

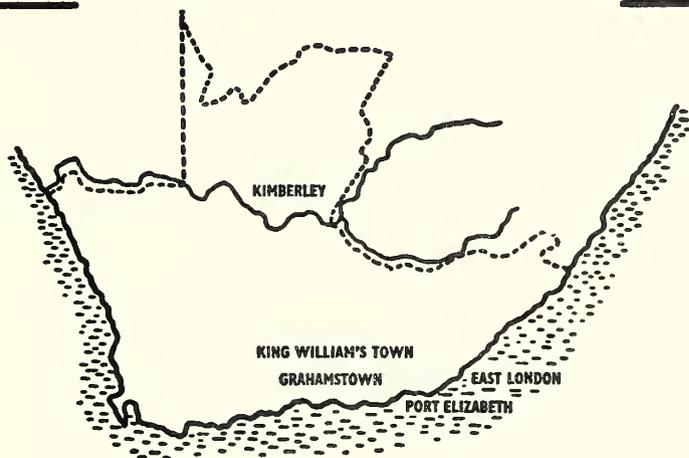


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Excavations at Duiker Eiland, Vredenburg District, Cape Province

by

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INTRODUCTION

Evidence of prehistoric coastal exploitation at Duiker Eiland (32° 43'S; 17° 55'E) was investigated during 1975 as part of a study of coastal settlement in the western Cape during the latter part of the Holocene. Other excavated sites in this region (Fig. 1) are Elands Bay Cave (Parkington, 1972, 1976a, 1976b), Paternoster (Robertshaw, 1977) and Stofbergfontein (Robertshaw, in press). The present report describes the material recovered from excavations at Duiker Eiland but does not attempt an overall synthesis of coastal settlement in the western Cape. Discussion is focused on the diet of the site's inhabitants, the season at which occupation took place, and on the function and age of the stone features found in association with the shell midden.

LOCATION

The farm Duiker Eiland is located at the north-western corner of the Vredenburg peninsula (Fig. 1). The archaeological site itself is found on the tip of the peninsula known as Cape St Martin, which is an area of unconsolidated sand dunes lying on a granite basement only a few metres above sea-level. Dykes of porphory and granite-porphory occur commonly in the area (Geological Survey, 1972). The sand dunes tend to be oriented approximately north-south with archaeological occurrences being found in the deflated areas between dunes. Dune movement no doubt causes sites to be exposed and buried at regular intervals.

Cape St Martin is almost surrounded by a shallow, shelving rocky coastline, which today supports a considerable shellfish population. Large flocks of Cape cormorants (*Phalacrocorax capensis*) numbering up to tens of thousands also pass this point twice daily on their way to and from roosting grounds further south. It is not surprising, therefore, to find that a large number of shell middens are located on Cape St Martin; indeed the whole area can be regarded as virtually a single archaeological site.

Only one midden was excavated at Duiker Eiland. It is located about 100m from the sea on a surface free from sand dunes at a height of approximately 5m above sea-level. Found close to the midden were a number of stone features similar to those described in detail for the southern Cape by Avery (1974) and Cairns (1975). Several of these were cleaned and excavated in an attempt to discover their function and age, and hence whether they could be considered contemporaneous with the excavated shell midden.

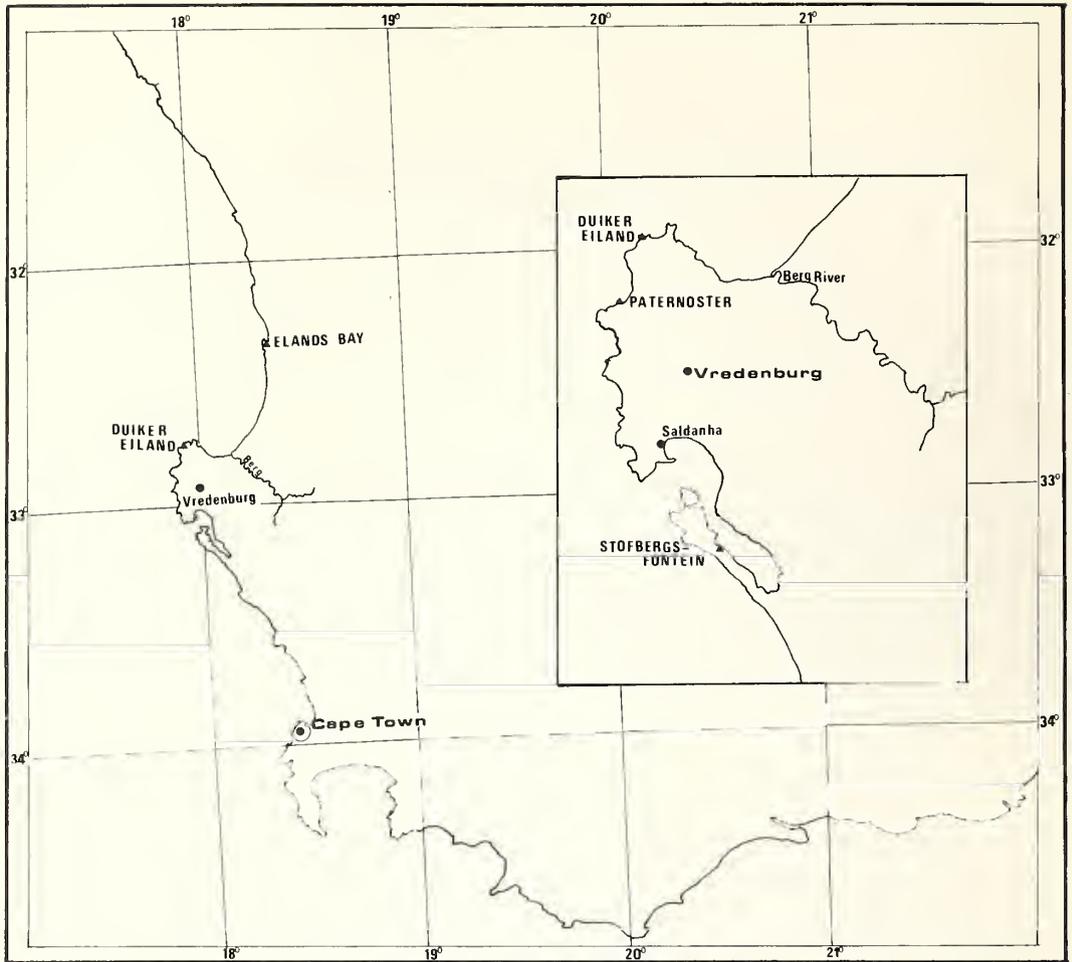


Fig. 1. Location of Duiker Eiland and other excavated coastal sites.

