest contact level (H). At Mauermanshoek (HA) the Jo level is assigned to the early twentieth century and is characterised

by small scrapers, a small adze component and one miscellaneously backed tool (Domleo, 1993:38). Scrapers of all sizes comprise 83% of the formal tool component (Domleo, 1993: Table 4). The older Dash level dated to the seventeenth century in the main part of the site (Table 4.1) is also dominated by small scrapers and no backed tools were recovered. Scrapers of all sizes comprise 89% of the formal component (Domleo, 1993: Table 14). The restricted range of formal tools from the contact levels of these sites is comparable with the assemblage from Westbury. The very high percentage of scrapers in both of the contact levels at Mauermanshoek is comparable with contact levels (1 -2) at Westbury. Microwear studies on scrapers indicate that they were used for scraping hides (Binneman, 1984:145). It is possible that the high percentage of scrapers represented in the contact levels at these two sites is an indication that hide preparation was one of the main activities carried out there and that these shelters were largely used as hunting (or possibly stock raiding) camps. Wadley (1996:210) notes a marked increase in small scrapers at Jubilee Shelter in North West Province during the earliest period of contact with Iron Age agriculturists and argues that in the following period of contact with the village of Broederstroom ready made scrapers were brought to the village by hunter-gatherers to process hides (Wadley, 1996:214). The high percentage of scrapers from contact levels at Maurmanshoek and Westbury may also be linked to trading hides with neighbouring agriculturists. A high proportion of scrapers is unlikely to be the result of intensified gift exchange. Gift exchange should involve higher percentages of other items such as worked bone and ostrich eggshell as well as an increase in formal stone tools. At Rooikrans the more diverse stone tool assemblage and richer ceramic and domesticated plant assemblage may suggest a different interpretation, which I shall explain later.

The implications of the impact of interaction on aggregation and dispersal behaviour amongst hunter-gatherers have already been discussed in chapter 2 of this work. The list of criteria for distinguishing aggregation phase camps in the archaeological record compiled by Wadley (1987 and 1989) includes a high density of formal tools combined with high densities of evidence for manufacture of reciprocal gift exchange items such as bone points and ostrich eggshell beads. The material culture and spatial patterning of hearths and artefacts in Level A at Rose Cottage Cave dated to 680 ± 50 BP are interpreted as representing an aggregation camp (Ouzman and Wadley, 1997:399-401).When the stone assemblages from the most recent levels at Rose Cottage

Cave were first reported on (Wadley, 1992), the Mn level was assumed to date to the nineteenth and twentieth centuries. The formal character of the stone assemblage was considered to be surprising in view of the ethnographic evidence for social stress, caused by interaction between indigenous and European agriculturists and hunter-gatherers in the area during that period (Wadley, 1992:11). The more recently obtained 500 BP date from Level Mn puts the evidence from this level in a different context. The high proportion of formal tools in both the A (8%) and Mn (6%) levels was interpreted as an indication that the makers were not severely stressed (Wadley, 1992:11). This interpretation is no longer contradictory because the ethnographic evidence for stress describes the situation approximately 400 years later, when Europeans first entered the area.

Although the contact assemblages at Rooikrans may fulfill at least some of the criteria suggested by Wadley to distinguish aggregation phase sites, this argument cannot apply to Westbury as it is too small to have been used in this way and lacks evidence of gift exchange items. The percentage of formal tools (around 7%) is surprisingly high in the contact levels at Westbury (Table 5.10), although both Rooikrans and Westbury have a relatively high percentage of formal tools. In the case of Westbury this may be due to the comparatively small sample size, however it should be noted that the sample recovered there represents a larger proportion of the total assemblage because the shelter is so small. Since Levels 1 and 2 at Rooikrans are probably roughly contemporary with Levels 1 and 2 at Westbury (Table 4.1) any differences in the stone assemblages may be significant and could indicate different activities or social strategies.

Like Westbury neither Mauermanshoek nor Twyfelpoort contact levels had rich assemblages of ostrich eggshell or worked bone. Domleo interprets the lack of formal tools in Maurmanshoek (HA) contact levels as marking the end of the use of this site for aggregation (Domleo, 1993:50). At Twyfelpoort the pre-contact level L, dated to 1880 ± 50 BP, is the only level interpreted as possibly representing an aggregation phase camp based on the high frequency of formal tools as well as worked bone and ostrich eggshell representing gift exchange items (Backwell *et al.*, 1997:94). The sharp increase in formal tool frequencies in terms of tools per bucket in Level H, compared to the later contact levels and the preceding pre-contact L level, is seen as an reflection of stress (Backwell *et al.*, 1997:93; Wallace, 1996:23). Formal tools are interpreted as a means

of expressing emblemic style. An increase in formal tools in turn reflects increasing concern with territoriality and group identity caused by social stress according to this argument. The lack of items used in gift exchange such as worked bone and ostrich eggshell (58 fragments and 2 beads) in the contact levels (Helen and Pam) (Backwell *et al*, 1996:93) is interpreted as the result of a breakdown in reciprocal exchange networks due to stress on a regional level. This in turn negated the option of moving in with neighbours therefore rendering reciprocal gift exchange redundant (Wallace, 1996:23).

Although all of these interpretations stress the disruptive influence of new immigrants on the social organisation of hunter-gatherers in the Caledon Valley, the stone assemblages from Rooikrans suggest a slightly different explanation. At Rooikrans in Levels 1 and 2 which are roughly contemporary with the contact levels at Westbury, Mauermanshoek and Twyfelpoort there is a noticeably wider range of formal tools including small segments (Table 5.4). The percentage of formal tools in the Rooikrans contact assemblages is only moderately high (between 5.7 and 3.9%). Nevertheless this percentage is higher than in the comparable contact levels from Mauermanshoek (HA) (2.5% in Jo level) or Twyfelpoort (2.6%-3.7% in H, C and P levels), although not as high as in the most recent levels (A and Mn) at Rose Cottage Cave which date to an earlier period between 680 BP and 500 BP. The percentages of formal tools from contact levels at Rooikrans are comparable with the earlier contact level dated to 200 ± 50 BP at Mauermanhoek (4.9% in the Dash level) (Domleo, 1993:40). In conjunction with the relatively rich assemblage of ceramics from Rooikrans described in chapter 6, as well as ostrich eggshell (Table 5.15.) and bone points (Figure 5.5) which also contrast with the three nineteenth to twentieth century occupations at other sites, an alternative explanation based on an integrated view of these assemblages can be constructed. It is possible that during this final period of contact, the use of aggregation and dispersal as a means of regulating social relations was transformed by new relationships with neighbouring agriculturists as suggested by Wadley (1996:215). Some hunter-gatherer sites situated near agriculturist settlements may have become the focus of activity resulting from new relationships with agriculturists which I argue, using Moore's (1985) model in chapter 2, are based on barter exchange and clientship. Such sites might be expected to have longer term occupations resulting from a more sedentary lifestyle. Artefact assemblages might therefore be more diverse reflecting a wider range of activities. They might

also be expected to have substantial evidence of interactive relationships with agriculturists. The Level 1 and 2 contact assemblages from Rooikrans could arguably represent this new development.

One of the predictions made by Wadley (1989:43) for distinguishing dispersal phase camps is that a high proportion of the artefacts present should be made from predominantly local raw materials. Some support for this interpretation can be found in the pattern of raw material usage for stone artefact manufacture through time from some of the Caledon Valley sites. At both Leliehoek and Orange Springs the use of local sandstone increases through time. At Leliehoek sandstone comprises 2.6% of the total Classic Wilton assemblage, increasing to 4.4% of the more recent post-Classic Wilton assemblage. At Orange Springs the highest percentages of sandstone occur in the most recent occupation levels (1-2). However, all of these levels pre-date the period when evidence for interaction with agriculturists appears, therefore this pattern suggesting a possible decline in aggregation behaviour cannot be attributed to interaction.

At Rose Cottage Cave data on raw material usage from Levels Mn, A and A2 shows that there was a slight decline in the percentage of opaline used through time from 77% in Level A2 to 75% in Level Mn. On the other hand the percentage of sandstone used fluctuated through time from 3% in Level A2 to 2% in Level A then back to 3.3% in Level Mn (Wadley *pers. comm.*). Recycling of MSA artefacts from a nearby surface site has been cited as possible evidence for reduced mobility in Levels Mn and A due to contact with agriculturists (Wadley, 1992:11). However these levels are now known to date to a period when evidence for intensive settlement by agriculturists in the Caledon Valley is lacking (Maggs, 1976).

The contact period and pre-contact levels at Rooikrans show no clear pattern in the proportion of local sandstone and siltstone represented through time (Table 5.9). Rooikrans is only 5 km away from the Caledon River which was presumably the source of opaline raw material. The close proximity of the river may have facilitated continued access to this resource in spite of the agriculturists presence. It is also possible that the archaeological and historical evidence for intensive interaction discussed in later chapters explains this pattern. Good relations with agriculturists in the area may have ensured continued free movement for the occupants of

Rooikrans. However the percentage of hornfels decreases in the contact levels compared to the pre-contact levels. The decrease in hornfels may contradict this explanation if the source was a nearby outcrop; however, another explanation is feasible. Some of the hornfels used may have been brought into the area through hunter-gatherer exchange networks from areas south of Wepener, where high quality hornfels was more freely available and frequently used for stone tool manufacture. If these networks disintegrated when hunter-gatherers focused their exchange relationships on agriculturists, then hornfels from this source would have become more scarce.

At Westbury a definite increase in the use of local shale and sandstone occurs in the contact levels coupled with a small increase in the use of hornfels. Westbury is 17 km from the Caledon River and has less evidence of interaction with agriculturists in the form of ceramics and domesticated plant remains than Rooikrans. Possibly the decrease in the use of opalines available from the Caledon River was due to reduced ease of access in this area caused by less amicable relationships with local agriculturists or with Boer settlers. Westbury is on the fringe of the area which became the Orange Free State in 1854. At Tienfontein 2 Brooker (1975: 9 & Table 2) notes a similar marked decrease in the use of chalcedony (opaline) and an increase in local shales and of hornfels in the stone tool assemblage in the more recent levels. This pattern is also described by Sampson (1970:136) from Ventershoek and from the Orange River Scheme (1972: 205) and is discussed by Humphreys (1972). The trend starts in the Orange River scheme area around the beginning of the second millenium BP. It is thought to represent an adaptation, which took place over a protracted period, to the use of hornfels as a raw material (Sampson, 1972:199). Possibly the decreasing use of hornfels through time at Rooikrans and insignificant increase in its use through time at Westbury suggest a decrease in mobility and exchange between the two areas, and perhaps even the development of a different identity for some hunter-gatherer groups inside areas of agriculturist settlement as exchange relationships began to transform and focus on farming communities.

Metal and glass artefacts as evidence for contact

Metal artefacts

Most of the metal artefacts recovered came from Rooikrans (Table 5.13) though a small number were recovered at Westbury (Table 5.14). At Rooikrans metal artefacts were only found in the most recent contact levels 1 and 2 (Table 5.13). Items of European origin include aluminium wire and a nail from Level 1, as well as a small iron tack and a lead hand made bullet tip from Level 2. The remaining iron artefacts were probably of agriculturist origin although none was complete enough to identify the type of implement with certainty. The iron wire fragments may however have been the remains of fencing wire and the post holes dug from the surface in square I3 and squares G3\G4 support this interpretation. Iron wire was mostly recovered from Level 1.

Table 5.13 Rooikrans Rock Shelter inventory of metal artefacts.

Level	Object	Quantity
Level 1	aluminium wire	1
Level 1	broken iron bar	1
Level 1	flat fragment iron sheet	1
Level 1	fragment iron sheet	1
Level 1	iron fragment (machinery)	1
Level 1	iron impliment	1
Level 1	iron sheet fragments	2
Level 1	iron wire	9
Level 1	iron wire (barbed?)	1
Level 1	length iron wire (joined)	1
Level 1	rusted iron nail	1
Level 2	flat fragment iron sheet	1
Level 2	lead bullet tip	1
Level 2	flat fragment iron sheet	1
Level 2	fragment iron	1
Level 2	iron (arrowhead?)	1
Level 2	iron fragment	1
Level 2	iron fragments	6
Level 2	iron frament	1
Level 2	iron sheet fragment	3
Level 2	iron tack	1
Level 2	iron wire	10
Level 2	joined iron wire fragment	1

Metal artefacts from Westbury (Table 5.14) were mostly recovered from Level 1. The iron razor (Figure 5.5) is of agriculturist origin and similar to artefacts found on agriculturist settlements (Maggs, 1976). Other unidentifiable iron artefacts are likely to be of agriculturist origin. The fragments of zinc sheet recovered must be of European manufacture and the fragment from the pre-contact Level 2a had probably been displaced downwards in the deposit.

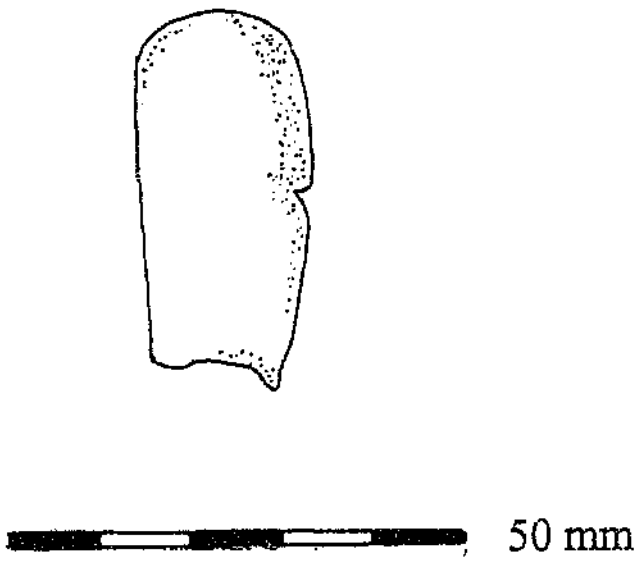


Figure 5.5 Westbury Rock Shelter iron razor from square F4 Level 1.

Table 5.14 Westbury Rock Shelter inventory of metal artefacts.

Square	Level	Object	Quantity
E4	1 Rolls Royce	fragment zinc sheet (2 perforations)	1
E4	1 Rolls Royce	fragments iron (bracelet?)	7
E4	2 Datsun	fragment sheet iron	1
E4	2a Fiat	folded sheet zinc	1
F4	1 Rolls Royce	broken iron razor	1
F4	1 Surface	fragment iron	1
F5	1 Rolls Royce	rectangular fragment iron	1

Unidentifiable metal fragments were found in the S, H and P levels at Twyfelpoort (Wallace, 1996:31, Backwell *et al*, 1996:90). A metal blanket pin and two pieces of metal from Maurmanshoek are interpreted as evidence of exchange with agriculturists although they are thought to be of European manufacture (Domleo, 1993:32). At Rose Cottage Cave the recent identification of a metal insert in a bone point from Level A dated to 680 BP (Wadley *pers. comm.*) may be evidence for barter exchange with Iron Age communities living some distance north of the Caledon Valley at that time.

Glass and glass beads

No glass pieces were found at Westbury and glass was only found on the surface at Orange Springs. At Rooikrans two thin fragments of transparent glass, which are probably modern, came from Levels 1 and 2 respectively. A chunk of thick turquoise bottle glass was found at the bottom of Level 2 in square H3. This may be part of a 'Codd' soda bottle and could date to any time after 1870 when the inventor of the marble-stoppered bottle took out his first patent (Robert Burrett, *pers. comm.*; E & A Lastovica, 1982:25).

Glass beads were only recovered from Rooikrans and are reported on by Sharma Saitowitz in Appendix A. A total of seven glass beads was found at Rooikrans and six of them are described in Appendix A. One bead was found in Level 1 and the rest came from Level 2. All of the beads

are consistent with a date in the mid to late nineteenth century and probably came from Venice, Germany and Czechoslovakia (Saitowitz, Appendix A). All of these artefacts represent contact with Europeans, possibly via agriculturists.

Rooikrans miscellaneous smallfinds

One handmade mother of pearl button 15 mm in diameter with two perforations was recovered from Level 1 at Rooikrans. Handmade buttons of this type were probably made until the early twentieth century (Robert Burrett, *pers. comm.*). Four pieces of leather were found in Levels 1 and 2.These included finds from the bottom of Level 2 of two fragments of leather strap which were perforated and may have been arm or leg bands.

Worked bone and ostrich eggshell

Worked bone

Worked bone from Rooikrans is described by Ina Plug in Appendix B and includes a bone point from the bottom of Level 2 in square DS2 (Figure 5.6:2). A broken blunt pointed shaft fragment with a groove around the snapped end and an awl also came from square DS2 Level 2 (Figure 5.6:3,5). Three shaft fragments including one with a nocked end (Figure 5.6:1,4) were recovered from Level 3. Three shaft fragments came from the pit in square DS2 (Figure 4.6) and another shaft fragment came from Level 2 in square H3. No data is available on worked bone from the pre-contact levels at present.

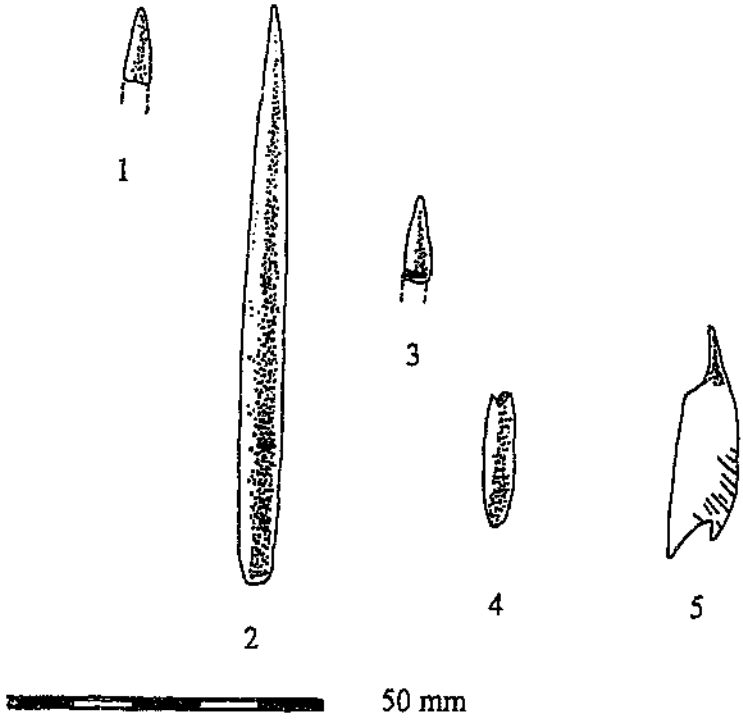


Figure 5.6 Rooikrans Rock Shelter worked bone.

At Twyfelpoort worked bone fragments were found in the contact levels (H and M). However, bone points were only found in the pre-contact levels and worked bone fragments were also most abundant in these levels (Backwell *et al*, 1996:89). The decline in worked bone in the contact levels is interpreted as evidence for the decline of gift exchange between hunter-gatherers in the area. At Mauermanshoek (HA) only one broken bone point is mentioned, and it was found in the most recent contact level thought to date after 1830 AD (Domleo, 1993:32). Worked bone is considerably more abundant in the earlier A level at Rose Cottage Cave dated to 680 BP than in the more recent Mn level dated to 500 BP. Level A at Rose Cottage Cave is interpreted ... an aggregation occupation because of the considerable quantities of worked bone as well as other items used by hunter-gatherers for gift exchange (Ouzman & Wadley, 1997:399).

Ostrich eggshell

A total of 169 fragments of ostrich eggshell (81.2 g) and two beads were recovered from Rooikrans (Table 5.15). Only a small sample from the pre-contact levels of the excavation in DS2 is included in this total. This small sample indicates that ostrich eggshell was most dense (1.3 g per bucket) in the pre-contact levels, and declined in density in the oldest contact level reaching a density of 0.09 g per bucket in the youngest Level 1. No ostrich eggshell was recovered from Orange Springs or Westbury.

Table 5.15 Rooikkrans Rock Shelter vertical distribution of ostrich eggshell.

Level	Bead	Size (mm)	Weight (g)	Total Fragments
Level 1			7.4	11
Level 2			30.7	84
Level 2	1	6		1
Level 2 (pit)			2.8	5
Level 3			23	37
Level 3	1	4.6		1
Level 3 (pit)			13.4	19
Level 4			3.9	11
TOTAL	**2**		**81.2**	**169**

There is good evidence for ostrich eggshell bead manufacture, including two grooved beadstones from Level A at Rose Cottage Cave dated around 600 BP (Wadley, 1992:11,Ouzman & Wadley, 1997:401). However there is no evidence as yet for agriculturist settlement in the immediate area at that time, although roughly contemporary Type N agriculturist settlements further north near the Vaal River have been involved in exchange with hunter-gatherers. Little direct evidence of eggshell bead manufacture comes from the nineteenth to twentieth century occupations in the small scatters in the middle Caledon Valley apart from the presence of borers, thought to have been used for working shell and bone (Deacon, 1976:75), in the stone tool assemblages in Levels

2 and 3 from Rooikrans (Table 5.4) and in the H and C levels at Twyfelpoort (Wallace, 1993:52). However ostrich eggshell fragments in considerable quantities, but few finished beads, are found at both Rooikrans and Twyfelpoort shelters. It is therefore possible that the egshell beads on later agriculturist settlements in the Caledon Valley were obtained from hunter-gatherers, and this may lend further support to the interpretation that barter exchange relationships developed between hunter-gatherers and agriculturists there.

Arbousset writing about his journey in the Caledon Valley and the northern Free State in 1836 (Figure 3.5) is quoted by Germond (1967:44) on the distribution of ostrich in this area as follows: 'The Lihojas country (see Figure 3.5 Ligoyas), and generally the whole of the Orange River Basin which we explored, possesses a considerable variety of birds ... ostriches, huge vultures, golden eagles, which the Dutch colonists call *lamvangers* (lamb catchers)'. The Lihoja were the Taung who at this time lived between theVet and Vals Rivers. This passage establishes the distribution of ostrich in 1836 in the highveld between the Vet and Vals Rivers north of Mequatling where Rooikrans is situated, as well as to the west along the Orange River.

Considerable quantities of finished ostrich eggshell beads, but very little evidence for the manufacturing process, have been found on excavated agriculturist sites on the highveld. This leads Maggs (1976:126) to suggest that the beads were obtained from hunter-gatherers. He cites historical evidence for this trade between the Taung and their hunter-gatherer clients. Clients of the Taung chief Moletsane's parents are said to have made him a girdle of ostrich eggshell beads (Ellenberger, 1912:58). Mitchell (1995:59) also suggests that ostrich eggshell beads on Iron Age sites in the southern highveld indicate exchange relationships with hunter-gatherers. Ostrich eggshell beads were recovered by Maggs from the following agriculturist settlements: Seven ostrich eggshell beads were recovered from Ntsuanatsatsi (OU1), a Type N site near the Vaal River dated to the fifteenth century (Maggs, 1976:158). Fourteen beads and one unused shell fragment were found at OU2, another Type N site slightly further north than Ntsuanatsatsi (Maggs, 1976:173). A large number of ostrich eggshell beads (174) but only seven unused fragments were found at the Type V site of Makgwareng (001) in the north-central Free State dated between the seventeenth and nineteenth centuries (Maggs 1976:126). One fragment of unused ostrich eggshell and no beads came from OND2, a Caledon Valley site just south of

Mequatling dated to the mid seventeenth century (Maggs, 1976:225). Six beads and two unused ostrich eggshell fragments were recovered from OXF 1 a Type Z settlement near Ventersburg and five beads and one unused fragment came from OMB 1 another Type Z settlement near Bothaville dated between the sixteenth and nineteenth centuries (Maggs, 1976:231-275).

Faunal and plant remains as evidence for contact

Faunal samples

Faunal remains from Rooikrans and Westbury have been identified by Ina Plug (Appendix B and C). Domesticates including dog, sheep, sheep\goat, cattle and chicken were identified only in the contact levels 1 and 2 dated to the nineteenth or twentieth century at Rooikrans. Plug points out that the presence of foetal/neonate and juvenile Mountain Reedbuck in Level 3 indicate that the shelter was used at least in spring and summer during the earlier contact occupation. A wide range of wild fauna was identified from these levels and Plug comments that these species also occurred in Late and mid-Holocene deposits at Rose Cottage. At Westbury the small faunal sample which came mostly from Level 2, dated to the nineteenth or twentieth century, was dominated by cattle remains.

Plant remains

Considerable quantities of seed and other plant material were recovered from Levels 1 and 2 at Rooikrans. Identified material included peach pips, maize cob fragments, cowpeas, gourd seeds and large numbers of Tsama melon and pumpkin seeds as well as corms of Watsonia sp. The vertical distribution of domesticated plants at Rooikrans (Table 5.16) indicates their consumption in the most recent contact levels (1 and 2). The few fragments in Level 3 are probably intrusive.

By contrast with Rooikrans domesticated plant remains at Westbury were rare and only occurred in Level 1. These remains were limited to a few peach pips and maize cob fragments. The presence of bedding grass and some plaited grass or reeds in Level 2 of Westbury suggests that

this distribution is not caused by differential preservation (Table 5.17). Level 2 is dated to approximately the same period as the most recent contact levels at Rooikrans.

Missionary accounts from the 1830s document plant foods, including pumpkins and maize, already grown by agriculturists before European occupation of the Caledon Valley. These accounts also document the introduction to the Caledon Valley of new European plant foods from the 1830s onwards. Eugene Casalis, describes exchanging salt for 'magnificent pumpkins' with Basotho at Thaba Nchu in 1833 (Germond, 1967:23), and Arbousset writing in 1847 states that the Batlokoa grow 'pumpkins and one or two species of indigenous melon' (Germond, 1967:30). Tsama melon and pumpkin seeds from Rooikrans could therefore represent barter with agriculturists. In support of this suggeston, Tsama melon seeds were found on OND 3, a Type V agriculturist site in the Ladybrand area, dating between the sixteenth and nineteenth centuries (Maggs, 1976:210). Tsama in the Free State is most likely to be domesticted as wild varieties are not found there (Judy Maguire, *pers. comm.*). Direct evidence for cultivation of sorghum and cowpea by agriculturists is also recorded in the form of carbonised seeds from this site. Cowpeas are amongst the list of crops grown by agriculturists since the Early Iron Age in southern Africa (Maggs, 1980:6). The cowpeas at Rooikrans are therefore also likely to have been obtained from agriculturists.

Casalis's account of the Thaba Nchu area also shows that maize was already being grown by the Basotho in the 1830s 'Directly under the mountain, we could see fields of near-ripe maize' (Germond, 1967:23). Casalis (1861:168) writes that 'according to the natives, maize is a plant of recent introduction. Probably they received it from the coast of Mozambique and from the Cape Colony at the same time'. Maggs (1976:319) suggests that before the 'mfecane' maize was unknown to many groups.

Arbousset also writes that European fruit trees were introduced to the Basotho by the missionaries after 1833 'We introduced wheat, the potato, fruit trees and European cloth' (Germond, 1967:197). Maeder writing in 1855 from Morija in Lesotho, comments that the Basotho are 'now beginning to plant fruit trees and the vine everywhere' (Germond 1967:452). Duvoisin describes the garden of Berea Mission in Lesotho in 1863 'The garden of Berea is most

beautiful, the peaches litter the ground' (Germond 1967:460), although fruit trees are still comparatively rare in Masitise district, southern Lesotho, in 1873 (Germond, 1967:321).These accounts therefore suggest that although peaches were introduced by missionaries in the 1830s they were not adopted by the Basotho until the 1850s. Peach pips found on archaeological sites dating to this period could therefore come from either source. The vertical distribution of peach pips from archaeological sites should also help to date occupations because they indicate a post 1830s date.

Table 5.16 Rooikrans Rock Shelter vertical distribution of plant remains.

	Level 1	Level 2	Level 3	Level 3 (pit)	Level 4	Level 5	TOTAL
Cowpea (*Vigna unguiculata*)	36	0	0	0	0	0	36
Maize cob fragments (*Zea mays*)	32	4	5	0	0	0	41
Maize stalk fragments	2	8	0	0	0	0	10
Maize seed	1	0	0	0	0	0	1
Pumpkin seed (*Cucurbita maxima*)	131	28	1	0	0	0	160
Pumpkin seed fragments	153	26	0	0	0	0	179
Tsama seed (*Citrullus lanatus*)	208	66	11	0	0	0	285
Tsama seed fragments	157	19	2	3	0	0	181
Gourd seed (*Lageuam sicerana*)	0	3	0	0	0		
Gourd (fruit wall)	0	1	0	0	0		
Rye grass (*Lolium temelentum*)	0	0	2	0	0		
Peach pip fragments (*Anygdalus persica*)	20	15	1	0	0	0	36
Corm sample (*Gladiolus sp.*)	1	0	0	0	0	0	1
Corm sample (*Watsonia sp.*)	1	3	1	0	0	0	5
Unidentified corm sample	0	1	3	0	0	0	4
Fruit *Rhus sp.*	0	0	0	1	0	0	1
Fruit *Grewia* cf	0	1	0	0	0	0	1
Unidentified plant samples	31	22	13	8	0	0	74
Unidentified seed	0	2	0	0	0	0	2
TOTAL	754	186	41	15	4	5	1005

Table 5.17 Westbury Rock Shelter vertical distribution of plant remains.

	Level 1	Level 2	Level 2a	Level 3	TOTAL
Maize cob fragments (*Zea Mays*)	1	0	0	0	1
Maize seed	1	0	0	0	1
Peach pip (*Anygdalus persica*)	2	0	0	0	2
Plaited reed or *Hypoxis* fibres	0	1	0	0	1
TOTAL	4	1	0	0	5

Some of these plant species are potential indicators of the season of occupation at the site. In the eastern Cape Watsonia corms are available and most palatable from August (spring) through to May (autumn) (Deacon, 1976:98). The rainfall maxima in this region is spring and autumn (Deacon, 1976:96). Rainfall in the eastern Free State occurs mainly between October and April, indicating a slightly shorter growing season might be expected there for Watsonia. Tsama melons also fruit in summer (Van Wyk & Malan, 1988) but can be stored throughout the year (Fox & Norwood Young, 1982). In Lesotho there are two varieties of peaches which are harvested from December to February (Ambrose,1976). The evidence from plant remains at Rooikrans therefore suggests occupation at least during the summer months.

Summary of the evidence for interaction

One of the predicted outcomes for hunter-gatherer society of interaction with agriculturists is the cessation of traditional aggregation (Wadley, 1987 and 1989). At Rose Cottage Cave there is good evidence for aggregation behaviour pre-dating the settlement of agriculturists in the Caledon Valley in the A level dated 680 ± 50 BP (Ouzman & Wadley, 1997:399). The more recent Mn level at Rose Cottage Cave dated 500 ± 50 BP has less evidence of aggregation behaviour. An overall decline in aggregation behaviour amongst Caledon Valley hunter-gatherers once agriculturists had moved into the area may be suggested by evidence from stone tool assemblages at Rooikrans and Mauermanshoek. There is a decrease in formality in the stone tool assemblages in terms of tools per bucket in more recent occupation levels of Rooikrans between

approximately 415 ± 65 BP and 100 ± 45 BP. At Mauermanshoek (HA) a similar decline in formality is evident in the contrast between the pre-contact Lyn level dated 1700 BP compared with the contact levels (Domleo, 1993:50). The situation at Twyfelpoort is more difficult to explain in terms of the expected decline in formality predicted for a breakdown of aggregation and dispersal behaviour. The pre-interaction L level at Twyfelpoort dated to 1800 BP is interpreted as a possible aggregation phase occupation on the basis of high frequencies of formal tools, hunted faunal remains, worked bone and ostrich eggshell (Backwell *et al.*, 1997:94). On the other hand the increase in the frequency of formal tools in the H level after contact is seen as an indication of stress (Backwell *et al.*, 1997:93; Wallace, 1997:23). The decrease in worked bone and ostrich eggshell beads in this same level is interpreted as an indication of stress on a regional level rendering reciprocal gift exchange redundant (Wallace, 1997:23).Whatever the case, apart from the A level at Rose Cottage Cave which probably pre-dates the arrival of agriculturists in the area, none of the post-contact assemblages from the Caledon Valley sites could be unequivocally interpreted as having all the attributes listed by Wadley to define aggregation phase occupation.

An overall increase at Westbury in the use of local raw materials in stone artefact assemblages through time suggests reduced mobility for hunter-gatherers as the area became populated by agriculturists and possibly European farmers. A decrease in the use of hornfels in the contact levels at Rooikrans could indicate a breakdown in exchange relationships with hunter-gatherers south of Wepener if the latter area was the source of the hornfels. Continued high frequencies of opaline in the contact assemblages at Rooikrans may reflect its close proximity to the Caledon River or alternatively good relationships with agriculturists in the area allowing easy access to the river.

Evidence for interaction between hunter-gatherers and agriculturists within the last two hundred years approximately comes from occupation levels at Rooikrans and Westbury (Table 4.1). These occupations have assemblages of stone tools associated with fauna and plants including wild and domestic species as well as agriculturist ceramics, metal and European artefacts. At both Rooikrans and Westbury the vertical distribution of the contact assemblages and the stratigraphic evidence described indicate that the various components of these assemblages are likely to be

largely in true association, although some instances of vertical movement of artefacts are noted, especially from the ceramic assemblages analysed in the following chapter. Metal artefacts from Westbury and Rooikrans can be attributed to both European and agriculturist sources. Considerable quantities of domestic plant remains from Rooikrans Levels 1 and 2 including cowpeas, gourd seeds and Tsama melon seeds are likely to have been obtained from agriculturists. Peach pips from these contexts may have come from either European or agriculturist sources. Barter exchange of goods obtained by hunting in return for domestic plant foods from agriculturists is a recognised mechanism for coping with a frontier situation (Moore, 1985:106). Domestic plant remains from agriculturist sources in hunter-gatherer contexts may therefore be interpreted as evidence of barter relationships with neighbouring agriculturists. Metal items from an agriculturist source can be interpreted in the same way using ethnographic analogy. Domestic animals in these levels including sheep/goat and cattle are also likely to have come from an agriculturists source although a European source cannot be ruled out. These animals may have been obtained from agriculturists or Europeans by theft. On the other hand the evidence for sustained occupation of Rooikrans by hunter-gatherers suggests that their presence in this area was tolerated by agriculturists and such animals are likely to have been obtained through co-operative interaction, possibly even as payment for a marriage partner as documented in Norton's (1910b:244) account of the Mequatling area. The plant remains also suggest that Rooikrans was occupied at least in the summer months in the nineteenth century contact levels 1 and 2. Faunal evidence points to summer occupation in the earlier contact level 3 as well. This may contradict Loubser and Laurens (1994) proposal that hunter-gatherers retreated to agriculturally marginal lands west of the frontier zone in summer.

Comparisons between the stone artefact assemblages from nineteenth to twentieth century levels on these sites and on other middle Caledon Valley sites including Mauermanshoek and Twyfelpoort suggest different activities and uses for them. A dominance of scrapers in the nineteenth century occupations at both Mauermanshoek (HA) and Westbury may suggest that these sites were largely used as hunting (or possibly stock raiding) camps at this time. The more diverse stone tool assemblages from contemporary occupations at Rooikrans in conjunction with evidence for consumption of domestic plant foods and animals which may largely have come from agriculturist sources, as well as ceramic evidence which will be detailed in the next chapter,

suggests that Rooikrans may have become the focus of activities such as barter exchange and clientship with agriculturist in the vicinity. In support of this suggestion indirect evidence for use of ostrich eggshell in bead manufacture comes from Rooikrans. Finished ostrich eggshell beads from agriculturist sites in the Caledon Valley dating to this period may therefore have been obtained from hunter-gatherers. Glass beads dated to the nineteenth century from Levels 1 and 2 at Rooikrans may also indicate barter exchange or client relationships between the occupants and local agriculturists, although they may have been obtained from European missionaries or traders. The implications of the association of ceramics with artefacts commonly attributed to hunter-gatherers, and the character and possible origin of the ceramics are examined further in the following chapter.

6 CERAMIC ASSEMBLAGES FROM HUNTER-GATHERER SITES IN THE CALEDON VALLEY

The aim of this chapter is to attempt to establish the character of the ceramic sequence in the Caledon Valley, starting with the oldest phase and to compare the resulting sequence with those known from surrounding regions. Ceramic assemblages from six hunter-gatherer contexts in the Caledon Valley are analysed below and an assessment of their cultural affinities is attempted based on the analyses, and on a comparison with the published data from adjacent regions.

I shall now examine the ceramics from sites in three zones (Figure 1.1), first, from the Caledon Valley frontier zone, secondly, on the southern fringes of the frontier zone and lastly south-west of the frontier in the Orange and Seacow River Valleys. The Caledon Valley sites are described below in chronological order, according to the earliest ceramic level identified from each site.

The ceramic analyses

The broken walls of all sherds were examined under a microscope using a minimum magnification of 10x the actual size in order to determine fabric temper. An analysis of vessel shape and where possible decoration was carried out on all ceramic assemblages. Sherds were refitted where possible and shape categories were identified. These categories included: open bowls (e.g. Figure 6.3:1), shallow open bowls (e.g. Figure 6.3:10), constricted bowls (e.g. Figure 6.3:12) and shouldered pots or bowls (e.g. Figure 6.4:1). Mean thickness of sherds was calculated by measuring the thickest point of each sherd to determine the average thickness of the total sample.

Ceramics from Roosfontein Rock Shelter (analysis and results)

A total of 73 sherds was recovered from RW (Table 6.1). The assemblage is extremely fragmented and only two diagnostic sherds rep[illegible]ing a possible small bowl shape (120 mm diameter) with plain burnish and a possible [illegible]at base (Figure 6.1:15) (found in the Hard Grey level) were identified. Two sherds, one from the surface and one from the Hard Grey level were

painted with ochre. The sherds are tempered with quartz, and only one sherd was found with a possible grass inclusion probably incorporated with the fabric by chance. The mean thickness of sherds in this assemblage was 8.2 mm.

A total of 212 sherds came from RM (Table 6.1). Only two vessels were complete enough for a tentative reconstruction of shape (Figure 6.1:10,11), both were from small bowls. Sherds from one bowl (Figure 6.1:10) were found in all three stratigraphic units of the excavation. Only one plain burnished rim sherd was found and two sherds including one rim, were perforated from the outside, possibly while the clay was still wet. The sherds are tempered with quartz and a small percentage (Table 6.1) have small quantities of grass inclusions which were probably incorporated in the clay by chance. The mean thickness of the sherds in this assemblage is 6.8 mm.

A total of 145 sherds came from RE (Table 6.1) and sherds from the Surface Level were very small, possibly indicating that this area was subjected to more trampling than the other areas. Three vessels were complete enough to allow tentative reconstruction of their shape, comprising two small bowls (Figure 6.1:3,6) and two small pots or bowls, one with a perforation near the rim drilled from the outside (Figure 6.1:1) and one with broad shallow crenellations on the lip and burnished inside and outside (Figure 6.1:2). One rim fragment (Figure 6.1:8) from the Black Ash level is beaded (banded) and burnished inside and outside. The illustrated angle of rest is tentative because the fragment may come from a vessel with a more upright neck. One sherd from the Black Ash layer had a coil break along its edge. The sherds are quartz tempered and the mean thickness of the assemblage is 6.4 mm.