EXCAVATION

The excavated shell midden (Fig. 2) had an exposed surface covering an area of approximately 100m². Of this surface 29m² were removed and passed through a combination of 12mm and 3mm mesh sieves. All cultural and faunal material was retained, and regular bulk shell samples were kept from the 12mm mesh sieve. Excavations were pursued below the surface in 12m² of the midden (Fig. 3). Unlike the consolidated shell middens found at Paternoster (Robertshaw, 1977) and Elands Bay (Parkington, 1976a), archaeological horizons below the surface at Duiker Eiland were rarely more than 5cm thick, ephemeral in extent and separated often by sterile dune sand. The impression given by the excavated site was of a small dune visited briefly during its accumulation by occasional bands of hunter-gatherers who stayed for a



Fig. 2. Duiker Eiland: The excavated midden.

short time and left only small amounts of midden debris. The extent of these sub-surface archaeological horizons was plotted (Fig. 4).

Occupation debris was found only to a depth of about 12cm below the midden surface and three stratigraphic horizons were discernible. Layer 1 consisted of the surface midden. Layer 2 contained a rich faunal assemblage together with shell, charcoal and some artefacts. Layer 3 comprised two units recognized in the field on the same stratigraphical level and therefore thought to be different facies of the same occupation.

Two radiocarbon dates have been obtained from Dr J. C. Vogel of the National Physical Research Laboratory in Pretoria which are:

Pta 1581 Surface (layer 1) (shell)	1 700 \pm 50 yrs B.P.
Pta 1554 Layer 2 (charcoal)	1 930 \pm 70 yrs B.P.

CULTURAL REMAINS

Lithic

A typological breakdown of the stone artefacts is given in Table I. The typology is the same as was employed in the analysis of material from Paternoster (Robertshaw, 1977: 66), which in turn was a modified version of that used by Janette Deacon in her analysis of the artefacts from the Wilton name site (Deacon, 1972). Though the size of the assemblage from Duiker Eiland is small, formal tools are nevertheless comparatively rare and the small sample of tools recovered does not merit metrical analysis.

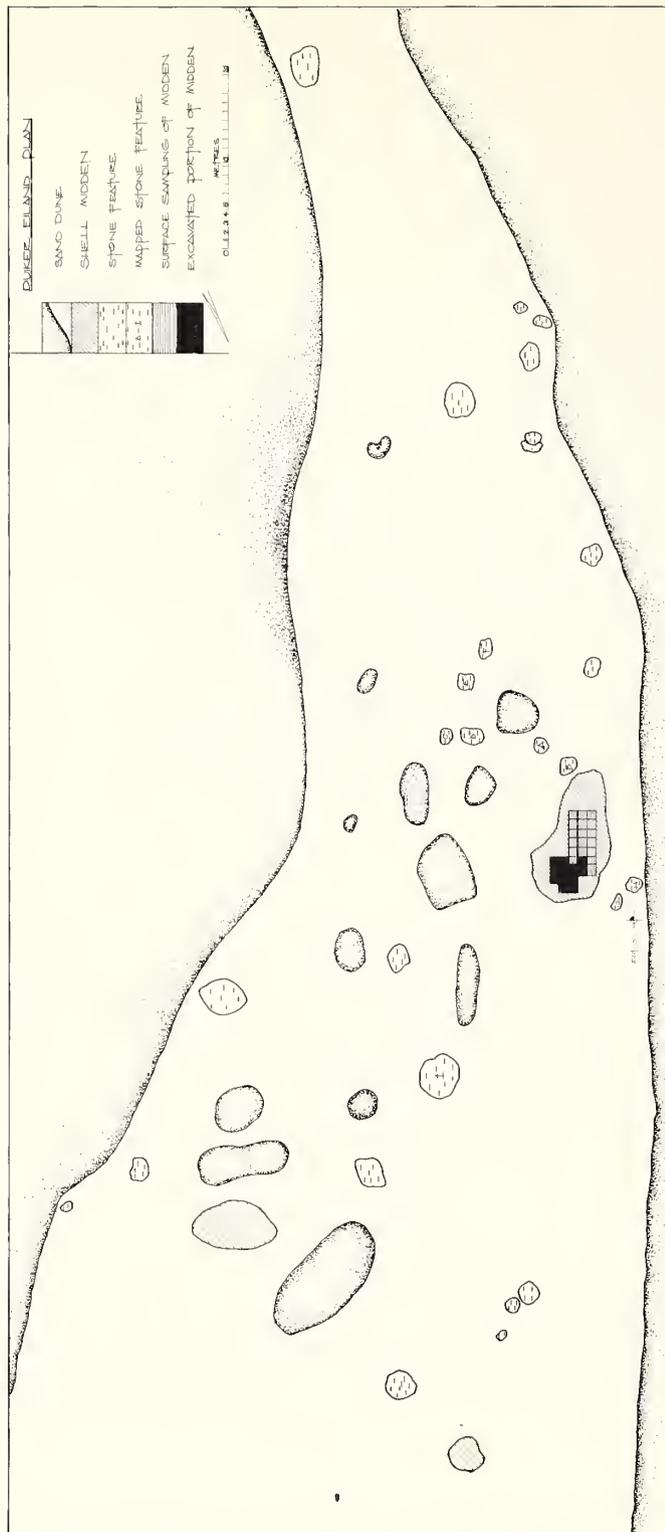


Fig. 3. Plan of Duiker Eiland showing the excavated midden and stone features.

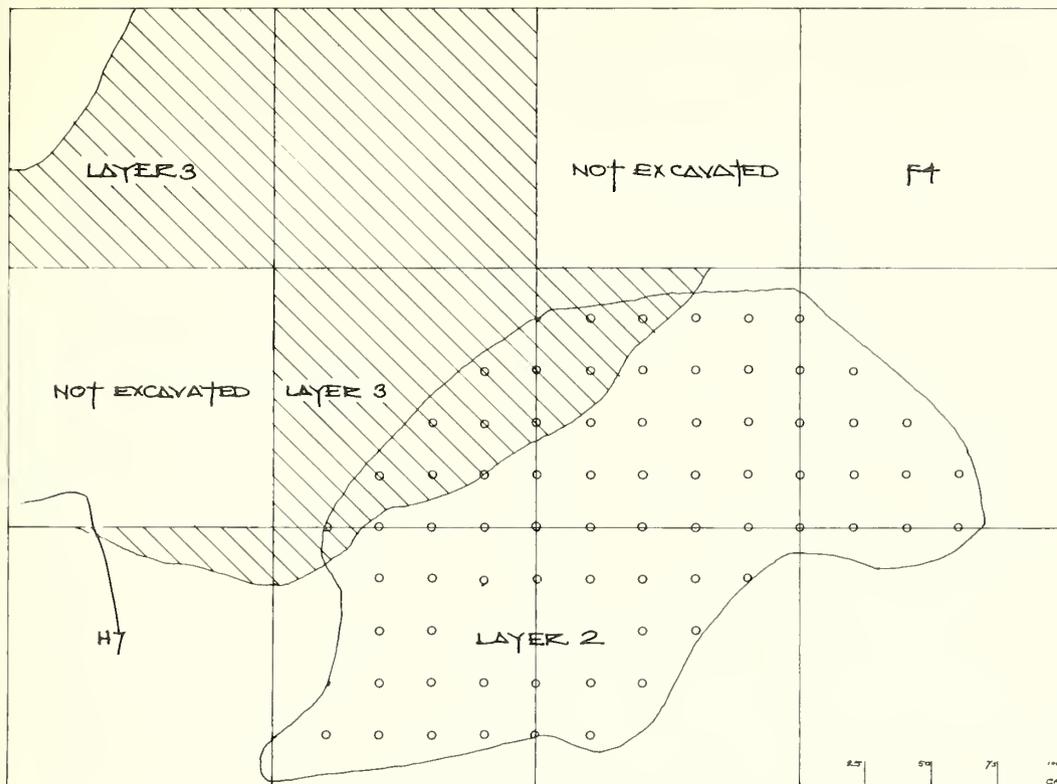


Fig. 4. Duiker Eiland: Plan of sub-surface layers.

Formal tools are rare in other assemblages from middens in the south-western Cape (Maggs & Speed, 1967; Van Noten, 1974; Avery, 1976; Robertshaw, 1977) and Klein (1974: 276) has speculated that formal tools may not have been used in the exploitation of marine resources. It would appear to be rash to assign any cultural or industrial "label" to the Duiker Eiland assemblage. Sampson (1974: 409) seems to assign material from this site without describing it to his "midden" industry, which is founded upon selective collections which are neither dated nor adequately reported. Quartz is the predominant raw material represented in the Duiker Eiland artefact assemblage (Table 2). Silcrete, however, was preferred for the manufacture of formal tools. Only one formal tool, a small quartz scraper found in layer 1, is not made from silcrete. Granite and other coarse-grained rocks were used in the manufacture of larger pieces. Sources of all the different types of raw material employed are located within a few kilometres of the site.

Non-lithic

An inventory of the non-lithic artefacts found during excavation is given in Table 3. The absence of pottery from layer 2 and its presence in layer 1 allows us to state that pottery probably appeared at Duiker Eiland sometime between about 1 900 and 1 700 years ago. This date agrees

TABLE 1

Duiker Eiland: Stone artefact inventory

	Layer 1		Layer 2		Layer 3		Stone Features		Total	
	f	%	f	%	f	%	f	%	n	%
WASTE										
Cores	1	5,6	—	—	—	—	4	1,5	5	1,7
Chips	3	16,7	—	—	—	—	61	23,2	64	22,3
Chunks	9	50,0	3	75,0	2	100,0	125	47,5	139	48,4
Untrimmed flakes	2	11,1	—	—	—	—	54	20,5	56	19,5
Unworked pebbles	1	5,6	—	—	—	—	2	0,8	3	1,0
Totals	16	88,9	3	75,0	2	100,0	246	93,5	267	93,0
UTILIZED										
Multi-flaked cobbles & pebbles	—	—	—	—	—	—	—	—	—	—
Hammerstones	—	—	1	25,0	—	—	—	—	1	0,3
Trimmed flakes	—	—	—	—	—	—	10	3,8	10	3,5
Pièces esquillées	—	—	—	—	—	—	—	—	—	—
Rubbers	1	5,6	—	—	—	—	—	—	1	0,3
Totals	1	5,6	1	25,0	0	0,0	10	3,8	12	4,2
FORMAL TOOLS										
Small scrapers	1	5,6	—	—	—	—	1	0,4	2	0,7
Medium scrapers	—	—	—	—	—	—	1	0,4	1	0,3
Backed blades	—	—	—	—	—	—	1	0,4	1	0,3
Other retouched tools	—	—	—	—	—	—	4	1,5	4	1,4
Totals	1	5,6	0	0,0	0	0,0	7	2,7	8	2,8
TOTAL	18	100,1	4	100,0	2	100,0	263	100,0	287	100,0

well with other early dates for pottery at a number of sites in the Cape (Robertshaw, 1978: Table 7: 1). However, the association of the dated shells and the pottery in layer 1 is not definite, since it is a surface occurrence and the pottery might well post-date the shells.

Although there are only a few potsherds from the site, the presence of a spout of a pot is interesting as spouts are not a common feature of Cape coastal ware (Rudner, 1968). However, the other features of the pottery—its texture, thinness, and colouring—are typical of pottery found at other sites along the south-western Cape coast.

TABLE 2

Duiker Eiland: Stone raw material usage

	Layer 1		Layer 2		Layer 3		Stone Features		Total	
	f	%	f	%	f	%	f	%	n	%
Quartz	12	66,7	—	—	—	—	104	39,5	116	40,4
Granite	3	16,7	4	100,0	2	100,0	67	25,5	76	26,5
Silcrete	1	5,6	—	—	—	—	42	16,0	43	15,0
Quartzite	2	11,1	—	—	—	—	27	10,3	29	10,1
Limestone	—	—	—	—	—	—	16	6,1	16	5,6
Quartz-porphory	—	—	—	—	—	—	4	1,5	4	1,4
Other	—	—	—	—	—	—	3	1,1	3	1,0
TOTAL	18	100,1	4	100,0	2	100,0	263	100,0	287	100,0

The bone beads were made from the radii and ulnae of birds. The other piece of bonework from layer 1 is the distal end of a bird radius (probably cormorant) which has been grooved and cut, suggesting that the shaft of this bone was used in the manufacture of bone beads.

The term, *Donax* scraper, refers to shells of the white sand mussel *Donax serra* which have been retouched along part of the ventral margin. It has been suggested elsewhere (Robertshaw, in press) that these artefacts may have been employed in scaling fish.

FAUNAL REMAINS

Shellfish

All shells from a bucket of deposit that failed to pass through the 12mm mesh sieve were retained from every three to five buckets of deposit excavated. Occasional samples were taken of the shell which passed through the 12mm mesh sieve but not the 3mm mesh. The results obtained are

TABLE 3

Duiker Eiland: Non-lithic artefacts

	Layer 1	Layer 2	Layer 3	Stone Features	Total
Potsherds	4	—	—	—	4
Ostrich eggshell beads	22	3	5	1	31
Bone beads	4	8	1	—	13
<i>Donax</i> scrapers	—	2	—	—	2
Other	1	—	—	—	1
TOTAL	31	13	6	1	51

from the analysis of shells retained in the 12mm mesh sieve. Sorting of the 3mm samples is very time-consuming and the results obtained from these samples are very similar to those from the larger meshed sieve. It should be noted, however, that slightly more *Choromytilus* than *Patella* shells reach the smaller sieve. All samples were sorted as far as possible into individual species and counts of minimum numbers obtained by the methods defined by Speed (Maggs & Speed, 1967). The maximum diameter across the foot of all limpet (*Patella*) shells which had survived intact was measured.