Discussion

There are several factors indicating that the assemblage from RW is different from those found in RM and RE. The mean thickness of the RW assemblage is considerably greater than that of RE and RM. The flat base from RW indicates an agriculturist origin as this type of base is common in Type V agriculturist assemblages, and also occurs in Type N assemblages (Maggs, 1976:168-9 & 293). Ochre burnishing was only found in the RW assemblage. However this

finish is found on both agriculturist and 'Khoi' ceramics, and does not help to define the affinities of the assemblage. The complexity of the stratigraphy in the surface levels of this area is a possible further indication of a more recent occupation in this part of the shelter, perhaps associated with the stone walling (Klatzow, 1994:Figure 2).

In conjunction with the early date from the ceramic levels of RE, the thin character of the assemblages from RM and RE suggests that they are different from the RW assemblage, and have more in common with early ceramics from Stone Age contexts in the Cape or possibly even KwaZulu-Natal. In support of this view, the beaded (banded) rim sherd from the Black Ash level is not typical of agriculturist vessels illustrated by Maggs (1976) although it is comparable with rims from both earlier and later ceramic assemblages ascribed to pastoralists in the Cape (eg Sadr & Smith, 1991:110 Fig. 4 d; Rudner, 1968:617). The vessel with shallow crenellations on the lip (Figure 6.1:2) seems quite different from rim nicked pottery found in Type N or V agriculturist assemblages. The published descriptions of rim nicked vessels from the eastern Cape attributed to agriculturists (Brooker, 1989:27 Fig. 12. 5; Rudner 1968:554) do not seem to match this example either. In conclusion it is likely that an early ceramic assemblage is represented on this site, although some more recent vessels may be present in the sample from RW.

Table 6.1 Roosfontein Rock Shelter vertical distribution of ceramics.

Roosfontein (W) vertical distribution of ceramics.

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Vessel part	Temper	Yellow Orange Brown Surface Level 1		Hard Grey Level 2		Light Brown Pale Light Brown Beach Sand Hard Orange Level 3		TOTAL	
Rim	Grit	0	0.0%	3	6.5%	0	0.0%	3	4.1%
	Grass?	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body	Grit	26	100.0%	42	91.3%	1	100.0%	69	94.5%
	Grass?	0	0.0%	1	2.2%	0	0.0%	1	1.4%
TOTAL		26	100.0%	46	100.0%	1	100.0%	73	100.0%

Roosfontein (M) vertical distribution of ceramics.

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Vessel part	Temper	Surface Level 1		Light Hard Grey Ashy Level 2		TOTAL	
Rim	Grit	6	4.7%	6	7.1%	12	5.7%
	Grass?	0	0.0%	0	0.0%	0	0.0%
Body	Grit	114	89.1%	75	89.3%	189	89.2%
	Grass?	8	6.3%	3	3.6%	11	5.2%
TOTAL		128	100.0%	84	100.0%	212	100.0%

Roosfontein (E) vertical distribution of ceramics.

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Vessel part	Temper	Surface Level 1		Black Ash Level 2		Black Ash 2 Level 3		TOTAL	
Rim	Grit	2	5.3%	9	8.0%	2	7.1%	11	7.1%
	Grass?	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body	Grit	33	86.8%	80	90.9%	26	92.9%	139	90.3%
	Grass?	3	7.9%	1	1.1%	0	0.0%	4	2.6%
TOTAL		38	100.0%	88	100.0%	28	100.0%	154	100.0%

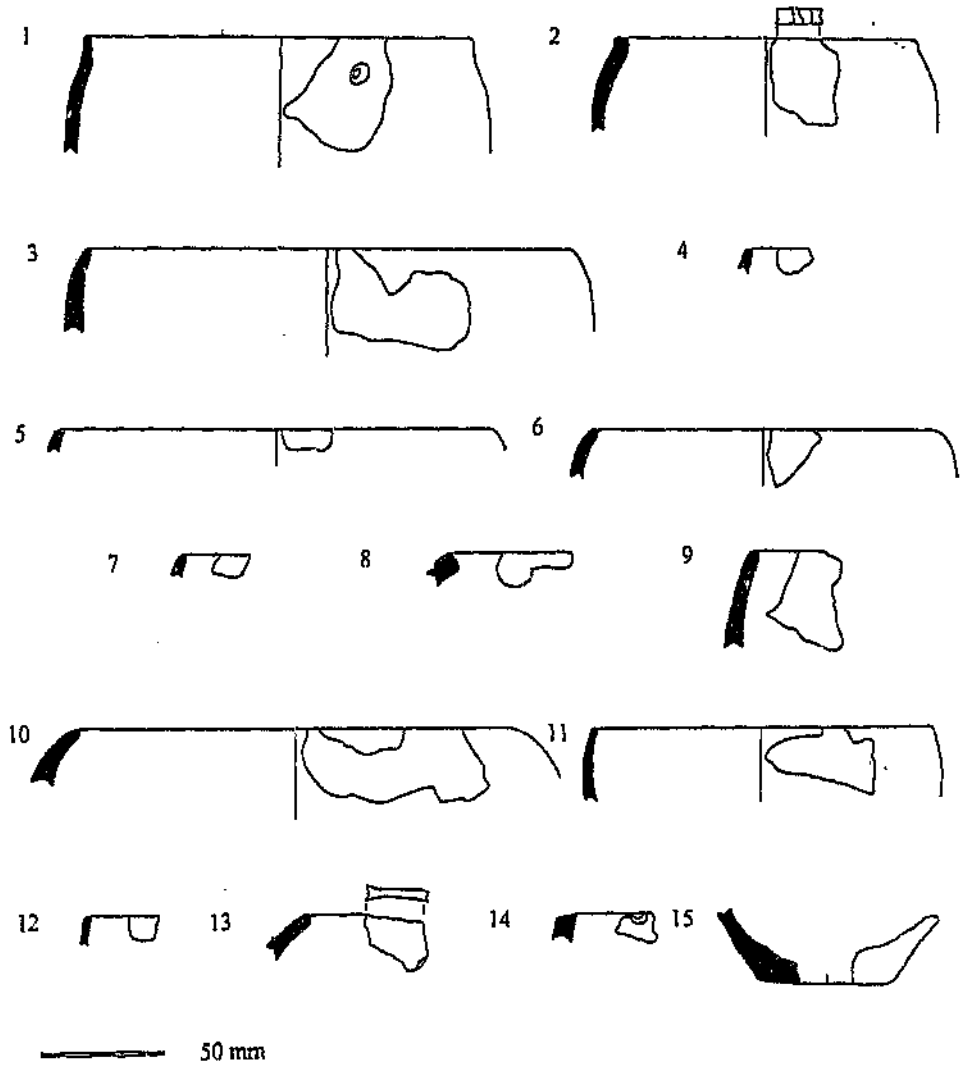


Figure 6.1 Roosfontein Rock Shelter ceramics.

Figure 6.1 Roosfontein Rock Shelter ceramics.

1 open bowl\pot - RE (Black Ash)
2 crenellated rim sherd - RE (Black Ash)
3 slightly constricted bowl - RE (Black Ash)
4 rim sherd - RE (Black Ash)
5 rim sherd - RE (Surface)
6 rim sherd - RE (Black Ash)
7 rim sherd - RE (Black Ash 2)
8 beaded rim sherd - RE (Black Ash)
9 rim sherd - RM (Ashy)
10 slightly constricted bowl - RM (Surface and Ashy)
11 open bowl - RM (Surface and Light Hard Grey)
12 rim sherd - RM (Surface)
13 rim sherd - RM (Ashy)
14 perforated sherd - RM (Surface)
15 flat base - RW (Hard Grey 2)

Ceramics from Tandjiesberg Rock Shelter (analysis and results)

A small sample of 25 sherds was recovered from the excavation. Although no sherds were large enough to reconstruct vessel shape with certainty, rims of two vessels which may be small bowls were recovered from Level 1 Daisy and Level 2 Douglas (Figure 6.2:1,3). Two diagnostic decorated 'Smithfield' grass-tempered sherds were recovered from Level 2 Douglas (Figure 6.2:2,4) and undecorated grass-tempered sherds were found in Level 1 Antonio and Level 2 Douglas (Table 6.2). One ochre burnished body sherd was found in Level 2 Rachel. Three small fragments of what may be unpierced grit-tempered lugs or bosses came from Level 1 Daisy and Level 2 Steven, although these fragments could also be from figurines. The ceramics all came from the same level as the dated hearth (one grit-tempered sherd was found in the hearth) or from above this dated level. The mean thickness of the few grass and one possible grass-tempered sherds is 7 mm and the grit sherds mean thickness is 6.8 mm.

Table 6.2 Tandjiesberg Rock Shelter vertical distribution of ceramics.

	Level 1 Antonio		Level 1 Daisy		Level 2 Steven		Level 2 Douglas		Level 2 Gordon		Level 2 Jacobs		Level 2 Rachel	
Rim grass	0	0%	0	0%	0	0%	0	0%	0	0%	0	0.0%	0	0.0%	0	0.0%
Body grass	1	20%	0	0%	0	0%	4	57%	0	0%	0	0.0%	0	0.0%	0	0.0%
Grass sub total	1	20%	0	0%	0	0%	4	57%	0	0%	0	0.0%	0	0.0%	0	0.0%
Rim grit	0	0%	0	0%	0	0%	1	14%	0	0%	0	0.0%	0	0.0%	0	0.0%
Body grit	0	0%	0	0%	0	0%	0	0%	0	0%	1	0.0%	0	0.0%	0	0.0%
Grit sub total	0	0%	0	0%	0	0%	1	14%	0	0%	1	0.0%	0	0.0%	0	0.0%
Rim grit	0	0%	1	50%	0	0%		0%	0	0%	0	0.0%	0	0.0%	0	0.0%
Body grit	4	80%	1	50%	3	0%	2	29%	1	0%	0	0.0%	1	0.0%	1	0.0%
Grit sub total	4	80%	2	100%	3	100%	3	29%	1	100%	0	0.0%	1	0.0%	1	0.0%
TOTAL	5	100%	2	100%	3	100%	7	100%	1	100%	1	0.0%	1	0.0%	1	0.0%
Lug or boss? grit	0		1		2		0		0		0		0		1	

Discussion

No diagnostic Sotho sherds were found, and the presence of a grass-tempered sherd just below the surface, indicates that the various occupations were characterised by a mixture of grass-tempered and grit-tempered ceramics. Although approximately half of the ceramics come from levels above the hearth, found in Level 2 Gordon, and dated to the twelfth century AD, it is likely that these layers are relatively close together in date. Once again the assemblage is comparable with contemporary assemblages from the Orange River Valley and Seacow River Valley.

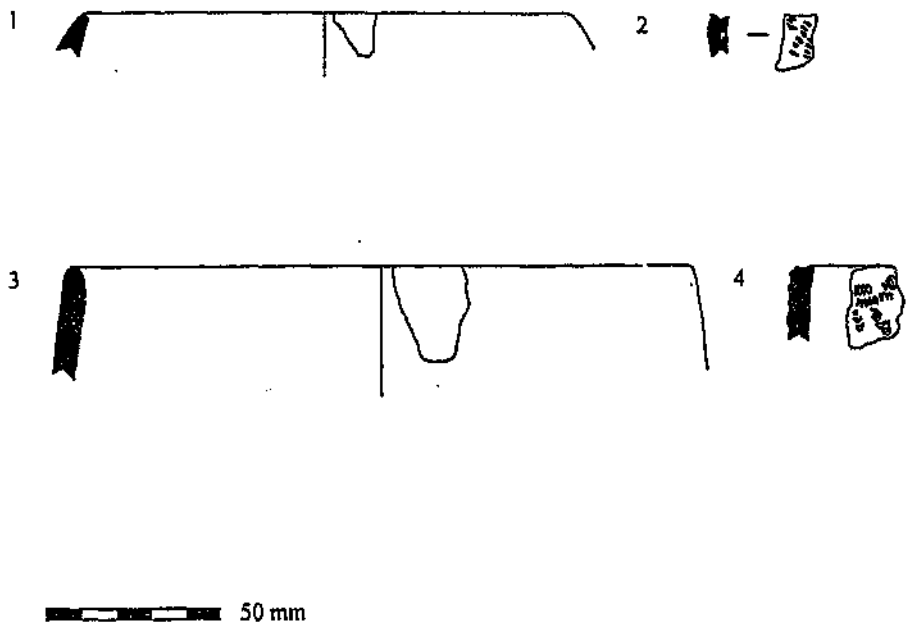


Figure 6.2 Tandjiesberg Rock Shelter ceramics.

1 rim sherd - Level 1 (Daisy)

2 'Smithfield' sherds - Level 2 (Douglas)

3 rim sherd - Level 2 (Douglas)

4 'Smithfield' sherds - Level 2 (Douglas)

Rose Cottage Cave ceramic analysis

A total of 1853 sherds from the ceramic levels of the excavation is included in this analysis. Although the sherds from Levels A and A2 are shown separately to quantify the ceramics from these units (Table 6.3) they are considered as one assemblage in the analysis for reasons detailed in the discussion below. An analysis of vessel shape and, where possible, decoration was carried out, and a total of 49 vessels was complete enough to be used to establish the range of vessel shapes (Table 6.4). Sherds were refitted where possible and four shape categories were identified: open bowls (eg Figure 6.3:1), shallow open bowls (eg Figure 6.3:10), slightly constricted bowls (eg Figure 6.3:12) and shouldered pots or bowls (6.3:13). Eight diagnostic decorated sherds (Table 6.4) and one small spout were recorded (Figures 6.3:8 & 6.4:1-9). Mean thickness of sherds was calculated by measuring the thickest point of each sherd to determine the average thickness of the total sample. The mean thickness of the grass-tempered and possibly grass-tempered sherds was similar in all three ceramic levels and ranged between 8.2 mm and 8.5 mm. The mean thickness of grit-tempered sherds was 7.75 mm in the Mn level, 7.9 mm in the A lvel and 7.1 mm in the A2 level. Only three sherds came from the Pt level with a mean thickness of 4.66 mm and two from the Ja level with a mean thickness of 8.5 mm.

Table 6.3 Rose Cottage Cave vertical distribution of ceramics.

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	Level Mn		Level A		Level A2		Level Pt		Level Ja	
Rim grass	9	1.0%	13	2.0%	3	0.9%	0	0.0%	0	0.0%
Body grass	131	15.2%	127	19.2%	24	7.5%	0	0.0%	0	0.0%
Grass sub total	140	16.2%	140	21.1%	27	8.4%	0	0.0%	0	0.0%
						0.0%				
Rim grass?	1	0.1%	2	0.3%	1	0.3%	0	0.0%	0	0.0%
Body grass?	22	2.6%	28	4.2%	11	3.4%	0	0.0%	0	0.0%
Grass? sub total	23	2.7%	30	4.5%	12	3.7%	0	0.0%	0	0.0%
						0.0%				
Rim grit	45	5.2%	49	7.4%	24	7.5%	0	0.0%	0	0.0%
Rim? (ground) grit	0	0.0%	0	0.0%	4	1.2%	0	0.0%	0	0.0%
Rim? grit	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body grit	651	75.5%	444	67.0%	252	78.3%	4	100.0%	2	100.0%
Body ground? grit	1	0.1%	0	0.0%	2	0.6%	0	0.0%	0	0.0%
Body grit & grog?	1	0.1%	0	0.0%	1	0.3%	0	0.0%	0	0.0%
Sub total grit	699	81.1%	493	74.4%	283	87.9%	4	100.0%	2	100.0%
TOTAL	862	100.0%	663	100.0%	322	100.0%	4	100.0%	2	100.0%
Figurine? grit	2		0		0		0			
Figurine? Spout? grit	0		1		0		0			

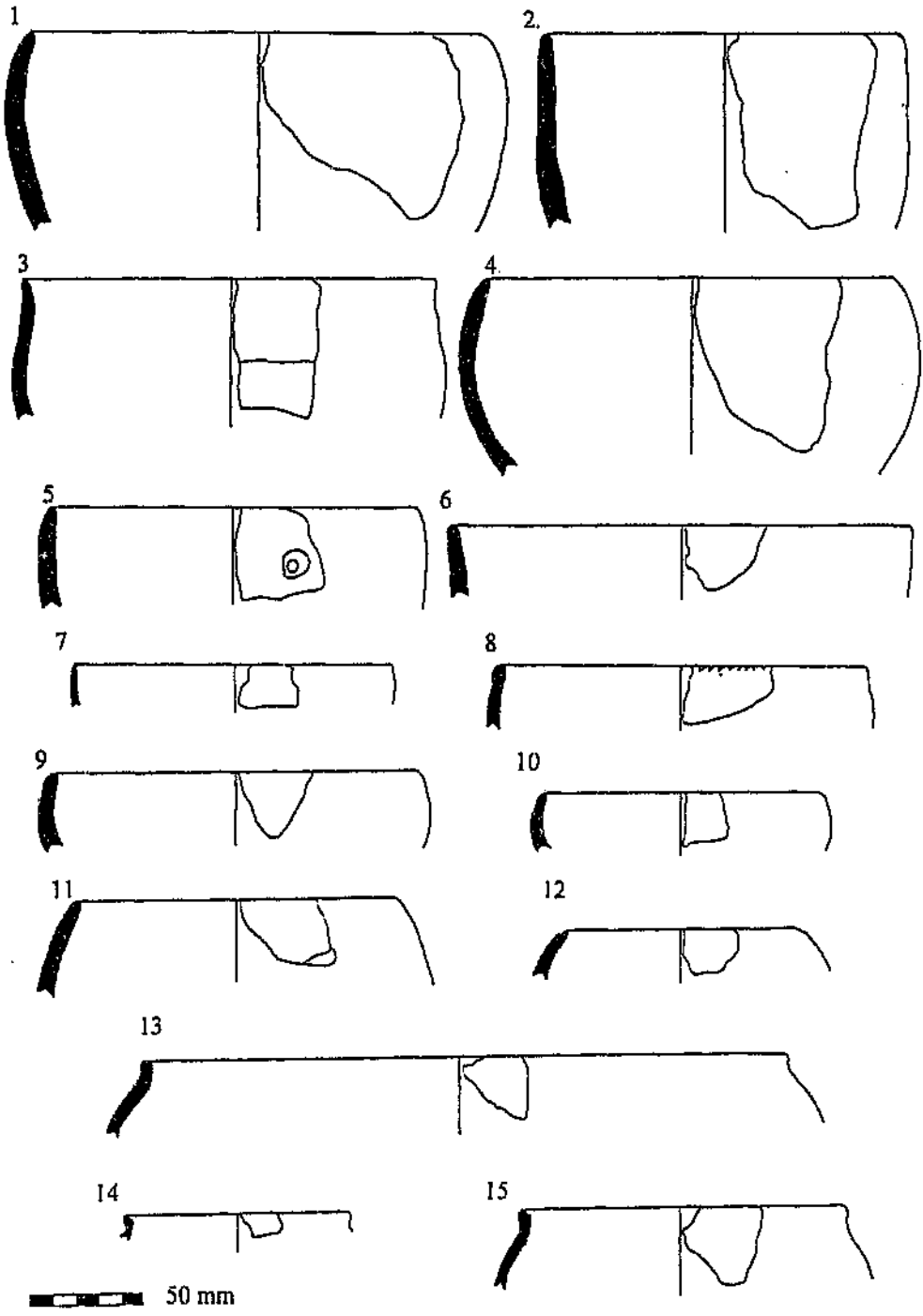


Figure 6.3 Rose Cottage Cave ceramics.

Figure 6.3 Rose Cottage Cave ceramics.