The results of the analysis of the shell samples are given in Tables 4, 5, and 6. Limpets (*Patella*) predominate in all the layers of the midden, while black mussels (*Choromytilus meridionalis*) seem to have been of lesser importance in the shellfish diet of the site's inhabitants. The great majority of the limpets belonged either to the species *Patella granularis* or to *P. granatina*. Excavation and sampling of other shell midden sites in the region located close to areas of rocky shore have shown that shells of *P. granularis*, *P. granatina* and *Choromytilus meridionalis* form the major component of almost all the middens, though the ratio of limpets to mussels varies considerably from site to site (Robertshaw, 1977; Buchanan *et al.*, 1978). The predominance of these three species reflects their abundance and accessibility within the intertidal zone of rocky shores and the fact that they attain a size which makes human exploitation feasible.

TABLE 4

Duiker Eiland: Species of shellfish found in the midden

	Layer 1	Layer 2	Layer 3
<i>Patella argenvillei</i>	x	x	x
<i>Patella granularis</i>	x	x	x
<i>Patella granatina</i>	x	x	x
<i>Patella oculus</i>	x	x	—
<i>Patella barbara</i>	x	x	x
<i>Patella cochlear</i>	x	x	x
<i>Patella compressa</i>	x	—	—
<i>Choromytilus meridionalis</i>	x	x	x
<i>Oxystele</i> sp.	x	—	—
<i>Crepidula porcellana</i>	x	x	x
<i>Donax serra</i>	x	x	x
<i>Aulacomya magellanica</i>	x	x	x
<i>Argobuccinum argus</i>	x	—	x
<i>Balanus</i> sp.	x	x	x
<i>Burnupena</i> sp.	x	x	x
<i>Haliois midae</i>	x	—	—
<i>Bullia</i> sp.	x	x	x
<i>Tapes corrugatus</i>	x	x	x
<i>Helcion pectunculus</i>	—	x	—

x = Present

The low frequencies of *C. meridionalis* at Duiker Eiland may reflect the local availability of this species on the shore. The potential toxicity of *C. meridionalis* during the summer months (Grindley & Nel, 1968) may also have been a check on exploitation if site occupation took place during that period of the year. Similarly, the varying relative frequencies of *P. granularis* and

TABLE 5

Duiker Eiland: Shellfish frequencies

	Layer 1	Layer 2	Layer 3
No. of identifications	1 692	721	712
No. of samples	12	4	5
Frequencies (%) of			
<i>Patella</i> spp. (all spp. together)	84,28	86,55	89,19
<i>Choromytilus</i> sp.	10,05	11,65	8,00
Other	5,67	1,80	2,81
Frequencies (%) of <i>Patella</i> spp.			
<i>Patella granularis</i>	27,00	44,71	52,28
<i>Patella granatina</i>	60,52	45,35	34,96
<i>Patella</i> spp. (others)	12,48	9,94	12,76

P. granatina through the deposits perhaps indicates changing population sizes of these two species on the local shoreline or changing human predation patterns or a combination of these two factors.

The mean sizes of both *P. granatina* and *P. granularis* from samples taken throughout the deposit are small when compared with what can be collected from the intertidal zone today (Branch, 1974; Buchanan *et al.*, 1978). It has been argued elsewhere (Parkington, 1976b: 134-5; Robertshaw 1977: 67; Buchanan *et al.*, 1978) that the reduced mean sizes of *P. granularis* and *P. granatina* from shell middens in the western Cape is best explained by the hypothesis that human predation had the effect of farming down local populations of these species. This interpretation also points to the probable importance of limpets as day-to-day staples in the diet of coastal peoples in this region during the latter part of the Holocene.

Rock lobsters

Remains of rock lobsters (*Jasus lalandii*), consisting of the calcareous tips of the mandibles, were found in all layers at Duiker Eiland (Table 7). Conversion of the mandible widths into

TABLE 6

Duiker Eiland: Shellfish lengths (mm)

Species	Layer 1			Layer 2			Layer 3		
	n	mean length	standard deviation	n	mean length	standard deviation	n	mean length	standard deviation
<i>Patella granularis</i> ...	268	38,37	6,18	227	38,54	8,35	245	36,58	7,12
<i>Patella granatina</i> ...	346	57,47	7,71	129	55,77	9,56	107	53,32	9,64
<i>Patella argenvillei</i> ...	45	75,87	12,11	13	76,85	10,17	—	—	—
<i>Patella cochlear</i> ...	26	29,58	5,09	13	29,62	5,39	25	26,56	8,34
<i>Patella barbara</i> ...	11	57,91	21,78	—	—	—	—	—	—
<i>Choromytilus meridionalis</i> ...	—	—	—	16	67,75	11,45	—	—	—

TABLE 7

Duiker Eiland: Remains of Cape rock lobster (Jasus lalandii)

	Layer 1	Layer 2	Layer 3
Minimum number	236	134	48
Min. no./m ³	529,0	—	—

carapace lengths (following Grindley, 1967) reveals that the population curve of the archaeological sample is similar to that of a modern living population (Fig. 5). This suggests that as at Paternoster (Robertshaw, 1977: 68-9) the inhabitants of Duiker Eiland were not selective in their rock lobster collecting habits and did not cause any damage to the local lobster population.

Other fauna

The sample of mammalian fauna is small (Table 8) but representative of what can be found in the vicinity of the site today. There is, therefore, no evidence of past environmental change at Duiker Eiland. The predominance of Cape fur seals (*Arctocephalus pusillus*) in the mammalian remains suggests that this animal was of some importance in the diet of the prehistoric inhabitants of the site.

A comparatively large assemblage of bird remains consisting almost entirely of marine species (Table 8) was recovered. It is dominated by jackass penguin (*Spheniscus demersus*) and Cape cormorant (*Phalacrocorax capensis*) which were probably caught or scavenged from the shore close to the site.

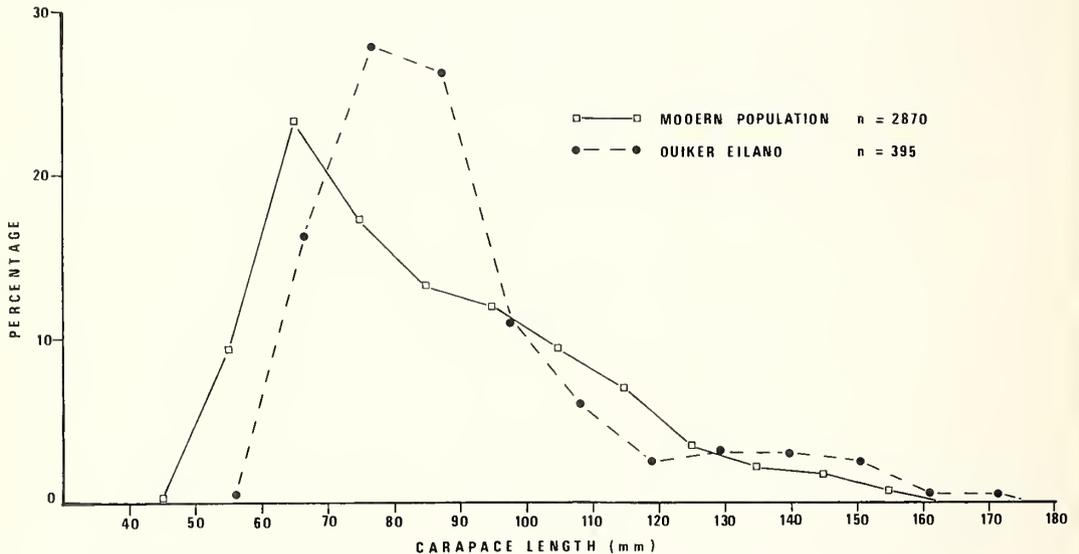
Fig. 5. Comparison of Cape rock lobsters (*Jasus lalandii*) from Duiker Eiland with a modern population.

TABLE 8

Duiker Eiland: Fauna

	Layer 1	Layer 2	Layer 3
MAMMALS			
<i>Felis libyca</i> Wildcat	1	1	1
<i>Arctocephalus pusillus</i> Cape fur seal	3	3	2
<i>Raphicerus</i> sp. indet. Steenbok/grysbok	1	—	—
<i>Sylvicapra grimmia</i> Grey duiker	1	—	—
Bovidae gen. et sp. indet., Small (e.g. steenbok) ..	3	1	—
<i>Bathyergus suillus</i> Dune mole rat	1	—	—
<i>Chlorotalpa scalteri</i> Scalter's golden mole	1	—	1
<i>Crocidura flavescens</i> Musk shrew	3	—	—
<i>Myosorex varius</i> Forest shrew	1	—	—
<i>Georchychus capensis</i> Cape mole-rat	—	1	—
<i>Tatera afra</i> Cape gerbil	1	1	—
<i>Gerbillus paeba</i> Pygmy gerbil	3	1	—
<i>Rhodomys pumilio</i> Striped field mouse	3	—	—
<i>Otomys</i> cf. <i>unisulcatus</i> Bush karoo rat	8	1	—
BIRDS			
<i>Spheniscus demersus</i> Jackass penguin	22 (3)	12 (2)	2 (1)
<i>Morus capensis</i> Cape gannet	1	—	—
<i>Phalacrocorax carbo</i> White-breasted cormorant ...	4 (4)	6 (4)	2 (1)
<i>Phalacrocorax capensis</i> Cape cormorant	16 (4)	7 (3)	4 (2)
<i>Phalacrocorax neglectus</i> Bank cormorant	4 (1)	5 (3)	2 (1)
Indet. Passerine	2	1	—
Indet. medium	1	—	—
Indet. large	1	—	—
REPTILES			
Snake	x	x	x
Tortoise	3	1	x
FISH			
<i>Pachymetopon blochii</i> Hottentot	4	7	6
<i>Liza ramada</i> Haarder	—	4	6

x = present; numbers in brackets = number of immature individuals of the total.

Two species of fish were found (Table 8), both of which can be taken from the rocks by line-fishing (Poggenpoel, pers. comm.). It is assumed that the snake and microfaunal remains do not represent food refuse.

DISCUSSION

Diet

The subsistence economy of hunter-gatherers in tropical and temperate latitudes is normally based on the collection of plant foods supplemented by the produce of successful hunting or fishing expeditions (Lee, 1968). In most societies women gather the plant foods while men hunt the less reliable game. By analogy one would predict that subsistence and settlement patterns on

the west coast of South Africa during the latter part of the Holocene would have been geared to the exploitation of predictable gathered foods. Since plant foods are uncommon on the west coast it seems reasonable to suggest that shellfish provided the regular day-to-day staples of the inhabitants of Duiker Eiland and other coastal sites in this region. *Choromytilus meridionalis*, *Patella granularis* and *P. granatina* can be easily harvested from the rocks twice a day during low tides. Shellfish are thus both a dependable and easily accessible resource.

In addition to shellfish coastal settlement allowed the exploitation of a wide range of other animals from the maritime zone, including sea birds, fish, seals and crayfish. On land the small, solitary browsing antelopes which are characteristic of the fynbos biome could be trapped with snares or hunted with bows and arrows, while tortoises were an easy prey.

Therefore coastal settlement allowed a wide range of resources to be exploited by hunters and gatherers who could rely upon shellfish as a secure subsistence staple. However, shellfish and other marine resources contain only small amounts of carbohydrate, though they are rich in protein. Thus, movement at least seasonally to areas where plant foods, which are rich in carbohydrates, could be easily acquired may have been necessary for the hunter-gatherers to maintain a properly balanced diet. Therefore, in order to understand the settlement system of hunter-gatherers in the Vredenburg region it is pertinent to examine the question of the season at which occupation at Duiker Eiland took place.

Seasonality

All three layers from the site are discussed here as a single entity since the faunal remains show little variation through the deposit.

The remains of immature birds are often good indicators of the season of site occupation since many birds have restricted breeding seasons. Ageing of the immature specimens represented at Duiker Eiland gives a range from fledgling to sub-adult individuals. If we then attempt to delimit the timing of settlement from the occurrence of immature birds correlated with the breeding seasons of the species involved (see Fig. 6), two interpretations suggest themselves. Firstly, the presence of both immature *Phalacrocorax carbo* (winter breeders) and immature *P. capensis* (summer breeders) could indicate possible year-round exploitation. Secondly, if we suppose on *a priori* grounds that occupation was seasonal then we can take the approximate period of overlap between the breeding seasons of these two species as representing the timing of occupation of the site. This would be from about July through to October or November. *Spheniscus demersus* breeds throughout the year and *Phalacrocorax neglectus* has been recorded breeding in all months except April, August and November (McLachlan & Liversidge, 1970); the presence of immature individuals of these two species therefore does not resolve the problem. Instead we must look to other lines of evidence to clarify the question of seasonality at Duiker Eiland.