1 open bowl (A2)
2 open bowl (Mn)
3 open bowl (A2)
4 open bowl (A)
5 perforated open bowl (A)
6 open bowl (Mn)
7 open bowl (Pt)
8 open bowl (Sotho)(Mn)
9 shallow open bowl (Mn)
10 shallow open bowl (A2)
11 slightly constricted bowl (A)
12 slightly constricted bowl (Mn)
13 necked bowl\pot (Mn)
14 necked bowl\pot (A)
15 necked bowl\pot (Mn)

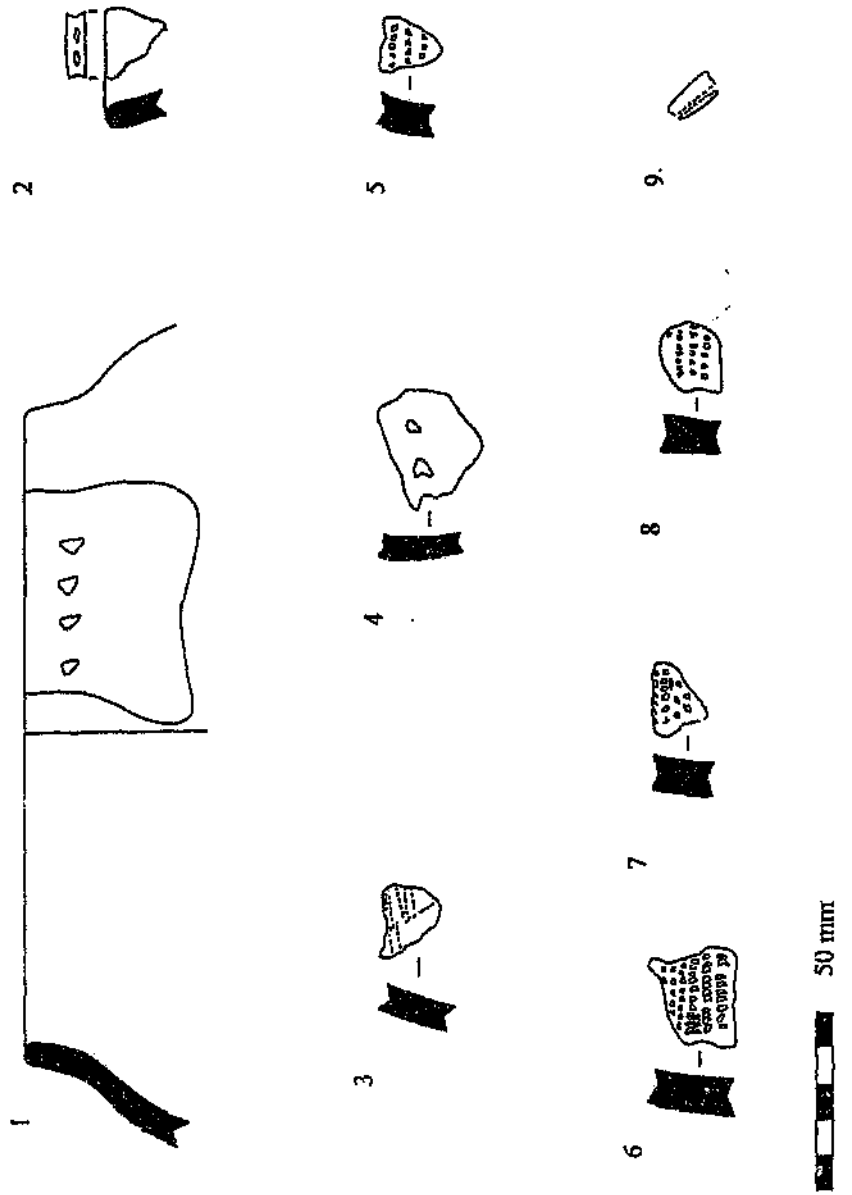


Figure 6.4 Rose Cottage Cave ceramics.

Figure 6.4 Ceramics from Rose Cottage Cave.

1 necked bowl\pot (Sotho) (Mn)

2 decorated lip (Sotho) (Mn)

3 decorated body (Sotho)(A2)

4 decorated body (Mn)

5 decorated body ('Smithfield')(A2)

6 decorated body ('Smithfie!d')(Mn)

7 decorated body ('Smithfield')(Mn)

8 decorated body ('Smithfield')(A)

9 spout (A)

Results

The analysis of the indigenous pottery assemblages from the Mn level and the combined A levels shows that they are similar, and include 16% and 17% respectively of grass-tempered sherds (Table 6.3) a few of which are decorated with punctates and can be classified as 'Smithfield' (Table 6.4). Some sherds have a few grass inclusions which may be fortuitous (Table 6.3). The rest of the sample is grit-tempered and undecorated, or decorated with motifs comparable with Type N, Type V or Caledon Valley ceramics (Table 6.4) dated between the fifteenth and nineteenth centuries. Twenty-eight sherds in the Mn level and sixteen in the A level were painted with ochre. Only one possible instance of sherds from one vessel occurring in both levels was found although several joins were made within levels. However the fragmented state of the ceramics made refitting difficult.

The reconstructible vessel forms from the Mn and A levels are both dominated by undecorated bowls (Table 6.4) which include both grit-tempered (72.5%) and grass-tempered (27.5%) vessels. The necked bowl or pot category only comprises grit-tempered vessels. The diagnostic decorated Sotho sherds are from bowls and a necked pot (Figure 6.3:8 & Figure 6.4:1,2).

The Rose Cottage assemblage includes five open bowls with grit inclusions\temper and one with grass-temper which are coated with soot on the outside. One of the grass-tempered slightly constricted bowls and two of the necked bowls\pots with grit inclusions or temper also have sooty deposits on the outside. It is likely that all of these vessels were used for cooking. Coilbreaks noted on three undecorated body sherds with grit inclusions or temper indicate that at least this category of vessels were built by the coil method. Bollong (1996, *pers. comm.*) also notes fibre-tempered sherds with coil breaks in the assemblage.

Discussion

The ceramic assemblage from the Mn and A levels at Rose Cottage Cave can be divided into at least two main components based on temper or inclusions in the fabric in conjunction with

diagnostic decorative motifs. The first component comprises the diagnostic decorated grass-tempered sherds (Figure 6.4:5-8) which are similar to those found further south in the Orange River Scheme area and the Seacow River Valley (Sampson, 1967:52-55; Sampson,1972:200-20[illegible]; Sampson 1988). In these areas such wares have been attributed to hunter-gatherers although recently it has been suggested that some of the wares may be associated with herders (Sampson and Vogel, 1995). It is likely that the undecorated grass tempered sherds in the Rose Cottage Cave assemblage may also be attributable to hunter-gatherers. Bowls comprised the only reconstructible vessel shape in the grass-tempered category from Rose Cottage Cave (Table 6.4; eg Figure 6.3:2,5,6,11) and all of them are undecorated. Descriptions of grass-tempered assemblages from the adjacent regions concentrate on decorated vessels, and the proportion of decorated to non-decorated vessels through time is difficult to ascertain from the literature. However grass-tempered plain ware comprising bowl shaped vessels is found throughout the sequence in the upper Seacow River Valley (Sampson *et al.* 1989:4; Sampson & Vogel, 1996; Bollong & Kamilli, 1995).

The second component in the Rose Cottage Cave ceramic assemblage comprises grit temper or inclusions in conjunction with diagnostic decorative motifs attributable to agriculturists. Although the diagnostic agriculturist sherds from Rose Cottage may have been displaced downwards from the surface, this seems unlikely as they are found in both the A and Mn levels (Table 6.4). The decoration motifs recovered are found in both Type N and later Type V assemblages from stone walled agriculturist settlements (Maggs, 1976:293). The distribution of Type N settlements dated to the fifteenth century is north of the Caledon Valley (Maggs, 1976:Fig.7). In the Caledon Valley only later Type V and Caledon Valley settlements dated between the sixteenth and nineteenth centuries have so far been described. A radiocarbon date from OU 1 Ntsuanatsatsi, an agriculturist Type N site north of the Caledon Valley (Maggs, 1976:146), calibrates to 1432 AD. This calibrated date is close to the calibrated result of 1436 AD from the Mn level at Rose Cottage Cave (Table 4.1). If the argument for a fifteenth century date for the bulk of the ceramics recovered from Level Mn is accepted, it is possible that the diagnostic Sotho sherds from this level are *in situ* and represent items obtained through barter exchange by hunter-gatherers from contemporary agriculturist settlements further north.

There is a third component in the Rose Cottage Cave ceramic assemblage, the undiagnostic undecorated vessels and sherds with grit inclusions or temper, which is more problematic. It is possible that this component includes vessels and sherds comparable with those referred to as 'Khoi' in assemblages from the Orange River Scheme and Seacow River Valley. The presence of bowl shapes in the undecorated grit-tempered category from Rose Cottage Cave and the lack of pointed bases are difficult to reconcile with the argument for a 'Khoi' component in the assemblage and could instead suggest an agriculturist origin for all the grit-tempered material. However the review of regional ceramic evidence in chapter 1 shows that comparative data on the range of 'Khoi' vessel shapes is limited because of the fragmentary nature of the assemblages recovered (Parkington & Poggenpoel, 1971:19; Bollong & Kamilli, 1995:6) and this makes comparisons between assemblages difficult. Characteristic 'Khoi' assemblages described in the literature do not generally include bowl shapes (eg Rudner 1979:11), although bowls are described from sites on the west coast (Rudner, 1968:Figs. VII:2; XII:3). Illustrations of sherds in De Hangen style assemblages dated to within the last 600 years from the south-western Cape (Smith *et. al.*1991:84 Figure 20 i, j & k) appear to be from bowl shaped vessels. Although Andrew Smith (1996, *pers. comm.*) considers these fragments to be too small to reconstruct vessel shape. Vessel shape, temper and surface finish are not yet described from these assemblages (Smith *et. al.*, 1991). However the assemblage from De Hangen, the type site (Parkington & Poggenpoel, 1971:19-20), was tempered with sand or shale grit and included 16% of ochre burnished sherds. Ochre painted sherds from Mn make up 3.2 % of the grit-tempered assemblage and 1.6% in the A levels. Ochre paint is also found on Type N and V agriculturist ceramics however (Maggs, 1976). Spouts are undoubtedly a feature of 'Khoi' ceramics, and the identification of a small spout from Level A at Rose Cottage Cave (Figure 6.4:9) lends credence to the argument for the presence of 'Khoi' ceramics.

In support of the argument for a non Sotho origin for some of the grit-tempered vessels, the fabric of the diagnostic Sotho sherds has a different appearance from that of the majority of other vessels and is orange/buff in colour whereas the fabric of the majority of sherds in the assemblage is black or brown. This suggestion could possibly be tested by a more detailed examination of the clay petrography and chemistry of the diagnostic Sotho sherds in comparison to that of a sample of undiagnostic grit-tempered bowl sherds.

The similar vertical distribution of the grit and grass ceramics and of the few diagnostic 'Smithfield' and agriculturist sherds does not suggest that one type of pottery overlies the other (Tables 6.3 & 6.4). The ceramic assemblages described above and stone tool assemblages (Wadley, 1992) from the A and Mn levels are very similar and calibrated dates from the two levels (Table 4.1) are relatively close, falling within the fourteenth and fifteenth centuries. The ceramic assemblage from Rose Cottage Cave with its grass-tempered component contrasts with nineteenth and twentieth century assemblages from other hunter-gatherer sites in the area described below, which are almost exclusively made up of vessels with grit and sometimes pottery grog inclusions or temper. This supports the suggestion that the ceramics from the Mn and A levels at Rose Cottage are close together in date and that both levels date to well before the nineteenth century. A date of 2240 ± 60 BP (Pta-7117) has recently been obtained from Level A2 (Wadley *pers. comm.*). This date seems too early to be in true association with the ceramics from Level A2 which include a diagnostic 'Sotho' sherd (Table 6.4). Two sherds which fit together were found in Levels A and A2 respectively, lending support to the conclusion that the ceramics from these levels are associated with the date from Level A (Table 4.1). Although a few sherds were recovered from the Pt and Ja levels they are almost certainly intrusive because the Pt level has been dated to between 7630 ± 80 BP and 5970 ± 70 BP.

Apart from the diagnostic agriculturist sherds, this type of assemblage is perhaps comparable with contemporary assemblages found further south in the Orange River Scheme area and the Seacow River Valley, where highly decorated grass-tempered sherds become numerically dominant in assemblages only from the sixteenth century onwards (Sampson *et al.* 1989; Sampson & Vogel 1995; Beaumont & Vogel 1984). The origin of the grass-tempered component of the ceramic assemblage at Rose Cottage is difficult to establish without a detailed comparison, employing standardised methodologies, with assemblages from hunter-gatherer contexts in adjacent regions. However it seems probable that these ceramics were manufactured locally by hunter-gatherers and also possibly exchanged through local networks between hunter-gatherers. Such exchange was recorded in ethnography described in chapter 2.

Ceramics from Mauermanshoek Rock Shelter (analysis and results)

A sample of 151 sherds representing at least four vessels (Figure 6.5) was obtained mainly from Levels 1 and 2 (Table 6.5). The few sherds in Levels 3 and 4 had probably worked their way down from overlying levels. The vessel shapes included open bowls (Figure 6.5:1,2,5) and a probable constricted pot (Figure 6.5:4). No decorated sherds were recovered, but 6.4% of Level 2 sherds and 3% of Level 1 sherds were painted or burnished with ochre, and a small number of sherds were plain burnished. Most of the sherds are tempered with quartz grit and a few include pottery grog or small amounts of grass probably incorporated by chance. One body sherd in Level 2 contained three grass fragments, and has therefore been classified as grass-tempered (Table 6.5). The mean thickness of the total assemblage is 8.1 mm.

Table 6.5 Mauermanshoek Rock Shelter vertical distribution of ceramics.
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Square	Vessel part	Temper	Hard Brown Hard Grey Lash Surface 1 Level 1	Stoney Grey Brown Ash Dash/Oash HGW Level 2	Speckled Ash Level 3	Hard Orange Level 4	TOTAL
C,D & E 14	Rim	Grit	0	0	0	0	0
		Grit & grog?	0	0	0	0	0
		Grass?	0	0	0	0	0
	Body	Grit	32	0	0	1	33
		Grit & grog?	0	0	0	0	0
		Grass?	1	0	0	0	1
G3 & G4	Rim	Grit	0	1	0	0	1
		Grit & grog	0	0	0	0	0
		Grass?	0	2	0	0	2
	Body	Grit	16	47	2	0	65
		Grit & grog?	1	1	0	0	2
		Grass?	1	8	0	0	9
		Grass	0	1	0	0	1
G6	Rim	Grit	0	1	0	0	1
		Grit & grog?	0	0	0	0	0
		Grass?	0	0	0	0	0
	Body	Grit	0	7	0	0	7
		Grit & grog?	0	0	0	0	0
		Grass?	0	0	0	0	0
		Grass	0	1	0	0	1
H8	Rim	Grit	1	1	0	0	2
		Grit & grog?	0	0	0	0	0
		Grass?	0	0	0	0	0
	Body	Grit	18	8	0	0	26
		Grit & grog?	0	0	0	0	0
		Grass?	0	0	0	0	0
TOTAL			70	78	2	1	151
Figurine fragment			1	0	0	0	1

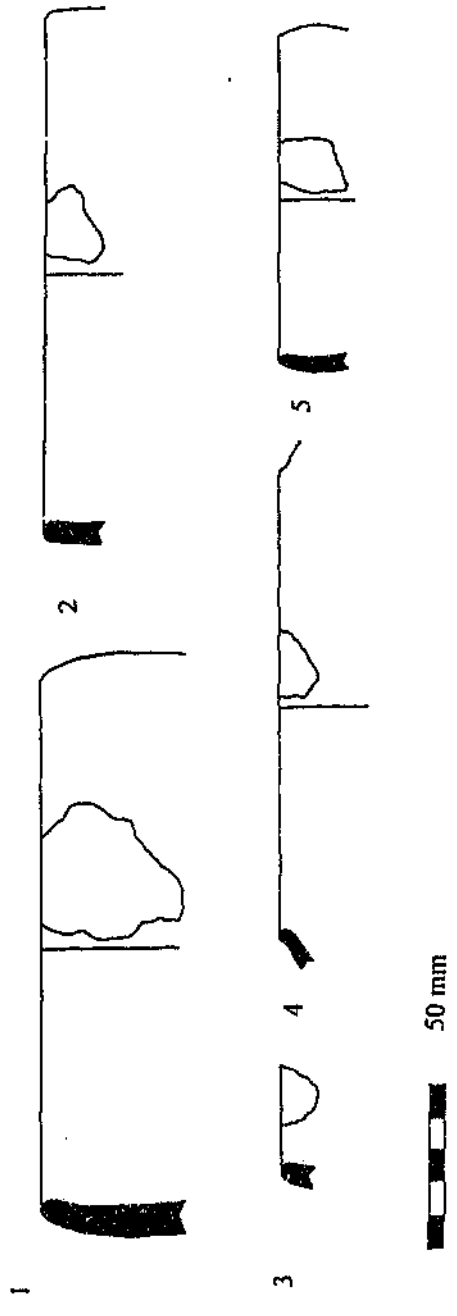


Figure 6.5 Mauermanshoek Rock Shelter ceramics.

Figure 6.5 Mauermanshoek Rock Shelter ceramics.

1 open bowl - Level 2 (Dash)
2 open bowl - Level 1 (Hard Grey)
3 rim sherd - Level 2 (Dash)
4 constricted pot - Level 1 (Lash)
5 open bowl - Level 2 (Dash)

Discussion

The assemblages from both ceramic levels are essentially the same and, although there are no diagnostic Sotho sherds, the finish, temper and vessel shapes are all compatible with Sotho ceramics. The single grass-tempered sherd may be attributable to hunter-gatherers.
The assemblage of 218 sherds from corresponding layers in the nearby Horse Annex described by Domleo (1993:29-30) has similar characteristics, except that no grass inclusions were found. Although there were no diagnostic Sotho sherds in this sample either, Domleo attributes it to the Sotho, because once again the temper, finish and vessel shapes are compatible with this conclusion.

Ceramics from Rooikrans Rock Shelter (analysis and results)

At Rooikrans Levels 1, 2 and 3 have stone artefact assemblages associated with ceramics (Table 6.6). This distribution was disturbed in square DS due to an illegal excavation and some sherds were found in deeper levels (Table 6.7). The largest proportion of the assemblage came from Level 2 (Table 6.6). Some of the sherds from square I3. Level 3 could be joined to pieces from Level 2 in other squares and had obviously been displaced downwards. A total of 511 sherds were collected including 35 rim sherds representing a minimum of 33 vessels. Four classes including jars (Figure 6.6:1,2), necked\constricted pots (Figure 6.6:3) and open and slightly constricted bowls (Figure 6.6:4,5) were defined based on vessel shape since there were not enough decorated sherds for a multidimensional stylistic analysis. The pottery assemblages from all three levels are largely undecorated and tempered with quartz grit and sometimes pottery grog

(Table 6.6). The mean thickness of the total assemblage is 8.7 mm. Black and ochre burnishing occurs in all three contact levels, and 6.6 % of the total assemblage is ochre painted or burnished.