The predominance of limpets and the low frequency of mussels in the shellfish remains may be a result of summer occupation at the site. The fact that mussels are potentially toxic in the summer months has led Parkington (1972, 1976a) to argue that Elands Bay, where mussels were abundant, was occupied during the winter and the present writer (Robertshaw, 1977) to suggest that Paternoster, where mussels were rare in the lower levels, was occupied during the summer. However, the scarcity of mussels at Duiker Eiland may be a product of their limited abundance on the shore close to the site. Examination of the intertidal zone around Cape St Martin showed that there were no mussel colonies there today. Similarly, while mussels were abundant in Layer 1 at Paternoster in contrast to the lower layers (Robertshaw, 1977), there were no mussel middens at Duiker Eiland to suggest that mussel colonies existed in the area in the past. Thus the low frequency of mussels cannot be used as evidence for summer occupation at Duiker Eiland.

Tortoises are known to hibernate during the winter months; thus it seems likely that they would be encountered more regularly by hunter-gatherers during the summer. This suggests that

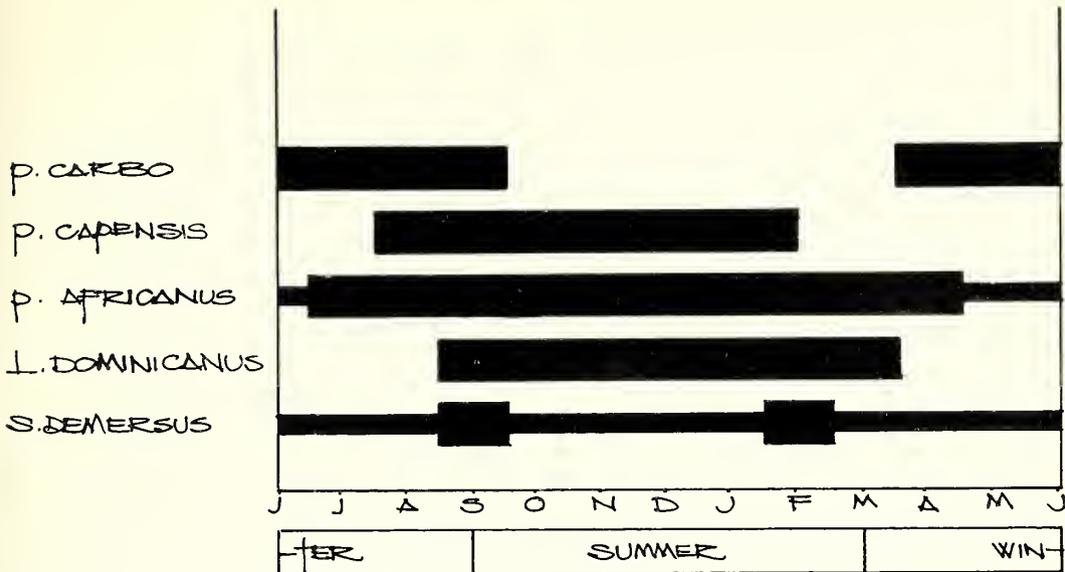


Fig. 6. Approximate breeding seasons of marine birds of the Western Cape (adapted from Avery 1977).

low densities of tortoise remains from an archaeological site in the western Cape might be correlated with winter occupation. Such low densities were reported from Elands Bay (Parkington, 1976a) and from layer 1 at Paternoster (Robertshaw, 1977: 71) where other lines of evidence also pointed towards coastal settlement during the winter. By contrast layers 2 to 6 at Paternoster contained high densities of tortoise bone as well as other indicators of summer occupation. The density of tortoise bone from layer 1 at Duiker Eiland is 0,64 kg/m³, a figure which compares favourably with the levels of Paternoster and Elands Bay interpreted as winter settlements. This interpretation is not incompatible with the bird remains which suggested occupation of Duiker Eiland during the winter and spring months.

Cape fur seals (*Arctocephalus pusillus*) have a restricted pupping season. Parkington (1976b) has shown that the length of mandibles of this animal can be correlated with some accuracy with the age in months at death and hence with the season of occupation of the archaeological site from which the bone comes. Support for his results has come from a study of the incremental growth of seal canines (Fletemeyer, 1977). Four seal mandibles were recovered intact from Duiker Eiland. These had a mean length of 94,5mm with a range from 88 to 97mm. They clearly fall within the yearling age class (see Parkington, 1976b: Fig. 3) and indicate occupation of the site sometime between about June and September, i.e. in the winter months.

The evidence of seasonality provided by the seal measurements fits reasonably well with that of the bird remains. Taken together they could indicate settlement in all seasons though the seals represent only winter occupation. No seal bones resulting from summer occupation were found, though the sample is admittedly small. This perhaps suggests that seasonal rather than year-round settlement is the more likely hypothesis. If the bird remains reflect July to October or November settlement, and the seals June to September or October, then it seems clear that the site of Duiker Eiland may have been occupied from June to November. This interpretation receives further support from the analysis of the tortoise bone density. Though settlement may

not have been continuous within this period, visits to the site must have been made in many of the winter and spring months to give the pattern found in the archaeological remains.

Our interpretation of the season of occupation of Duiker Eiland clearly differs from that reached for Paternoster (Robertshaw, 1977) where layers 6 to 2 accumulated during the second half of summer and layer 1 probably during the autumn months. Though the two sites were occupied at different times of the year, they are located only a few kilometres apart and witness the exploitation of a similar range of resources at each. There seems no reason to postulate seasonal movement between the two areas since the sites are situated within the same resource zone and not within complementary resource zones. Duiker Eiland and Paternoster rather seem to demonstrate that coastal settlement was possible in any season of the year on the Vredenburg peninsula. Clearly, complex patterns of seasonal mobility were possible within this region, and between it and elsewhere.

Stone features

The presence of stone features in the close vicinity of coastal middens in the Cape has been known for many years. They were reported by Schönland (1903) near Port Alfred, by Colson (1905) at Port Nolloth, by Goodwin (1946: 4) near the Slang River mouth in the Humansdorp district, and by Mabbutt (1955) at Bokbaai near Darling. Thus there are records of stone features spanning virtually the entire length of the Cape coast. Inland, stone hearth features have been excavated at Boomplaas in the southern Cape (Deacon & Brooker, 1976). More recently from the south coast Cairns (1975) excavated two stone features found *in situ*. Both consisted of beach cobbles forming tightly packed platform-like structures, 1,22m in diameter, which appear to have been hearths. Avery (1974) reported on a number of stone features at Pearly Beach and was able to identify four different forms. These were (1) groups of beach cobbles with an ashy or burnt matrix forming hearths; (2) groups similar to (1) but with a clean sand matrix which may represent blown-out hearths or platforms for some unknown use; (3) groups of large cobbles or boulders which cover burials; (4) roughly circular or semicircular features of various-sized cobbles or boulders which may represent the base anchorages of huts or windbreaks. In some cases this last type contains a group of smaller cobbles within, perhaps representing a hearth (Avery, 1974: 109–111). Avery did not find any features with tightly-packed stone as excavated by Cairns (1975).

Nine stone features were excavated at Duiker Eiland and the position of a number of others plotted (Fig. 3). Plans of the excavated features are shown in Figs 7–11, 13–16 and one is illustrated in Fig. 12. The features were generally circular in shape, varying in diameter and the degree to which the stones were packed together. The presence of a charcoal layer underlying the rocks in four of the features (Figs 8, 9, 11, 14) together with considerable fire-blackening on the rocks themselves showed these stone features to have been hearths. Two features (Figs 7, 15) contained only slight traces of charcoal and fire-blackening, but in size they corresponded closely to the known hearths; thus they are probably “blown-out hearths” (Avery’s group 2). One feature (Fig. 10) comprised a fairly dispersed group of stones and showed no evidence of having been used as a hearth. Its close proximity to a hearth and the large amount of artefactual debris found within it suggest tentatively that this stone feature may have been part of a hut or windbreak immediately outside which was located a hearth for warmth and cooking. The remaining two features excavated (Figs 13, 16) were more complex; both contain hearths which are part of larger stone features. It is possible that these are the remains of huts or windbreaks with hearths located inside or just outside them. No remains of postholes were found in excavation of any of the “hut” features but since all were resting on sand the preservation of postholes is unlikely.

An attempt was made to see whether greater amounts of artefactual debris were found on supposed hut floors than in hearths. However, no correlation was observed between the type of



DUIKER EILAND I
PLAN OF FEATURE A

Fig. 7. Duiker Eiland: Plan of Feature A.

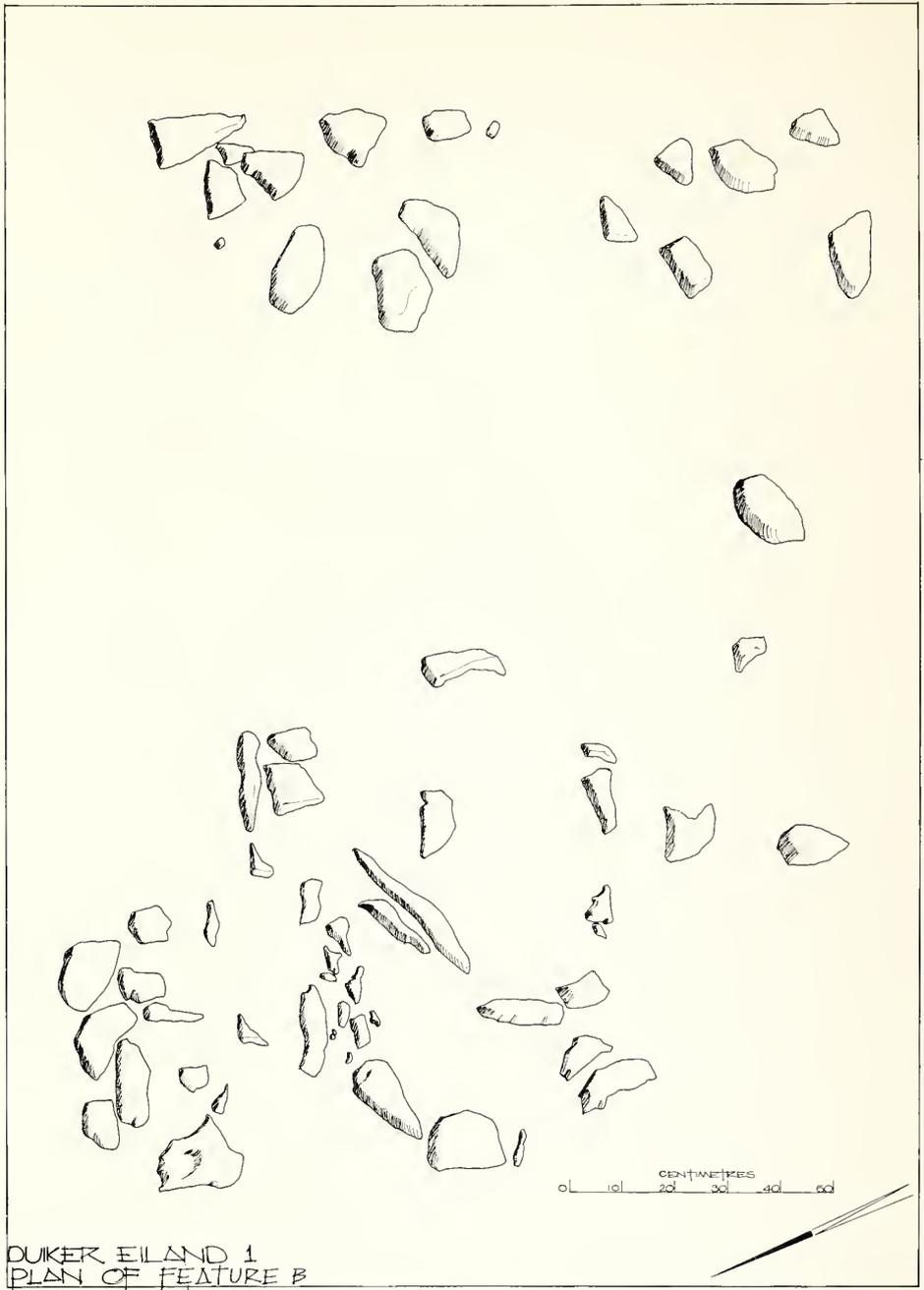


Fig. 8. Duiker Eiland: Plan of Feature B.