Table 6.6 Rooikrans Rock Shelter vertical distribution of ceramics.
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	Surface outside excavation		Level 1		Level 2		Level 2 (Pit)		Level 3		Level 3 (Pit)		Level 4		Level 5	
Body grass	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Grass sub total	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body grass?	0	0.0%	0	0.0%	7	2.6%	4	14.8%	5	14.7%	0	0.0%	0	0.0%	0	0.0%
Grass? sub total	0	0.0%	0	0.0%	7	2.6%	4	14.8%	5	14.7%	0	0.0%	0	0.0%	0	0.0%
Rim grit	2	2.5%	13	16.7%	13	4.7%	1	3.7%	3	8.8%	0	0.0%	0	0.0%	0	0.0%
Rim grit and grog	0	0.0%	0	0.0%	2	0.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Rim grit and bone?	0	0.0%	1	1.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body grit	78	97.5%	63	80.8%	225	85.8%	20	74.1%	25	73.5%	4	100.0%	5	100.0%	9	100.0%
Body grit and grog	0	0.0%	0	0.0%	5	1.8%	0	0.0%	1	2.9%	0	0.0%	0	0.0%	0	0.0%
Body grit and grog?	0	0.0%	1	1.3%	3	1.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body grog	0	0.0%	0	0.0%	5	1.8%	2	7.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Body grog?	0	0.0%	0	0.0%	3	1.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sub total grit	80	100.0%	78	100.0%	266	97.1%	23	85.2%	29	85.3%	4	100.0%	5	100.0%	9	100.0%
TOTAL	80	100.0%	78	100.0%	274	100.0%	27	100.0%	34	100.0%	4	100.0%	5	100.0%	9	100.0%
Disc unfired grit	0		1		0		0		0		0		0		0	

Table 6.7 Rooikrans Rock Shelter vertical distribution of ceramics in square DS.
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	Level 1		Level 2		Level 3		Level 4		Level 5	
Body grass	0	0%	0	0%	0	0%	0	0%	0	0%
Grass sub total	0	0%	0	0%	0	0%	0	0%	0	0%
Body grass?	0	0%	1	1%	3	38%	0	0%	0	0%
Grass? sub total	0	0%	1	1%	3	38%	0	0%	0	0%
Rim grit	1	25%	4	3%	0	0%	0	0%	0	0%
Rim grit and grog	0	0%	0	0%	0	0%	0	0%	0	0%
Rim grit and bone?	0	0%	0	0%	0	0%	0	0%	0	0%
Body grit	3	75%	113	96%	5	63%	2	100%	9	100%
Body grit and grog	0	0%	0	0%	0	0%	0	0%	0	0%
Body grit and grog?	0	0%	0	0%	0	0%	0	0%	0	0%
Body grog	0	0%	0	0%	0	0%	0	0%	0	0%
Body grog?	0	0%	0	0%	0	0%	0	0%	0	0%
Sub total grit	4	100%	117	99%	5	63%	2	100%	9	100%
TOTAL	4	100%	118	100%	8	100%	2	100%	9	100%
Disc unfired grit	0		1		0		0		0	

Table 6.8 Rooikrans Rock Shelter vertical distribution of vessel shapes.

	Open bowls	Constricted bowls	Necked\constricted pots	Jars
Level 1	1	5	3	1
Level 2	2	4	6	0
Level 3	1	0	1	0
Level 4	0	0	0	1
TOTAL	4	9	10	2

Discussion

It is not possible to distinguish between the assemblages in different levels on stylistic grounds because the sample is too small and fragmented. Diagnostic decorated sherds (Figure 6.6:3,6-8) are comparable with pottery from Type V and Caledon Valley sites dated between the sixteenth and nineteenth centuries (Maggs, 1976). Although only one diagnostic decorated Sotho sherd is from an indisputably undisturbed context in Level 2 (Figure 6.6:3), the vessel shapes represented in all the levels (Table 6.8) are found in Type V or Caledon Valley assemblages from agriculturist settlements described by Maggs (1976) and the quartz grit temper found in all levels, as well as occasional pottery grog temper from undisturbed contexts in Level 2 (Table 6.6) are a further indication that the ceramics from all three contact levels are likely to be of Sotho origin. No grass-tempered sherds were recovered, and only a small percentage of sherds contained minute quantities of grass which were probably chance inclusions (Table 6.6). Thus no hunter-gatherer pottery can be recognised.

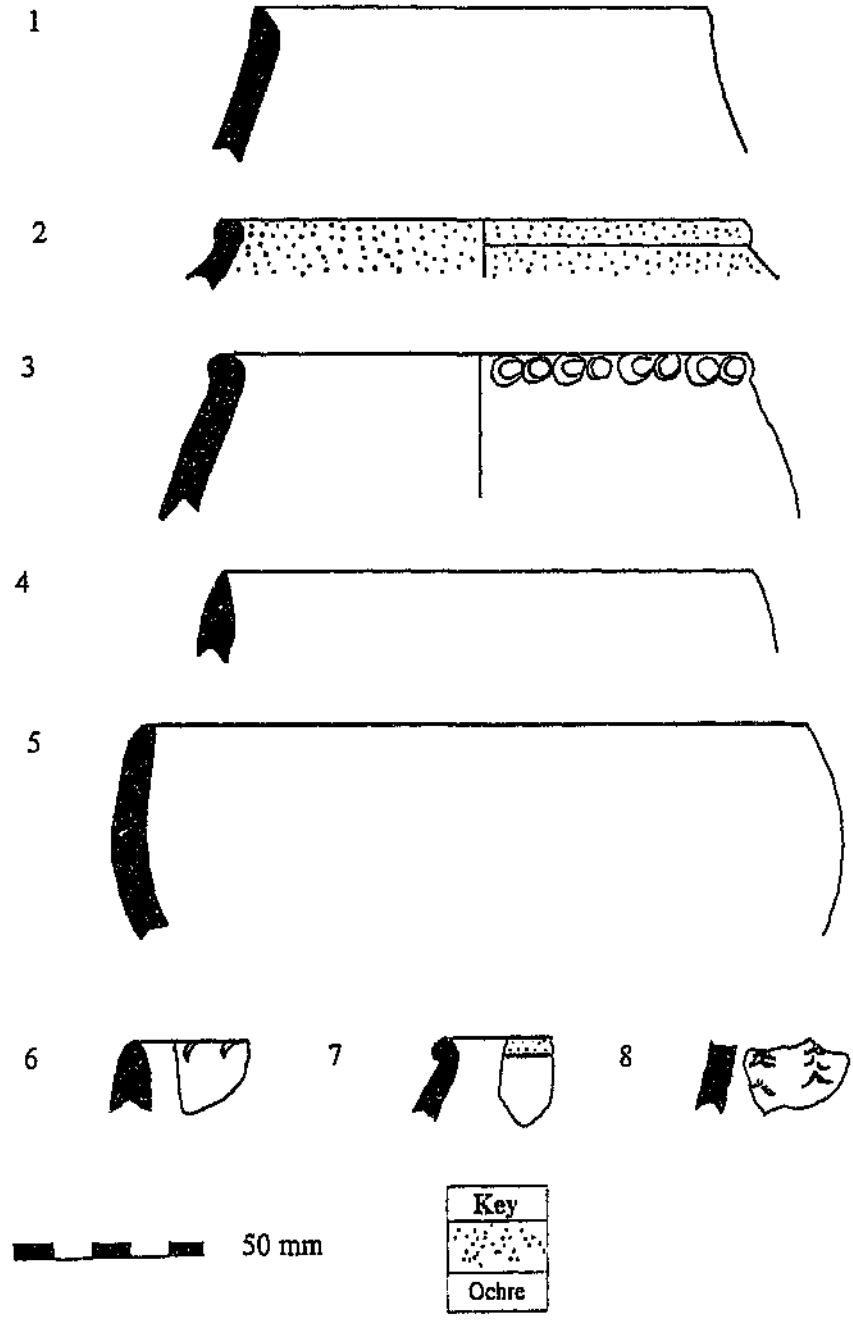


Figure 6.6 Rooikrans Rock Shelter ceramics.

Figure 6.6 Rooikrans Rock Shelter ceramics.

1 jar (Square DS Level 4 - Smog)

2 jar (Square G3 Level 1 - Surface)

3 constricted pot (Square G4 Level 2 - Sadat)

4 open bowl (illegal excavation spoil heap)

5 slightly consricted bowl (Square G4 Level 1 - Surface)

6 decorated rim sherd with rim nicks (Square DS Level 2 - Maltitz/Linde)

7 decorated rim sherd with ochre band on rim (Square DS2 Level 2 - Maltitz/Linde)

8 decorated sherd with finger nail impressions (Square DS Level 5 - Solet)

Ceramics from Westbury Rock Shelter (analysis and results)

The ceramic assemblage from Westbury occurred in Levels 1 and 2 (Table 6.9). A total of 97 sherds was recovered. No rim sherds were found and all the sherds were undecorated apart from one with black burnish. The fabric of the sherds included rounded quartz grains possibly used as temper, although a considerable proportion of sherds contained black thin and angular shale fragments (Broderick, pers comm) which could have been deliberate temper. One sherd in Level 1 included pottery grog temper. A large proportion of the assemblage came from Level 1 and many of the sherds probably come from the same vessel which was blackened and sooty on the outside, although it was not possible to refit many fragments or reconstruct the shape of the vessel. At least nine fragments of this vessel came from Level 1 in square E4, and one of these fragments was refitted to a sherd in Level 2 of the same square. In spite of this, the size of the ceramic assemblage from Level 2 indicates that some of this pottery was in true association with this level. The mean thickness of the total assemblage is 9 mm.

Table 6.9 Westbury Rock Shelter vertical distribution of ceramics.

SQUARE	VESSEL PART	SURFACE Level 1	ROLLS ROYCE Level 1	PUGEOT DATSUN Level 2	FIAT Level 2a	WESTBURY KHAKI Level 3	TOTAL
D4	body	1	0	0	0	0	1
D5	body	2	0	0	0	0	2
E4	body	1	42	17	0	0	60
E5	body	4	5	8	0	0	17
F4	body	5	5	0	0	0	10
F5	body	3	4	0	0	0	7
TOTAL		16	56	25	0	0	97

Although no diagnostic information on decoration, finish or vessel shape was obtained from this small sample the temper is compatible with that of SothoTswana ceramics. The nearest excavated agriculturist settlement is OXF 1, a Type Z settlement approximately 90 km north-west of Westbury. Further Type Z settlements extend eastward along the Sand River to within approximately 50 km north of Westbury (Maggs, 1976:38-39 Figure 8). Type V and Caledon Valley settlements are found in the vicinity of Westbury. Both Type V and Z settlements are dated to the period of occupation at Westbury with evidence of contact. Pottery from OXF 1 is tempered with an angular shale grit (Maggs, 1976:246) as is some pottery from OO 1, a Type V settlement north-east of Westbury (Maggs, 1976:87). Although the shale grit temper does not necessarily demonstrate a Type Z or V origin for the Westbury sherds, since shale would be found in many clay sources derived from the Beaufort System in the area and may be a chance inclusion (eg. Maggs, 1976:87), it does show that the assemblage is compatible with local agriculturist ceramics. No grass inclusions were seen in the Westbury assemblage, further strengthening the case for an agriculturist origin for the ceramics.

Discussion of the Caledon Valley ceramic data

In spite of the difficulties inherent in attempting to characterise the highly fragmented ceramic assemblages described here, it has been possible to demonstrate that attributes such as fabric temper and inclusions and possibly vessel shape are sufficient to differentiate chronologically distinct assemblages from hunter-gatherer contexts in the study area. No assemblage was large enough for a meaningful comparison of decoration to be attempted and the only sites with enough reconstructible vessels to compare the range of vessel shapes present are Rose Cottage Cave and Rooikrans (Tables 6.4 and 6.8). Although both samples are small there is a noticeably higher proportion of bowls from Rose Cottage Cave. Eight of the open bowls, one of the constricted bowls and two of the necked bowls\pots from Rose Cottage Cave have sooty deposits on the outside indicating their use for cooking. The smaller sample from Rooikrans includes only one necked pot with soot on the outside. Several undecorated body sherds also show evidence of use for cooking.

It therefore seems unlikely that the various shapes identified indicate different functions for these vessels apart perhaps from the jar shape (Figure 6.6:1) from Rooikrans which is most likely to represent a vessel used for storing liquids. It is possible then that the difference in the range of vessel shapes from these two sites is significant and results from the chronological difference between the assemblages which may in turn indicate different cultural origins for these assemblages. Of interest is the variation in mean sherd thickness in grit-tempered assemblages through time. Assemblages with grit-temper or inclusions attributed to agriculturists from Mauermanshoek, Rooikrans and Westbury are consistently thicker than earlier assemblages with possible pastoralist (Khoi) content from Roosfontein and Rose Cottage Cave.

The ceramic sequence in the frontier zone

The ceramic assemblages associated with stone tools from the eastern Free State sites span a period from possibly as early as the eighth century to the beginning of the twentieth century (Table 4.1). The results of the ceramic analysis of the material from Rose Cottage Cave indicate that in the frontier zone grass-tempered and sometimes highly decorated pottery was being used by hunter-gatherers. This pottery appears in the frontier zone possibly as early as the fourteenth century, but most likely during the fifteenth or sixteenth century. Similar grass-tempered pottery is ascribed to hunter-gatherers in areas further south (Sampson 1972; Sampson *et al* 1989).The evidence from Rose Cottage Cave also indicates that some ceramics with grit inclusions or temper and sometimes pottery grog temper, made by 'Bantu' speakers were also used by hunter-gatherers at this time. A third contemporary component may exist in the Rose Cottage assemblage. It comprises undecorated grit-tempered ceramics which may be similar to 'Khoi' ceramics identified in assemblages further south. By the nineteenth century ceramics used by hunter-gatherers in the frontier zone at sites such as Rooikrans, Mauermanshoek and Twyfelpoort can be attributed solely to an agriculturist origin.

The ceramic sequence on the periphery of Iron Age settlement

Research on the later part of the Stone Age sequence had been most intensive in areas to the south and west of the proposed frontier zone until relatively recently with the inception of the

University of the Witwatersrand research project in the Caledon Valley. In the 1970s Brooker (1975,1980) and Sampson (1970) worked in the Wepener area, on the fringe of the known distribution of Iron Age settlement.

Ventershoek

At Ventershoek Rock Shelter (Figure 1.1) Sampson (1970) described a ceramic assemblage dominated by grass-tempered sherds including some decorated sherds attributable to 'Bushmen'. No diagnostic Iron Age sherds were documented from this assemblage. However evidence of contact with Iron Age communities was found in the form of iron objects, metal and glass beads and rock paintings of cattle and people with shields. Sampson noted that this assemblage is comparable with Phase 6 assemblages from the Orange River Scheme (1970:142).

Tienfontein 2 and 4a

Two rock shelters containing ceramics, Tienfontein 4a and 2 (Figure 1.1) were excavated by Mary Brooker (1980). Brooker (1980:39) argues convincingly that two distinct chronological periods are represented in the contact phase and that the ceramics associated with them are significantly different. The first site, Tienfontein 4A, is attributed to a single occupation associated with a charcoal date in the seventeenth or eighteenth century (Table 4.1). Ceramics are attributed mostly to 'Bushmen' because 60% are grass-tempered and the decorated sherds are comparable to 'Bushmen' sherds described elsewhere.

The upper unit of the second site, Tienfontein 2, is dated to the nineteenth century based on a radiocarbon date (Table 4.1) and European trade items. The ceramic assemblage from this level is said to be varied and some vessels are described as similar to those from Iron Age sites in the Caledon Valley. In support of the argument for recent occupation of the area by hunter-gatherers Brooker (1980:39) recounts a local tradition about the first owner of the farm Brakfontein upstream from Tienfontein 'who, concerned for his safety during a war soon after 1865, slept one night in the reeds beside the stream. He awoke the next morning to find the warm sleeping place of a "Bushman" not 100 yards away'.

My re-examination of the ceramics confirms Brooker's findings. I recognise seven reconstructible vessels from Tienfontein 2, six of which are grit or grit and pottery grog-tempered. One body sherd decorated with rows of stamped impressions is grass-tempered. Three of the reconstructible vessels are comparable with types identified from OND 2, a Sotho settlement dated to between the seventeenth century and the beginning of the nineteenth century in the Caledon Valley (Maggs 1976). This ceramic assemblage contrasts with that from Tienfontein 4A. Of twelve sherds in Tienfontein 4A that were either decorated or rim sherds, only one body sherd definitely had no grass temper.

The ceramic sequence

This suggests that an initial phase of contact with Iron Age farmers during the seventeenth or eighteenth centuries resulted in the acquisition by hunter-gatherers of trade items including metal and possibly some pottery at Tienfontein 4A. However the bulk of the ceramics from Tienfontein 4A are attributable to hunter-gatherers on stylistic and technological grounds. Ventershoek may have been mainly occupied during this period. Within approximately 160-170 years the evidence from Tienfontein 2 indicates that this situation is radically altered. By the nineteenth century at Tienfontein 2 most of the pottery used by the hunter-gatherers is no longer made by themselves, but is acquired from Iron Age farmers. Pottery decorative style is thought to be significant in terms of social identity (Sampson *et al* 1989:14) amongst contemporary 'Bushmen' further south. The lack of the distinctive hunter-gatherer pottery on their living sites dated to the nineteenth century on the fringe of the frontier zone may indicate a breakdown of traditional social identity amongst hunter-gatherers in this area when they began to forge strong ties with agriculturists.

The ceramic sequence beyond the periphery of Iron Age settlement

Ceramic sequences for the later part of the Stone Age have been established by Sampson (1972; Sampson *et al* 1989) in the Orange River Scheme area and the Seacow River Valley.

The Orange River Scheme

Six sites (Zaayfontein, Riversmead, Blydefontein, Glen Elliot, Glen Elliot Crevice and Holmsgrove) excavated by Sampson in the Orange River Scheme have stone tool assemblages associated with ceramics (Sampson 1972) dated mostly directly on sherds, from before 730 AD to after 1520 or 1620 AD (Beaumont & Vogel 1984). European artifacts in Spit 1 at Zaayfontein in association with Class A ceramics (Fig. 1.2) indicate that this ceramic group survived to the late eighteenth and early nineteenth centuries (Sampson 1988:37) in the Orange River Scheme area. According to Sampson Class B ceramics were associated with Phase 5 stone tools and were undecorated bowls with grit temper. Class B ceramics have since been re-examined and classified as 'Khoi' (Sampson & Vogel, 1996:99-100). Class A ceramics are stamp decorated (Figs 1.2 and 1.3), grass-tempered and associated with Phase 6 stone tools. Historical evidence connects this ceramic group with 'Bushmen' (Beaumont & Vogel 1984).

The Seacow River Valley

A sequence of development of the characteristic stamp decorated (Figure 1.3) grass-tempered 'Bushman' pottery is documented south of the Orange River scheme in the Seacow River Valley (Sampson *et al* 1989; Sampson &Vogel 1995). 'Khoi' grit-tempered pottery, generally associated with Late Stone Age herders, and plain grass-tempered pottery associated with hunter-gatherers are said to appear before 700 AD (Sampson &Vogel 1995:93). Throughout the fifteenth century rocker and comb-stamped ware (Figure 1.3: a,m,n) appears and possibly persists until the sixteenth century. Late in this phase non-rocker quill decoration and double punctate decoration were used (Figure 1.3: k,j). In the seventeenth century non-rocker motifs (e.g. Figure 1.3: b,c,e,i) including pointed spatulate patterns were used. Rocker-stamped ware reappeared in the late eighteenth century or early nineteenth century. 'Bushmen' potters are thought to have continued production of grass-tempered ceramics into the late nineteenth century although Sampson points out that the final rocker-stamp decoration phase may be associated with stockless herders.

Summary of the ceramic evidence

Hunter-gatherer sites with occupations dating approximately between 1200 BP and 500 BP in the Caledon Valley (Roosfontein, Tandjiesberg and Rose Cottage Cave) may have a ceramic component comparable with 'Khoi' pastoralist assemblages described from areas further south, or possibly with early ceramic assemblages from hunter-gatherer contexts in areas east of the Caledon Valley in KwaZulu-Natal. The lack of comparative data on the 'Khoi' ceramics and early KwaZulu-Natal ceramics (dated approximately between 2160 BP and 1580 BP) from hunter-gatherer contexts, makes it difficult to determine the affinities of this ceramic component from the Caledon Valley. However it is apparent that hunter-gatherers in the Caledon Valley were using grit-tempered ceramics before extensive agriculturist settlement of the area. Agriculturists are unlikely to have been the source of the earliest ceramics from Roosfontein, dated to 1200 BP, as there are no diagnostic sherds to indicate any connection with known agriculturist ceramic entities of this time range to the north or east of the Caledon Valley. Instead the assemblage may resemble 'Khoi' ceramics from areas further south and west. The closest areas of 'Khoi' settlement may have been in the Orange River Scheme area or along the Riet River. If the ceramics from Roosfontein and Rose Cottage Cave are 'Khoi' they may have reached the Caledon Valley through hunter-gatherer exchange networks. Alternatively these early ceramics described as 'Khoi' may have a hunter-gatherer origin. It has been suggested that the knowledge of ceramic technology may have spread by diffusion from areas further north into hunter-gatherer communities of sou Africa (e.g. Kinahan, 1995; Sadr, 1997). It is interesting to note that the early grit-tempered ce. anic assemblage from Roosfontein as well as the later assemblage from Rose Cottage Cave is dominated by bowl shapes. The earlier 'Khoi' assemblages from the Cape are also characterised by bowls or bag shaped pots, as is the early hunter-gatherer pottery from KwaZulu-Natal. It might therefore be argued that the pre-agriculturist grit-tempered ceramics from the Caledon Valley sites represent a ceramic tradition which developed out of the early traditions at the Cape or in Natal. This question will only be resolved when adequately dated and described assemblages are available from these areas.

There are diagnostic agriculturist sherds from the Rose Cottage Cave ceramic assemblage dated to 600 BP. These agriculturist sherds are comparable with either Type N or Type V agriculturist

ceramics. The presence of agriculturist sherds in the Mn and A levels at Rose Cottage Cave may indicate barter exchange with agriculturist settlements some distance north of the Caledon Valley because there is no evidence so far of such settlements in the immediate area at this time.

Grass-tempered ceramics attributed to hunter-gatherer manufacture in adjacent regions to the south and west of the Caledon Valley are also found in two of these earlier contexts (Tandjiesberg and Rose Cottage Cave). It is likely that the grass-tempered ceramics were made by Caledon Valley hunter-gatherers or that they were obtained by exchange from hunter-gatherers further south and west of the Caledon Valley.

It seems probable that these Caledon Valley sites are at the north-eastern limit of the distribution of grass-tempered ceramics (Rudner, 1979: 12 Fig. 8). There has been little research on hunter-gatherer sites in the highveld between the Caledon Valley and the Vaal River. North of the Vaal River evidence for an undated Later Stone Age occupation with ceramics comes from Pietkloof Cave near Johannesburg. The excavation was described by Mason (1951: 73-75) and the ceramics are grit-tempered and include a shouldered pot and decorated bowls which are attributable to agriculturists. In the Magaliesberg, Wadley has described evidence of interaction between hunter-gatherers and agriculturists from Jubilee Shelter and Cave James. No grass-tempered 'Smithfield' ceramics were found here either. Instead Bambata pottery came from the earliest contact levels at Jubilee Shelter dated between 1840-1550 BP (Wadley 1996:209). Phase 2 Early Iron Age (agriculturist) pottery came from the more recent contact levels dated 1350 BP at Jubilee Shelter (Wadley, 1996:211). After 680 AD in undated levels mostly undecorated pottery attributed to agriculturists was found (Wadley, 1996:213). This ceramic sequence in conjunction with stone tools and other evidence is interpreted as a progression from trade and exchange with agriculturists in the Bambata levels to a client relationship with agriculturists in the Phase 2 Early Iron Age levels (Wadley, 1996:214-215). By comparison on the basis of the ceramic evidence it seems that the Caledon Valley hunter-gatherers only became involved in direct contact with agriculturists at a considerably later date than in areas further north. Hunter-gatherers in the Northern Province may already have been largely absorbed into agriculturist society while their contemporaries further south in the Caledon Valley around 860 BP (Table 4.1) were manufacturing or exchanging their own distinctive grass-tempered ceramics.

Later nineteenth century ceramic assemblages from Caledon Valley hunter-gatherer sites including Mauermanshoek, Twyfelpoort, Westbury and Rooikrans are dominated by vessels with grit inclusions or temper and some pottery grog attributable to an agriculturist origin. This change may result from the establishment of new client and barter exchange relationships with agriculturists who were now living in the Caledon Valley.

The Caledon Valley sequence contrasts in its later stage with sequences described in adjacent regions such as the Orange River Scheme area and the Seacow River Valley, where grass-tempered ceramics attributed to hunter-gatherer manufacture persist possibly until the beginning of the twentieth century. The absence of grass-tempered ceramics from the Caledon Valley sites after the sixteenth century AD suggests that this pottery was no longer being made or exchanged in the frontier zone. The implications of this difference between the regions in terms of the frontier hypothesis are further examined in the following chapter.

7 CONCLUSIONS

Previous research by Maggs (1976) in the southern highveld established the southern boundary of agriculturist stone walled settlement in the lower Caledon Valley (Figure 1.1). The new research described here investigates the evider :e for interaction between hunter-gatherers and agriculturists in the middle Caledon Valley frontier zone (Figure 1.1) from a hunter-gath. er perspective. Ethnographic evidence shows that frontiers between hunter-gatherers and agriculturists are made up of synchronous and interspersed communities of both groups forming a 'cultural mosaic' (Moore, 1985:94). Historical evidence from the middle Caledon Valley as well as the archaeological evidence from hunter-gatherer and agriculturist sites in this area of the Caledon Valley frontier zone (Figure 1.1) clearly point to the existence of a 'cultural mosaic' of interspersed hunter-gatherer and agriculturist communities from at least the sixteenth century AD, until the area was occupied by European farmers after 1868 (Norton 1910b: 242; Theal 1908b: 311). Type V and Caledon Valley agriculturist settlements in the frontier zone ' ited between the sixteenth and nineteenth centuries (Maggs, 1976). Occupation levels fro ter-gatherer sites in the Caledon Valley dated from the fifteenth century onwards described in this work are characterised by stone tool assemblages and faunal remains dominated by wild species attributable to hunter-gatherers, and include increasing quantities of ceramics attributable to agriculturists. However the earliest agriculturist ceramics, and possibly the metal arrow insert from Rose Cottage Cave, may have come from settlements some distance away from the Caledon Valley. Historical sources for the Caledon Valley document the locations, movements and identity of the people living there from around the sixteenth century. They also describe relationships between hunter-gatherers and various groups of agriculturists and possibly pastoralists as well.

The historical evidence from the Caledon Valley, detailed in chapter 3, records that the area was inhabited by hunter-gatherers when the first agriculturist groups arrived from north of the Vaal River (Figure 1.1) (eg Dornan, 1907; Ellenberger & Macgregor, 1912; Stow, 1905; Moletsane, 1967; Norton, 1910b). It suggests that hunter-gatherers may have begun to transform their social organisation from an egalitarian system to a more hierarchical system with 'chiefs' (Dornan,

1907: 438, 439, 441; Stow, 1905: 32-33). Some hunter-gatherers owned livestock according to historical accounts (Stow, 1905: 183, 191). Although some hunter-gatherers are said to have lived in kraals (Germond, 1967: 44) containing wooden framed mat covered huts (Orpen, 1964: 274), historical sources confirm that hunter-gatherers also continued to live in caves and rock shelters in the middle Caledon Valley area until it was appropriated by European farmers (Ellenberger & Macgregor, 1912: 68; Stow, 1905: 189). This is supported by the archaeological evidence described in chapters 4, 5 and 6 for continued use of rock shelters by hunter-gatherers in the Caledon Valley into the early twentieth century.

The various types of relationships between hunter-gatherers and other groups in the Caledon Valley can be reconstructed from the historical sources and by using models from modern ethnographic accounts of hunter-gatherer social organisation. They include clientship whereby hunter-gatherers attach themselves to agriculturists or pastoralists and hunt and herd for them. Agriculturist groups in the Caledon Valley referred to in the historical sources include the Sotho speaking Fokeng, Koena, Taung and Ramokhele Taung. Client relationships with hunter-gatherers are described particularly with reference to the Taung groups. Clientship is defined here as the exchange of hunting or herding services for secondary products from livestock such as milk, or for livestock (eg Wilson, 1973:63). Interaction including intermarriage between all of these groups and hunter-gatherers is recorded in the historical sources. Intermarriage appears to have largely occurred between hunter-gatherer women and agriculturist men in the Caledon Valley. Nguni speaking agriculturist groups in the Caledon Valley, particularly the Phuti and Phetla, also intermarried with hunter-gatherers and had hunter-gatherer clients. Historical evidence indicates that the pastoralist (Korana) only arrived in the middle Caledon Valley during the 1830s. This group may also have had hunter-gatherer clients in the area.

Moore (1985) suggests that traditional reciprocal exchange relationships amongst hunter-gatherers are transformed to barter exchange relationships with agriculturists in a frontier situation. Reciprocal exchange relationships amongst Kalahari hunter-gatherers including the !Kung and Nharo entail gift giving of non-consumable items between individuals in a system of delayed reciprocity (Lee 1979:456; Weissner 1982; Barnard 1992:141). The system signifies an underlying reciprocal right of access to water and plant resources available to exchange partners

who may be resident at a considerable distance from each other. Barter exchange is defined here as the exchange of goods obtained by traditional hunting methods in return for domesticated produce and items of material culture including ceramics. Barter exchange results in immediate return without involving any further ties; it does not imply that social obligations exist between the exchanging parties. Moore's (1985) model explains both clientship and barter exchange relationships as social mechanisms adopted by hunter-gatherers to cope with the frontier situation. Hunter-gatherer social organisation is flexible and can be adapted to changing needs. The Caledon Valley hunter-gatherers appear to have modified traditional social concepts to meet the requirements of the frontier situation.

Both reciprocal and barter exchange relationships should be reconstructible from archaeologically recoverable distinctive material culture items attributable to either agriculturists or hunter-gatherers. Such items include ostrich eggshell beads probably made by hunter-gatherers and diagnostic ceramics which may be attributable to either group on stylistic and technological grounds. Domesticated plant remains found on hunter-gatherer sites may also be interpreted as evidence of barter exchange or possibly client relationships with agriculturists who grew them. I use these models to interpret the archaeological evidence for hunter-gatherer reciprocal exchange as well as evidence of interaction between hunter-gatherers and agriculturists from sites in the Caledon Valley frontier zone. I begin with the evidence derived from ceramic assemblages, followed by supporting evidence from stone artefact assemblages and faunal and plant assemblages.

Ceramic assemblages are the most useful category of archaeological information for the purpose of reconstructing interaction between hunter-gatherers and agriculturists in the Caledon Valley because their stylistic and sometimes their technological attributes can be tied to cultural identity. When the ceramic sequence described in chapter 6 from the hunter-gatherer sites in the Caledon Valley frontier zone (Figure 1.1) is compared with that from sites on the fringe and south of the frontier, an interesting difference emerges. The highly decorated grass-tempered ceramics associated with hunter-gatherers south of the hypothesized frontier in the Seacow and Orange River valleys persist into the nineteenth century (Sampson & Vogel, 1995:94; Sampson, 1988:37). However, on hunter-gatherer living sites in the frontier zone and along its southern

fringes this tradition is replaced by ceramics attributable to agriculturists, probably around the sixteenth or seventeenth century AD.

It is probable that grass-tempered pottery vessels made by hunter-gatherers were exchanged reciprocally in a system similar to *hxaro* relationships amongst the !Kung hunter-gatherers in Botswana (Wiessner 1982) and *//ai* relationships among the Nharo hunter-gatherers (Barnard 1992:141). Items used in reciprocal gift giving listed by Barnard include cooking utensils and pots. Ceramic evidence in the form of grass-tempered sherds from Rose Cottage Cave suggests that reciprocal exchange relationships were still operating between hunter-gatherer groups in the Caledon Valley and possibly with groups from further to the southwest in the Orange River Valley, where this ceramic ware is common, into the fifteenth century. Although the lack of ornaments from Level Mn at Rose Cottage Cave suggests that gift making amongst hunter-gatherers may have ceased by the fifteenth century, the presence of grass-tempered ceramics suggest that it is possible that reciprocal exchange of some items including ceramics continued for a while in less formal contexts before ceasing altogether during the fifteenth century. The agriculturist sherds at Rose Cottage Cave suggest possible barter exchange relationships with agriculturists who were probably mainly living in areas further north at that time. The absence of grass-tempered hunter-gatherer ceramics on hunter-gatherer sites inside the frontier zone after the sixteenth century AD implies that this pottery was no longer made by, or exchanged between, hunter-gatherers in the frontier zone. Their absence in the frontier zone signifies at least a partial breakdown in traditional reciprocal relationships with areas to the southwest of the Caledon Valley, where these items are found in hunter-gatherer archaeological contexts into the late nineteenth century AD. The ceramic evidence as well as the historical and ethnographic evidence therefore strongly suggests that hunter-gatherers in the frontier zone coped with the arrival of farming communities by establishing new social relationships with them. The replacement of hunter-gatherer manufactured ceramics with characteristic agriculturist ceramics probably reflects the development of barter exchange relationships with agriculturists. Ethnographic sources suggest that herding services were rewarded with secondary products from livestock rather than with material culture items such as ceramics, although the possibility that ceramics may have been acquired through client relationships cannot be ruled out. No grass-tempered sherds are described from ceramic assemblages on agriculturist settlements in the highveld (Figure 1.1)

(Maggs, 1976). It is probably significant that hun. gatherer ceramics are not even found on the earlier Type N agriculturist sites. This may reflect the non-reciprocal nature of exchange arrangements between agriculturists and hunter-gatherers there, even during the earlier phases of interaction between them. A further possible indicator for non-reciprocal exchange is the absence of evidence for ostrich eggshell bead manufacture on agriculturist sites in the highveld coupled with the presence of finished beads on these sites (Maggs, 1976). Good evidence for ostrich eggshell bead manufacture from fourteenth and fifteenth century occupation levels at Rose Cottage Cave, as well as more tenuous evidence from later hunter-gatherer contexts in the Caledon Valley including Rooikrans and Twyfelpoort, supports this suggestion.

Mazel (1989:151) suggests that stone artefacts and ostrich eggshell beads from early farming community sites dated before 1000 AD in KwaZulu-Natal represent equitable social relationships with hunter-gatherers within alliance networks. By contrast the lack of these items on later farming community sites, in conjunction with evidence for farming community items including ceramics on hunter-gatherer sites, is interpreted as representing payment for services rendered or for commodities. This in turn denotes less equitable client relationships between these groups. In chapters 2 and 3, I argue that ethnographic and historical data from the Caledon Valley supports the archaeological evidence for barter and client relationships between hunter gatherers and agriculturists from the sixteenth to the nineteenth centuries. Contrary to the reasoning used by Mazel, I suggest that hunter-gatherer artefacts including ostrich eggshell beads and stone tools on agriculturist settlements could result from inequitable client relationships. Stone tools could have been used to perform services such as hide preparation and ostrich eggshell beads may have been bartered in return for domesticated produce. Wadley uses this argument to explain stone artefacts and possibly also ostrich eggshell beads found on the early farming community site of Broederstroom (Wadley, 1996:214). She suggests that the lack of hunter-gatherer items on the later agriculturist site of Olifantspoort signifies the end of interaction between the two groups and the demise of hunter-gatherers in the area (Wadley, 1996:215).

Reduction in mobility for hunter-gatherer groups is one of the consequences of the 'mosaic frontier' with farming communities predicted by Moore (1985:108). He observes that amongst hunter-gatherers 'visiting, reciprocity, gift-giving, ritual aggregation, and fission/fusion all create

social relations that permit future 'mobility'. Mobility is the means of accessing resources and organising the distribution of products amongst hunter-gatherers. Because ethnographic models suggest that ritual aggregation is closely tied to mobility mechanisms in hunter-gatherer societies, restricted mobility might be expected to adversely affect aggregation behaviour. In chapter 5 I use Wadley's (1987 and 1989) model in an attempt to identify aggregation residues in the Caledon Valley archaeological assemblages. I conclude that there is no unequivocal evidence for an aggregation camp from any of the Caledon Valley hunter-gatherer contact period occupations except in Level A at Rose Cottage Cave (dated to 680 BP), which Wadley herself has argued is an aggregation occupation. Although in some cases the percentage of formal tools in contact levels is high enough to justify an aggregation interpretation other evidence to support the argument, such as gift exchange items, is lacking.

Using Wadley's (1987 and 1989) model to identify archaeological aggregation residues, evidence from stone artefact assemblages in combination with evidence for gift exchange and formal use of space on hunter-gatherer sites considered in chapter 5 in the middle Caledon Valley, suggests that after approximately 500 BP, or possibly during the period between 680 BP and 500 BP, signs of aggregation behaviour disappear. Level A (680 BP) at Rose Cottage Cave has a high proportion of formal tools (8%) and evidence of other residues associated with aggregation behaviour such as ostrich eggshell bead manufacture and worked bone as well as evidence for formal use of space inside the cave This occupation is interpreted as an aggregation phase camp by Wadley (Ouzman & Wadley, 1997:399). The more recent Level Mn (500 BP) has a lower proportion of formal tools (6%), few ostrich eggshell beads, less worked bone and no evidence of bead manufacture as well as less pronounced formal use of space (Wadley, 1992, Ouzman & Wadley, 1997). Wadley does not commit herself to defining the occupation in Level Mn as either an aggregation camp or a dispersal occupation, and indeed in this case it may be difficult to assess whether the Mn assemblage meets her criteria for an aggregation definition. However, the fact that hunter-gatherers seem to have largely discontinued use of this large cave after approximately 500 BP based on the ceramic and dating evidence is suggestive of a decline in aggregation behaviour. The lack of substantial evidence for continued hunter-gatherer occupation of Rose Cottage Cave after 500 BP may result from periodic use of the cave by much smaller

groups of hunter-gatherers than in the past. The ephemeral nature of this kind of occupation may have left little trace in the archaeological record of the cave.

Westbury rock shelter was unlikely to have been used as an aggregation phase camp because the area suitable for habitation was too small to accommodate a large group of people (Figure 4.8). No evidence of gift exchange items was found at Westbury. Although the use of space there, detailed in chapter 4, was highly patterned it indicated occupation of the site by a small group of people located around one hearth during the nineteenth century.

At Mauermanshoek (HA) Domleo (1993:50-51) suggests that a decline in the proportion of formal tools after contact signifies the end of aggregation occupations of this site. Although the evidence for aggregation in the pre-contact levels at Mauermanshoek may be questionable since it is based largely on the percentage of formal tools (Domleo 1993:49), it is nevertheless evident that the contact level assemblages at Mauermanshoek (HA) dated to the nineteenth century do not meet all of Wadley's criteria for defining aggregation occupations.

The situation at Twyfelpoort is more difficult to explain in terms of the expected decline in formality of stone tool assemblages predicted for a breakdown of aggregation and dispersal behaviour. Nevertheless, only the pre-contact level L is interpreted by the excavators as possibly representing an aggregation phase camp based on the high frequency of formal tools as well as worked bone and ostrich eggshell representing gift exchange items (Backwell *et al.*, 1997:94). Surprisingly, in recent contact levels dated after 1830 AD there are also relatively high levels of formal tools and ritual objects from Level H, combined with a lack of items used in gift exchange such as worked bone and ostrich eggshell. Wallace argues that formal tools are a means of expressing emblemic style. She suggests that an increase in formal tools in turn reflects increasing concern with territoriality and group identity caused by social stress (Backwell *et al.*, 1997:93; Wallace, 1997:23). According to this interpretation the lack of gift exchange items in the contact levels results from a breakdown in reciprocal exchange networks due to stress on a regional level which negated the option of moving in with neighbours therefore rendering reciprocal gift exchange redundant. Whatever the case, it is apparent that the artefacts in the

contact levels at Twyfelpoort do not meet all of the criteria listed by Wadley for aggregation occupation.

The evidence from stone artefact assemblages for a decrease in formality through time in the contact levels is not very clear at Rooikrans either. The ratio of formal tools is relatively high but fluctuates slightly through time (between 5.7%-3.9%) even in the recent contact levels (Table 5.4). However there is a decrease in formality in the stone tool assemblages in terms of tools per bucket in more recent occupation levels of Rooikrans between approximately 415 ± 65 BP and 100 ± 45 BP. Evidence from the admittedly very small samples of bone points and link shaft fragments possibly used in gift exchange suggests that these items decreased through time in the contact levels. No data on worked bone is available from the pre-contact levels. Only one ostrich eggshell bead came from the Level 2 (100 BP) and one from Level 3 (415 BP). Ostrich eggshell fragments decreased in density from the oldest to the youngest contact levels and reach their highest density in the pre-contact Level 4. This suggests that the use of ostrich eggshell reflecting manufacture of gift exchange items (or even barter exchange items during contact) declined during the contact period.

It is apparent from this review of data from the Caledon Valley sites that evidence from stone tool assemblages alone for a decline in formality during the contact period reflecting the demise of aggregation behaviour is not clear cut. However when other indicators of aggregation such as gift exchange items are taken into account a clearer picture emerges. Apart from the A level at Rose Cottage Cave which probably pre-dates the arrival of agriculturists in the area, none of the post-contact assemblages from the Caledon Valley sites could be unequivocally interpreted as having all the attributes listed by Wadley to define aggregation phase occupation.

Further possible evidence for restricted mobility in the last few hundred years comes from increased use of locally available raw materials at Westbury although this does not seem to be the case at Rooikrans. This difference may be due to greater ease of access to the raw material sources of the Caledon River at Rooikrans, which could in turn be explained by good relationships with local agriculturists there or by its close proximity to the Caledon River. A decrease in the use of hornfels in the contact levels at Rooikrans could indicate a breakdown in

exchange relationships with hunter-gatherers south of Wepener if the latter area was the source of the hornfels.

Reviewing these stone tool assemblages from a different perspective in chapter 5, I argue that the evidence for differences in the more diverse stone tool assemblage at Rooikrans compared to Westbury and Mauermanshoek which both have very high frequencies of scrapers, may reflect the use of the latter two as hunting or stock raiding camps. It may be possible to test the suggestion of stock raiding by residue analysis for the presence of domestic stock blood on stone artefacts (Wadley, *pers. comm.*). At Rooikrans in Levels 1 and 2 which are roughly contemporary with the contact levels at Westbury and Mauermanshoek, there is a wider range of formal tools including small segments. I suggest that this may result from the site being used as a base by clients of sedentary agriculturists. Such sites might be expected to have longer term occupations resulting from a more sedentary lifestyle. Artefact assemblages might therefore be more diverse reflecting a wider range of activities. They might also be expected to have substantial evidence of interactive relationships with agriculturists. The Level 1 and 2 stone artefact assemblages at Rooikrans with associated agriculturist ceramics and domestic plant remains from agriculturist sources could arguably represent a client site.

The ceramic and plant assemblages from Rooikrans also differ from those documented at Westbury and Mauermanshoek. The contrast in the ceramic and plant assemblages from the recent contact levels at Rooikrans compared to Westbury and Maurmanshoek are all the more striking in view of their probable closeness in date. There are a number of possible explanations for the observed differences. At Westbury and Mauermanshoek it is likely that the ceramic assemblage represents only a few vessels whereas at least thirty vessels were recovered from Rooikrans. This could be explained in several ways. Firstly the Rooikrans assemblage could have resulted from a more sustained occupation of the site. Indeed I will argue below that the greater depth of deposit at Rooikrans suggests that this may be the case.

The function of the ceramics may also partly explain this difference. Many of the reconstructible vessels from Rooikrans were bowls which are largely used for cooking and eating rather than storage of liquids. Although it was not possible to reconstruct vessel shape at Westbury the soot

on many of the sherds recovered suggests that ceramics there were also used for cooking. However the small quantity of ceramics from Westbury possibly suggests that a larger proportion of the food consumed there was cooked without using pots and could have been meat which may have been roasted. I therefore propose that the larger quantity of ceramics at Rooikrans may have resulted from cooking the pumpkin and Tsama melon evidently consumed at the site.

The difference between the plant assemblage from Rooikrans compared to those from Westbury and Mauermanshoek cannot be explained by differential preservation at the sites because plant material is found on all of them. At Rooikrans considerable quantities of domestic plant species including maize, Tsama melon, pumpkin, gourd and peach pips were found. By contrast at Westbury domestic plant food remains were rare, and at Mauermanshoek only remains of edible wild plant species were found. There are several potential explanations for these differences. A seasonal explanation is possible, but can in part be discounted on the grounds that Tsama and pumpkin are easily stored and therefore available from agriculturists over long periods. Other potential explanations include possible specialised use of Westbury, perhaps as a refuge site where stolen cattle were consumed by hunter-gatherers operating inside an area where they had not established close relationships with local agriculturists or European farmers or were on hostile terms with them. This would mean that they were not receiving domesticated plant foods from agriculturists, neither as payment for services nor in exchange for goods.

Both the archaeological evidence and the historical accounts of contact between Sotho and hunter-gatherers suggest the nineteenth or early twentieth century occupants of Rooikrans may have been in closer contact with the Sotho population in the area than the occupants of Westbury or Mauermanshoek. I propose that the most recent contact levels at Rooikrans may be attributable to hunter-gatherer clients of the Ramokhele Taung and Moletsane's Taung. Historical evidence detailed in chapter 3 suggests that this might also be true of Tienfontein 2 (Brooker, 1975 & 1980) which is close to Mafeteng where the Taung were relocated (Figure 3.3) after the agreement demarcating the new borders of Lesotho was signed at Aliwal North in 1869 (Theal, 1908b: 311). The radiocarbon date for the site (Table 4.1) is within the right range to support this suggestion. The historical evidence shows that the site was within the borders of the Free State by 1869. Although the area would have been occupied by Boer farmers this need not preclude

its use by hunter-gatherers. This argument is supported by a local tradition about the first owner of the farm Brakfontein upstream from Tienfontein 'who, concerned for his safety during a war soon after 1865, slept one night in the reeds beside the stream. He awoke the next morning to find the warm sleeping place of a "Bushman" not 100 yards away' (Brooker, 1980:39). Mauermanshoek like Rooikrans is within the borders of the area controlled by Moshoeshoe until 1868 and within the boundaries of the district of Mequatling (Figure 3.4). The markedly different character of the archaeological assemblages in Mauermanshoek in contrast to the one in Rooikrans could be explained by the close proximity of Mauermanshoek to the Wesleyan Mission Station of Merumetsu, which is only three km away to the north (Merriemetsie marked on the 1:250000 Map sheet 2826 3rd edition 1981). The historical evidence (chapter 3) shows that Merumetsu was established in the 1830s to serve the Korana who had just moved into the area (Thompson, 1973:402). The hunter-gatherers occupying Mauermanshoek may not have had such close and amicable relations with their Korana neighbours living around Merumetsu at that time, compared with their relationship with the agriculturist Taung living close by but further South (Figures 3.3 and 3.4). Alternatively it is also feasible that the Maurmanshoek contact levels are largely earlier than Westbury and Rooikrans. The date of 200 ± 50 BP, obtained from Mauermanshoek in the Dash level of MMH calibrates to AD 1678 with a wide range of other possible dates after calibration (Table 4.1). This could explain the different intensity of interaction with agriculturists represented there. Mauermanshoek could have been largely occupied prior to the arrival of Moletsane's Taung in the area in 1837.

Hunter-gatherer sites of the same period outside the Mequatling area, including Westbury and Twyfelpoort, could either represent seasonal occupation by hunter-gatherer groups who were closely linked to the Taung, but operating in an area where they had not established similar close relationships with local agriculturists, or a totally different hunter-gatherer group. They could also represent hunter-gatherer forays into European occupied land. The village of Winburg northwest of Mequatling was established in 1837 by Potgieter (Theal, 1904:288-9). Historical sources (Van Rensburg, 1990; Elof, 1980) show that Westbury probably lies outside the area which formed part of the Orange River Sovereignty (Theal, 1908a:267) from 1848 until 1854 (Figure 3.1) and was therefore in the area controlled ultimately by Moshoeshoe. Thereafter the Sovereignty became the Orange Free State (now known as the Free State) and Westbury probably remained

right on the border of European occupied land until 1869. In this year the Sotho were finally driven out of Mequatling and the Lesotho border was drawn at the Caledon River. Twyfelpoort is further north than Westbury and therefore may have been within the area controlled by the Orange River Sovereignty and later by the Orange Free State.

The contrast between the intensity of occupation reflected in the deep nineteenth to twentieth century contact levels at Rooikrans (approximately 450 mm depth) in comparison to contemporary levels at Mauermanshoek (HA) (approximately 100 mm depth)(Domleo, 1993: Fig. 8), Twyfelpoort (250 mm depth) (Wallace, 1993:60), Westbury (250 mm depth) and Tienfontein 2 on the fringe of agriculturist settlement (approximately 200 mm depth) may indicate increasing sedentism at Rooikrans. Signs of increased sedentism might be expected on a hunter-gatherer site when its occupants were closely tied to a group of sedentary agriculturists over a long period.

Evidence from faunal remains and plant remains of occupation of Rooikrans at least during spring and summer is of interest, because Loubser and Laurens (1994) have proposed a strategy whereby in summer hunter-gatherers retreated from the middle Caledon Valley to agriculturally marginal lands west of the frontier zone which were not occupied by agriculturists (Figure 1.1). Here hunter-gatherers are said to have accumulated livestock and other goods. This model is possibly contradicted by the data on plant remains and fauna from Rooikrans presented in chapter 5, which indicate summer occupation in the shelter by hunter-gatherers. This suggests that clientship took place in summer, and possibly for longer periods of time inside the frontier zone when hunter-gatherer sedentism increased in response to an intensifying relationship with sedentary agriculturists.

The evidence from both faunal and plant remains at Rooikrans supports the argument for co-operative relationships between the hunter-gatherer occupants of the shelter and their agriculturist neighbours. The wild fauna from Rooikrans includes most of the species represented in the pre-contact late and mid-Holocene levels at Rose Cottage Cave (see Plug, appendix B). The abundance and variety of wild fauna in the contact levels at Rooikrans therefore suggest that this resource was still available to hunter-gatherers even inside an area populated by agriculturists.

Because the archaeological evidence from plant and faunal remains shows that hunter-gatherers were settled amongst agriculturists in the frontier zone for at least part of the year, domestic animals in the contact levels in this area were most likely to have been obtained through co-operation with agriculturists rather than by theft, and the archaeological evidence especially from Rooikrans, supports the suggestion of the development of an intensifying relationship between hunter-gatherers and agriculturists in the frontier zone. Historical evidence of payment of cattle to hunter-gatherers as bride price in the Mequatling area (Norton 1910b: 244) lends additional support to this suggestion. Livestock may also have been stolen from European farmers. Historical sources document instances of hunter-gatherers raiding stock from Europeans in co-operation with agriculturists (Loubser & Laurens 1994). The majority of domesticated plant species from Rooikrans probably come from agriculturists. Both archaeological and historical sources indicate that maize, melons, pumpkins, gourd and cowpeas were grown by agriculturists before European settlement in the Caledon Valley. Peaches were introduced by missionaries in the 1830s and later adopted by agriculturists, so peaches in very recent hunter-gatherer contexts could have come from either source.

Mitchell *et al.* (1994:48) postulate that the Caledon Valley may have been largely unpopulated by hunter-gatherers for much of the second half of the Holocene between 5000 and 1000 BP. However the western Caledon Valley was certainly occupied by hunter-gatherers during this period (Wadley, 1995:577) and this is demonstrated by the evidence described in chapters 4 and 5 for occupation of Orange Springs around 2900 BP, as well as evidence for occupation during this period from five other sites. Evidence for more intensive occupation of the area after 1000 BP in Lesotho is explained in terms of the location of this area on the periphery of Iron Age settlement which acted as a magnet to hunter-gatherers in terms of new resources (Mitchell *et al.*, 1994:49). Mitchell *et al.* attribute ceramics from recent occupations in larger shelters in the eastern Caledon Valley to agriculturist habitation of the sites, but concede that ceramics in smaller shelters may reflect acquisition of agriculturist ceramics by hunter-gatherers. This suggests that the 'cultural mosaic' may have extended into the eastern Caledon Valley as well.

The emerging evidence from the Caledon Valley is consistent with Moore's model of intensifying interaction along a sedentary farmer/mobile forager frontier, resulting in the types of client

relationships described from historical and ethnographic sources in chapters 2 and 3. The added complication of the advent of European farmers in the area is of interest. Presumably the hunter-gatherers developed a niche for themselves as clients of agriculturists and were also able to establish relationships with European farmers. An old Sotho man interviewed on Rooikrans Farm claimed that 'Bushmen' continued to live on Tandjiesberg working for the European farmer until his adulthood. Another Sotho man on a farm near the site of Twyfelpoort claimed that there were hunter-gatherers in the area when he was a child (Wadley *pers. comm.*). These claims do not seem far-fetched in view of the radiocarbon dates from Level 2 at Rooikrans rock shelter which are calibrated to the beginning of the twentieth century. In support of this argument Orpen's account of the Winburg area west of the middle Caledon Valley reveals that European farmers had 'Bushman' servants in the 1850s (Orpen, 1964). Furthermore in 1927 Van Riet Lowe (1929:180) came across a 'Bushman' who spoke a San language working on the farm Schaaplaats on the Vet River approximately 72 km north-west of Ladybrand. A similar pattern is also described by Sampson (1972:209) near the Toverberg, where after initial hostility 'Bushmen' were working for European farmers in 1822.

Finally the ceramic evidence from Roosfontein, Tandjiesberg and Rose Cottage Cave described in this work supports the suggestion that hunter-gatherers in the Middle Caledon River Valley were using grit-tempered ceramics between 1200 BP and 500 BP, before there is evidence for agriculturist settlement in the vicinity. These ceramics may be similar to those described as 'Khoi' ceramics in areas to the south-west including the Seacow River Valley and Orange River Scheme area (eg Sampson & Vogel, 1996:100). It is even possible that these early grit-tempered assemblages in the Caledon Valley are derived from early ceramic assemblages found in hunter-gatherer contexts from areas to the east in Kwazulu-Natal or from early southern Cape ceramics. However, the lack of comparative data on the contemporary 'Khoi' ceramics from areas to the south and west as well as on earlier KwaZulu-Natal ceramics (dated approximately between 2160 BP and 1580 BP) and southern Cape ceramics (dated approximately between 1900 and 1600 BP) from hunter-gatherer contexts makes it difficult to determine the affinities of this ceramic component from the Caledon Valley.

The large ceramic sample available from Rose Cottage Cave, which includes diagnostic agriculturist sherds and possible 'Khoi' ceramics, offers the potential for these suggestions to be explored further through a comparison of clay chemistry and petrography. Furthermore the lack of evidence for typical Early Iron Age ceramics from excavations in shelters in the middle Caledon Valley supports the assumption made by Maggs and Hall (Hall, 1987) that this area was largely populated by hunter-gatherers until around the sixteenth century or even later. It also suggests that during this period their reciprocal exchange networks were mainly with communities to the southwest rather than over the Drakensburg to the east in Natal, where Early Iron Age communities were present from fifth century AD (Whitelaw & Moon, 1996:53). However a cowrie shell from Level A at Rose Cottage Cave and depictions of mormyrid fish in the rock art of the cave may suggest that there were links with the east coast as well (Ouzman and Wadley 1997), or even that the direction of such links changed through time.

It seems probable that the Caledon Valley sites of Tandjiesberg and Rose Cottage Cave are at the north-eastern limit of the distribution of grass-tempered ceramics (Rudner, 1979: 12 Fig. 8). There has been little research on hunter-gatherer sites in the highveld between the Caledon Valley and the Vaal River to test this suggestion (Figure 1.1). North of the Vaal River agriculturist ceramics, not grass-tempered 'Smithfield' ceramics were found in undated levels at Pietkloof Cave (Mason, 1951: 73-75). No grass-tempered 'Smithfield' ceramics have been found in the Magaliesberg either. The ceramic sequence from the Magaliesberg at Jubilee Shelter and Cave James, in conjunction with stone tools and other evidence, is interpreted as a progression from trade and exchange with agriculturists in the Bambata levels dated to around 225 AD to a client relationship with agriculturists in the Phase 2 Early Iron Age levels dated to 680 AD (Wadley, 1996:214-215). Agriculturist pottery is also found in the most recent undated levels. By comparison, on the basis of the ceramic evidence, it seems that the Caledon Valley hunter-gatherers only became involved in direct contact with agriculturists at a considerably later date than in areas further north. Hunter-gatherers in the Northern Province north of the Vaal River may already have been largely absorbed into agriculturist society while their contemporaries further south in the Caledon Valley around 1190 AD (Table 4.1) were manufacturing or exchanging their own distinctive grass-tempered ceramics.

APPENDIX A : GLASS BEADS FROM ROOIKRANS

GLASS BEADS FROM ROOIKRANS

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Classification of glass beads relies on a number of criteria which provide a complete physical description. The most important being (1) method of manufacture (i.e. drawn, wound, moulded or blown (2) type (3) colour (4) diaphaneity or clarity and (5) size. The classification procedure used here has been adapted from the scheme produced by Karklins (1985). It consists of a series of componential paradigms, or levels of analysis, which are arranged in a taxonomic hierarchy. Its end result is a series of unique subtypes, at least as far as can be determined by visual inspection.

Five glass beads were excavated from Rooikrans.

1. METHOD OF MANUFACTURE

i) *Drawn beads* are made from molten glass which has been perforated, drawn into hollow tubes. and then cooled. The tubes are sorted, cut into more or less one metre lengths and then chopped into various sizes. At this stage of manufacture the beads tend to have sharp and uneven ends. These beads would be classified as tubular.

Further processing involving reheating, 'packing' the holes of the beads and washing, results in a *drawn* bead with rounded edges. These form Karklin's (1985:90) recorded types of class II drawn beads.

Characteristic of drawn beads are bubbles in the glass, and striations on the surface, which, if present are oriented parallel to the perforation. Drawn beads are also referred to in the literature as Margarite, tube or hollow canes (Karklins 1985:88), *seed* and *pound* beads and mutisalah.

ii) *Wound Beads*. Wire-wound or wound glass beads are made from solid glass rods, heated over a concentrated flame and wound around a rotating chalk-coated copper wire or iron mandrel until the desired size is obtained. The molten glass is cut, shaped, decorated and smoothed with iron tools or a half-mould and can be removed from the wire or mandrel once it has cooled. The perforation may taper slightly if an iron mandrel is used. Different coloured thin glass filaments and glass powder can be applied to the surface for decoration. Alternatively, wound beads can be reworked into melon or other shapes while the glass is still molten, and malleable. Wound beads are produced individually and the finished product depends entirely on the glassmaker's skill. Wound beads are recognised by swirl marks that run around the perforation, and elongated or round bubbles which are oriented like the swirl marks.

Beads can also be wound directly from crucible furnace molten glass. These are often referred to as *furnace wound* beads.

iii) *Moulded beads*. Basically the method involves compressing soft and malleable glass into a mould. A movable pin perforates the glass to form the bore. According to Karklins (1985) *mould-pressed* beads are usually symmetrical and may also have markings on the surface such as 'orange peel', ridges or creases.

Two moulding techniques were used to produce the moulded beads found at Rooikrans. One was a moulded, PMIa, bead and one *mould-pressed*, MPII, four sided and faceted bead were excavated at Rooikrans. The PMIa (black) moulded bead is a very common bead found in South Africa.

Additional levels of analysis divide and subdivide the beads into finer categories on the bases of shape, size, colour and appearance. Description of the methods and the physical characteristics involved in bead classification follow.

2. COLOUR

Colour is an important variable in bead classification and is used routinely in attribute analysis. It has played an important role in the history and development of glass technology and often determined the success or failure of a trader or an expedition, particularly amongst African societies. For the purpose of this project the colour was first described in familiar and widely understood terms such as pink, blue, green, etc. They were then coded according to standardised colours (Munsell Colour 1976).

3. SIZE

The maximum diameter of beads were measured with vernier calipers. The following size classes of beads were used, based on those drawn up by Kidd & Kidd (1970:66):

Very small	less than 2 mm
Small	2-4 mm
Medium	4-6 mm
Large	6-10 mm

For purposes of precision in the classification developed here, the diameters and lengths of all the beads were measured to the nearest tenth of a millimetre, as suggested by Karklins (1985:19).

It is recommended for future bead research in Southern Africa, that when dealing with large collections summary statistics such as means, modes and ranges could be calculated for using subsamples (eg. 100 randomly selected beads of each variety in a collection). Such data would be quite adequate (particularly when dealing with simple, drawn, monochrome 'seed' beads) for presenting data for recording and comparative purposes. This consideration is especially important where time and labour costs are involved (Saitowitz, 1990).

Bead size can be an important factor in beadmaking amongst South African societies so it is worth recording the information. Caton Thompson (1931:242) for example, noted that smaller bea. 'ere preferred, probably because 'they worked up more effectively into sewn patterns'.

4. CLARITY

Diaphaneity is the term used to describe the clarity of the glass. **Opaque** glass is impenetrable to light on the thinnest edges; **Translucent** is when the glass transmits light but does not allow for vision through it i.e. objects, such as a pin or thin wire in the perforation of a bead will only be seen very indistinctly. **Transparent** glass is self explanatory (the perforation is clearly visible when the bead is held sidew.ys to the light).

VISUAL CLASSIFICATION OF THE BEADS

One monochrome, white, *drawn* (IIa) bead; one and a half *wound* (WIb) turquoise beads; one round 'ridged tube' bead with 6 facets; one press-moulded (I . .a) .ead and one mould-pressed (MPII), four sided and faceted bead were excavated from Rooikrans.

Glass Site	Colour	Munsell No.	Method of Manufacture	Size	Clarity
DS (Li/M)	White	N9.5/90.0/R	IIa	D:401 L:3.03mm	Opaque
DS (Li/M)	Turquoise	7.5B 7/8	WIb	D:8.06 L:6.9rnm	Translucent
*DS (Li/M)	Turquoise	5.B 6/8	WIb	D:8.04 L:501mm	Translucent
G4 Sad/Wim	Engine red	5.0R 5/12	WIIf round, 'ridged tube' with 6 facets	D:7.06 L:7.01 mm	Opaque
I3	Black	N9.5/90.0/R	PMIa	D:5.01 L:4.02 mm	Opaque

Glass Site	Colour	Munsell No.	Method of Manufacture	Size	Clarity
D52 (Kat)	Red	5.OR 4/14	MPII *mould-pressed* 4 sides faceted along on the widest edges (Beck's type Long Bead IX.D.2c).	D:10.60 L:22.40 mm	Transparent

COMMENTS

The slight colour variation between the two turquoise, monochrome, *wound* beads found in DS (last of Linde/Maltitz), could be attributed to different manufacturers. The one (broken, slightly smaller of the two -*DS) was made in Sachse, Czechoslovakia and the other at one at Bayreuth, Germany (Saitowitz 1994:43). They were more than likely *furnace wound* made beads.

The type, size and colour of this particular bead seem to have been very popular throughout Southern Africa over a long period of time. I have personally come across them in an archaeological context from Great Zimbabwe, Botswana and Lesotho: Peter Mitchell also found a few of them at his site called Pitsaneng. As a matter of fact I even bought an *original pack* bag of them including the Panther head label (from Czechoslovakia: Saitowitz 1993) when I was on a field trip in Kwazulu some years ago. Hundreds have also been taken from a ship, the SS Kaffir, wrecked near Cape Point in 1878. So you see they seem to have been everywhere!

The same can be said for the white, monochrome *seed* bead from DS. The pure white bead seems to have replaced the creamy white bead or crackled bead which we start to find at sites towards the end of the 18th Century and into the 19th (Saitowitz and Sampson 1992).

Fashionable beads seem to have been produced for ages and everyone copied one another to get into the market. Nowadays glass beads of this size are very costly and subsequently are being replaced by plastic ones instead.

The most unusual beads are the round, 'ridged tube' bead with 6 facets and the monochrome mould-pressed (MPll) and faceted bead, possibly copied to look like an agate (agate beads were also very popular trade items, and have been for hundreds of years).

These two beads are reminiscent of beads which Karklins (1985) has described as mid-to late 19th Century Venetian beads. According to his description, the long, mould-pressed bead could have come from Czechoslovakia. It is therefore possible that the origin of the beads from Rooikrans were Venetian, Bohemian and or/German.

The obvious recommendation is to follow the visual classification with chemical analysis. Unfortunately for reasons already mentioned, it is not sufficient to comment on different types of beads without scientific or chemical confirmation.

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APPENDIX B : THE FAUNAL REMAINS FROM ROOIKRANS, LADYBRAND DISTRICT, FREE STATE

THE FAUNAL REMAINS FROM ROOIKRANS, LADYBRAND DISTRICT, FREE STATE

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The faunal remains from Rooikrans were submitted for analysis to the Transvaal Museum. Five levels and two pit features were recognised by the excavator (Thorp *pers. comm.*). Dates range from between 100 to 400 BP and 3700 to 6000 BP for Levels 1-3 and 3-4 respectively.

The total faunal samples numbers more than 19000 fragments of which 5,3% could be identified to species or animal size class (Table 1).

Many species are represented in the samples (Table 2). Domestic animals are cattle, sheep, or goats, dogs and chickens, but their remains occurred in Levels 1 and 2 only. Wild animals were hunted, trapped and gathered. Antelope remains represent most species that would nave occurred in the area. Small and large bovid species were hunted and include grassland as well as bush and mountain dwellers.

The collection has been accumulated through the action of various agents, human, animal predators and self-introduced. The insectivore, some of the *Otomys*, *Cryptomys*, other small rodents, amphibians and lizards were probably accumulated through the actions of small carnivores and birds of prey such as owls. Other specimens such as a vertebra fragment, 16 of the *Otomys* elements and the chicken from Level 2 are fresh and appear to have been introduced recently. The fresh *Otomys* specimens are from Level 3 in square DS which is known to have been disturbed by illegal excavation.

Hyrax remains are common in Levels 2-4 as well as in the pit features. They may have been utilised by humans, but it is possible that they could also have been leopard prey and some could also have been self introduced.

The people who used Rooikrans may have fished, particularly the *Clarias* and *Labeo*. The unidentified fish remains are mostly of small fish and may also have been caught by animal predators or birds.

The warthog remains from Level 3 in the disturbed square DS are of the same individuals as from the pit features in square DS2 (with Level 2 fill) and square I3 (with Level 3 fill). The bones from the pit features appear to contain a mixture of remains that belong to specimens from all levels, and shows a considerable amount of disturbance.

The sample of bovid skeletal parts per level is too small to interpret, but when they are combined for all units, the sample is sufficiently large (Table 3). The assemblage follows a pattern seen in most shelter site bone collections such as Tloutle (Plug in press) and Rose Cottage Cave (Plug & Engela, 1992) for example. It shows that natural attrition and the effects of marrow extraction, trampling and the mass of overburden fragmented the bones to such an extent, that only the smaller and more robust fragments remained intact. This leads to over representation of some elements and under-representation of others.

Eight point and point / linkshaft fragments were found in Levels 2, 3 and the pit feature in square DS2. All have circular sections and are polished. From Levels 2 comes a flat point, probably the pointed end of a tool similar to a matting needle. A small barrel shaped bone tool with a circular section and a V-shaped notch cut into one end comes from the pit feature in 13 (Figure 5.6 :4). Level 2 also yielded a light blue glass bead, 5.8m in diameter. A Bov. III tibia flake and a Bov. I femur shaft fragment each have one end shaped and polished into a point.

Most of the species represented are adult, but a few foetal / neonate fragments of a Bov. II, probably Reedbuck occur in Level 3 (Table 4). Some Juvenile, sub-adult, young-adult, mature and aged animals are also represented. The various age categories are not equal in the time span

they represent. The adult category will cover a larger period of all species than the other categories would. A large number of adult specimens is therefore expected. The presence of foetal/ neonate and juvenile individuals indicate that the shelter was used at least during spring and summer.

The wild species found at Rooikrans were also identified from the Rose Cottage Cave, Late and mid-Holocene deposits. The domestic animal species found at Rose Cottage Cave do not include dogs, but at both sites cattle, sheep and sheep or goats were represented (Plug & Engela, 1992).

Remains of single individuals of *Connochaetes gnou* were recovered from Level 2 in square I3 as well as from the pit feature in this square which had Level 3 fill. Remains of a single individual of *Procavia capensis* were found in Level 3 in square DS2 and Level 4 in the disturbed square DS. Remains of another single individual of *Procavia capensis* were found in the pit feature with Level 2 fill in square DS2 as well as in Level 4 in the disturbed square DS. Remains of a single individual of *Damaliscus dorcas* were found in Level 3 in square DS2 as well as in Level 3 and Level 4 of the disturbed square DS. Fresh *Otomys* remains occurred in the disturbed square DS in Levels 3. It is unlikely that this animals was self introduced as this species does not usually burrow. This indicates that most of the vertical displacement of faunal remains occurred in the disturbed square DS and in the pits in squares DS2 and I3.

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TABLE 1 ROOIKRANS: TOTAL SAMPLE

SKELETAL PART	SURFACE LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	PIT FEATURES	TOTAL
Identified remains	47	255	343	171	177	1003
Enamel fragments	46	340	151	131	171	839
Skull fragments	16	156	158	130	189	649
Vertebra fragments	6	43	64	165	20	298
Rib fragments	10	100	102	111	107	430
Miscellaneous fragments	344	3891	2492	2076	2224	11027
Bone flake	309	1813	1214	697	796	4829
TOTAL UNIDENTIFIABLE	731	6343	4181	3310	3507	18072
TOTAL SAMPLE	778	6598	4524	3481	3684	19075
Mass identifiable g	59.8	492.6	469.2	224.7	467.8	1714.1
Mass unidentifiable g	289.9	4374.9	5102.4	1606.3	1721.4	13095
TOTAL MASS	349.7	4867.5	5571.6	1831	2189.2	14809
% identifiable	6	4	7.6	5	4.8	5.3

TABLE 2. ROOIKRANS SPECIES PRESENT PER LEVEL AND THE PIT FEATURE, NISP / MNI

SPECIES	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	PIT FEATURES
Insectivora (shrew)	0	0	0	3/1	0
Papio ursinus	0	1/1	0	0	0
Canis familiaris	1/1	9	0	0	0
Canis mesomelas	0	0	0	1/1	0
Canis of. mesomelas	0	0	1/1	1/*	0
Canis sp.	0	0	1/*	0	0
Viverridae/mustelidae	1/1	0	0	3/1	1/1
Panthera pardus	0	0	0	1/1	0
Felis of lybica	0	0	0	2/1	0
Carnivora gen. et. sp. indet..	0	3/2	0	0	0
Procavia capensis	3/1	27/5	48/4	27/3	16/2
Phacochoerus aethiopicus	0	9	4/1	0	2/1
Suidae sp. indet..	0	0	1/*	0	0
Bos taurus	5/2	0	0	0	0
cf. Bos taurus	0	1/1	0	0	0
Ovis aries	1/1	1/1	0	0	0
Ovis/Capra	2/*	7/3	0	0	0
Connochaetes gnou	0	11/2	10/4	8/2	22/6
Connochaetes cf. gnou	1/1	0	0	0	1/*
cf. Connochaetes gnou	0	2/1	2/*	0	3/*
Damaliscus dorcas	0	1/1	10/2	4/1	6/2
cf. Damaliscus dorcas	0	0	2/*	0	1/*
Connochaetes / Alcelaphus	1/1	0	0	1/*	1/1
Alcelaphinae sp. indet..	0	2/1	0	0	0
Sylvicapra grimmia	0	0	4/1	4/1	0
cf. Sylvicapra grimmia	0	1/1	1/1	1/*	0
Antidorcas marsupialis	0	0	6/1	0	0
cf. Antidorcas marsupialis	0	0	1/*	0	0
Raphicerus campestris	2/1	0	5/1	1/1	5/3
cf. Raphicerus campestris	0	0	2/*	0	0
cf. Pelea capreolus	0	2/1	2/1	0	0
Taurotragus oryx	0	0	0	0	1/1
cf. Taurotragus oryx	0	0	1/1	0	0
Redunca cf. arundinum	0	0	0	0	1/1
Redunca fulvorufula	0	1/1	3/1	0	2/1
Redunca cf. fulvorufula	0	1/*	0	1/1	0
Redunca sp.	0	0	1/1	0	0
Pelea/Redunca	0	0	1/*	0	0
Bovidae gen. et. sp. indet.. (Bov. 1)	2/1	20/1	32/*	11/*	11/2
Bovidae gen. et. sp. indet. (Bov. 11 non-dom)	0	16/*	24/*	0	0
Bovidae gen. et. sp. indet. (Bov. II indet..)	2/*	8/1	3/1	12/1	13/*
Bovidae gen. et. sp. indet. (Bov. III non-dom)	3/1	22/1	25/*	12/*	15/*
Bovidae gen. et. sp. indet.	1/*	0	0	0	0

(Bov. III indet.)					
Hystrix africaeaustralis	0	1/1	0	0	1/1
Pedetes capensis	0	4/1	1/1	0	1/1
Cryptomys hottentotus	0	0	0	0	3/1
Otomys irroratus	0	0	8/2	0	0
Otomys cf. irroratus	0	0	30/3	0	0
Otomys sp.	0	0	2/*	2/1	3/1
Rodentia gen. et. sp. indet.. (small)	0	5/2	9/*	9/2	5/1
Lepus sp.	0	2/1	1/1	5/1	0
Lagomorph	2/1	0	5/*	7/1	5/1
Gallus domesticus	3/1	1/1	0	0	0
Struthio camelus	11/1	90/1	45/1	11/1	32/1
Francolinus sp.	0	2/1	0	0	0
cf. Francolinus sp.	0	0	1/1	0	0
Numida meleagris	0	0	0	0	0
cf. Numida meleagris	0	0	1/1	1/1	0
Tytonidae / Bubonidae	0	1/1	1/1	0	0
Otidae sp. indet..	0	0	1/1	0	0
Aves gen. et. sp. indet..	1/1	0	4/1	1/1	0
Varanus cf. niloticus	0	1/1	0	0	0
cf. Cordylus giganteus	0	0	1/1	0	0
Sauria gen. et. sp. indet..	1/1	0	1/1	0	0
Testudinidae sp. indet.	5/1	9/2	2/1	9/2	2/1
Pyxicephalus adspersus	0	3/2	1/1	3/1	7/2
Xenopus sp.	0	0	0	1/1	1/1
Amphibia gen. et. sp. indet..	0	2/1	17/3	11/3	12/5
Clarias sp.	0	0	2/1	3/1	1/1
Labeo sp.	0	2/1	1/1	0	0
Pisces gen. et. sp. indet..	0	2/1	14/3	20/3	10/3
Achatina sp.	0	0	1/1	0	0
Unionidae	0	2/1	4/2	0	1/1

TABLE 3. ROOIKRANS: BOVID SKELETAL PARTS

SKELETAL PARTS	BOV. I	BOV. II	BOV. III	TOTAL
Horncore	0	5	1	6
Skull & Mandibles	13	11	10	34
Teeth	16	29	51	96
Scapula	1	5	1	7
Humerus	5	7	10	22
Radius	7	6	7	20
Ulna	2	1	0	3
Pelvis	3	2	2	7
Femur	8	5	6	19
Tibia	3	8	7	18
Patella	0	1	1	2
Metacarpus	3	2	13	18
Metatarsus	5	11	8	24
Metapodiuum	8	8	7	23
Ossa carpi	0	4	0	4
Ossa tarsi	4	6	2	12
Ossa malleolare	1	1	0	8
Sesamoid	5	1	2	8
Phalanx 1	13	9	16	38
Phalanx 2	2	11	4	17
Phalanx 3	0	2	4	6
TOTAL	99	135	152	386

TABLE 4. ROOIKRANS: AGES OF ANIMALS AT TIME OF DEATH, MNI BASED ON TOOTH ROWS, EXCEPT CLASS FOETAL/NEONATE WHICH IS BASED ON POST-CRANIAL REMAINS.

1 = Age class, Foetal/Neonate; 2 = Juvenile; 3 = Sub-adult; 4 = Young adult; 5 = Adult; 6 = Mature; 7 = Aged.

SPECIES	1	2	3	4	5	6	7
Insectivora (Shrew)	0	0	0	0	1	0	0
Canis familiaris	0	1	0	0	0	0	0
Canis mesomelas	0	1	0	0	0	1	0
Viverridae / mustelidae	0	0	0	0	1	0	0
Carnivora indet.	0	0	0	0	2	0	0
Procavia capensis	0	1	0	0	4	0	0
Phacochoerus aethiopicus	0	0	0	0	1	0	0
Bos taurus	0	0	0	0	2 (VII)	1 (VII)	0
Ovis/Capra	0	1 (III)	1 (IV)	0	1 (V)	0	0
Connochaetes gnou	0	2	1	2	8	1	2
Damaliscus dorcas	0	0	0	0	4	1	1
Connochaetes / Alcelaphus	0	0	0	0	1	0	0
Sylvicapra grimmia	0	0	0	0	1	1	0
Raphicerus campestris	0	0	0	1	4	0	1
Redunca fulvorufula	1	0	0	0	2	0	0
Bov. I	0	0	0	0	3	1	0
Bov. II	0	0	0	0	0	0	1
Bov. III	0	1	0	0	0	0	0
Pedetes capensis	0	0	0	0	3	0	0
Hystrix africaeaustralis	0	0	0	0	1	0	0
Cryptomys hottentotus	0	0	0	0	1	0	0
Otomys sp.	0	0	0	0	7	0	0
Lagomorph	0	0	0	0	3	0	0

APPENDIX C : THE FAUNAL REMAINS FROM WESTBURY, LADYBRAND DISTRICT, FREE STATE

THE FAUNAL REMAINS FROM WESTBURY, LADYBRAND DISTRICT, FREE STATE

Ina Plug

Transvaal Museum, Pretoria

The faunal sample from Westbury Rock Shelter is very small. The site has been dated to the eighteenth, nineteenth century and represent a Late or terminal Stone Age occupation with possibly some influence of Bantu speakers.

The bulk of the sample comes from Level 2 (Table 1). Only six species are represented of which four are mammals. *Bos taurus* or cattle remains are best represented, and form the bulk of the identified sample (Table 2). Only the gnou was hunted. The hare may relate to the archaeological sample but the rodent and amphibian remains are probably the food remains of raptors such as owls or small predators. The shell fragment of the fresh water mussel may or may not relate to human activity.

TABLE 1. WESTBURY: FAUNAL REMAINS

SKELETAL PART	SURFACE	LEVEL 1	LEVEL 2	LEVEL 2a	LEVEL 3	TOTAL
Bovid remains	0	0	16	0	0	16
Non-bovid remains	1	1	3	2	0	7
TOTAL IDENTIFIABLE	1	1	19	2	0	23
Enamel fragments	0	2	18	13	0	33
Skull fragments	0	2	7	1	0	10
Vertebra fragments	0	0	4	0	0	4
Rib fragments	1	1	5	2	0	9
Miscellaneous fragments	4	9	779	64	16	872
Bone flakes	5	11	32	18	3	69
TOTAL UNIDENTIFIABLE	10	25	845	98	19	997
TOTAL SAMPLE	11	26	864	100	19	1020
Mass identifiable	0.1	0.8	242.8	0.2	0	243.9
Mass unidentifiable	2.7	26.8	134.4	22.3	7.3	193.5
TOTAL MASS	2.8	27.6	377.2	22.5	7.3	437.4
No. burnt	9	12	188	50	3	262

TABLE 2. WESTBURY: SPECIES PRESENT NISP / MNI

SPECIES	SURFACE	LEVEL 1	LEVEL 2	LEVEL 2a
Bos taurus	0	0	14/2	0
Connochaetes gnou	0	0	1/1	0
Bov. III (non-domestic)	0	0	1/*	0
Rodent medium	1/1	0	0	0
Lepus / Pronolagus	0	0	2/1	0
Amphibian	0	0	0	2/1
Unionidae	0	1/1	1/1	0

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