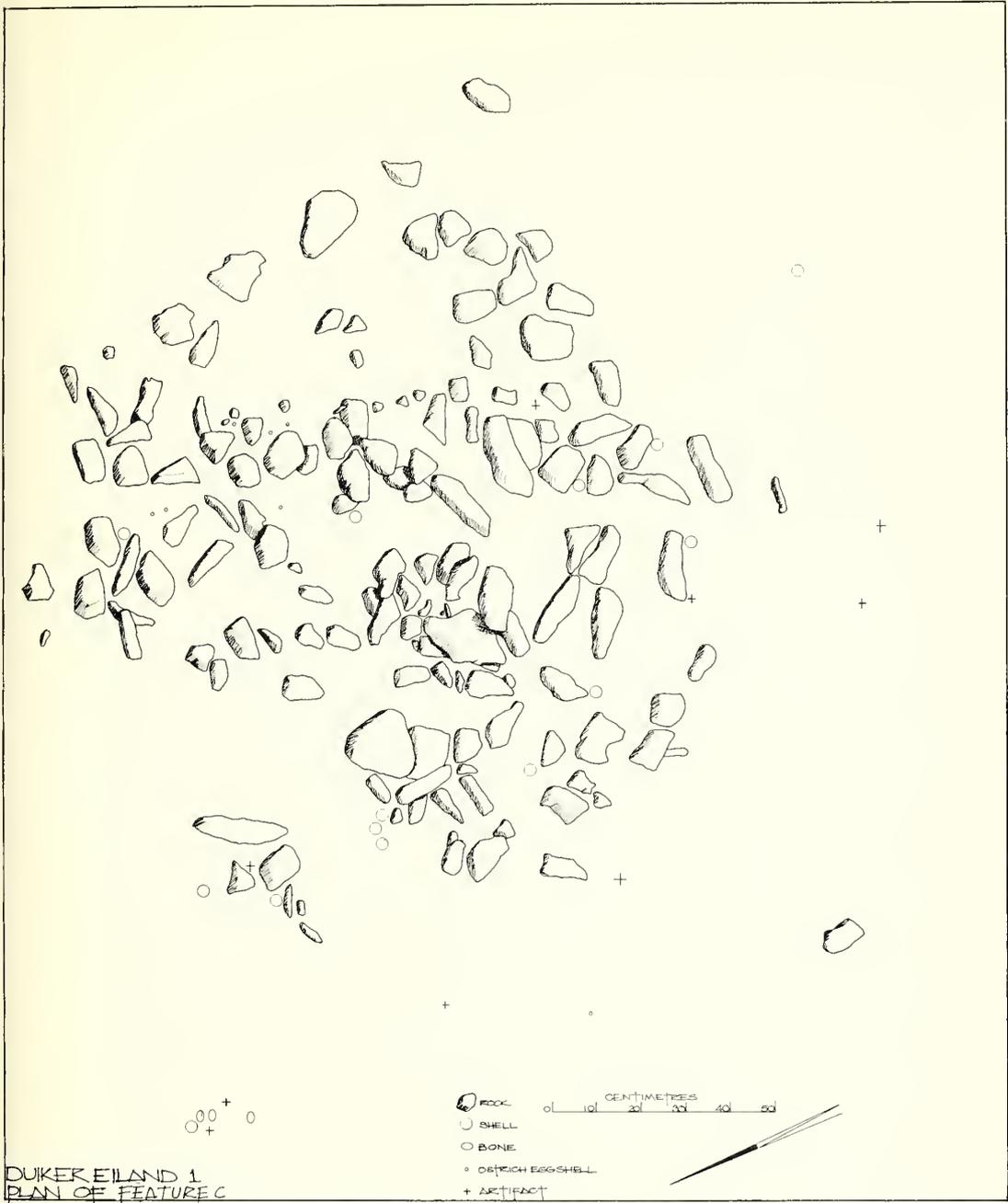


Fig. 9. Duiker Eiland: Plan of Feature C.

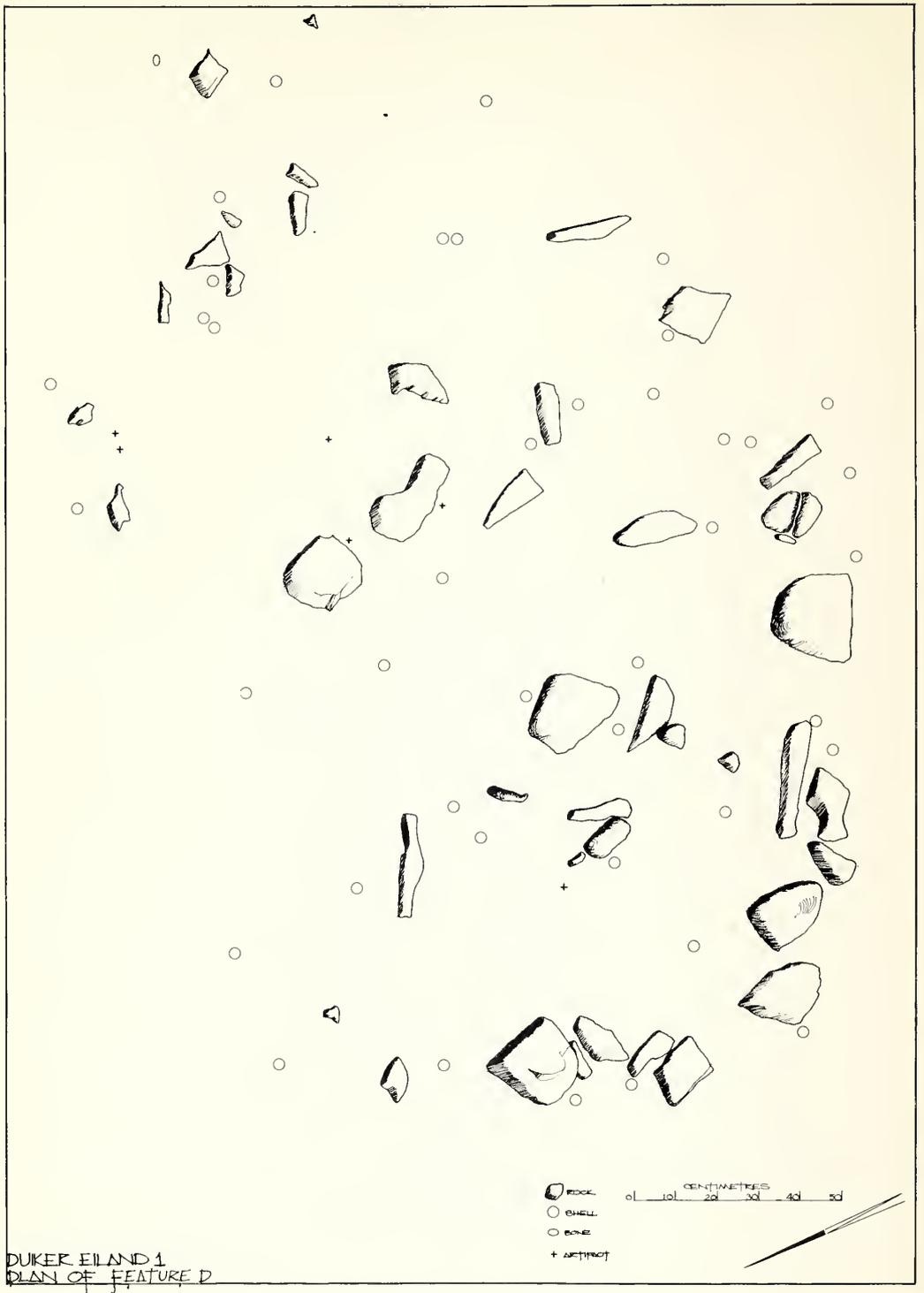


Fig. 10. Duiker Eiland: Plan of Feature D.

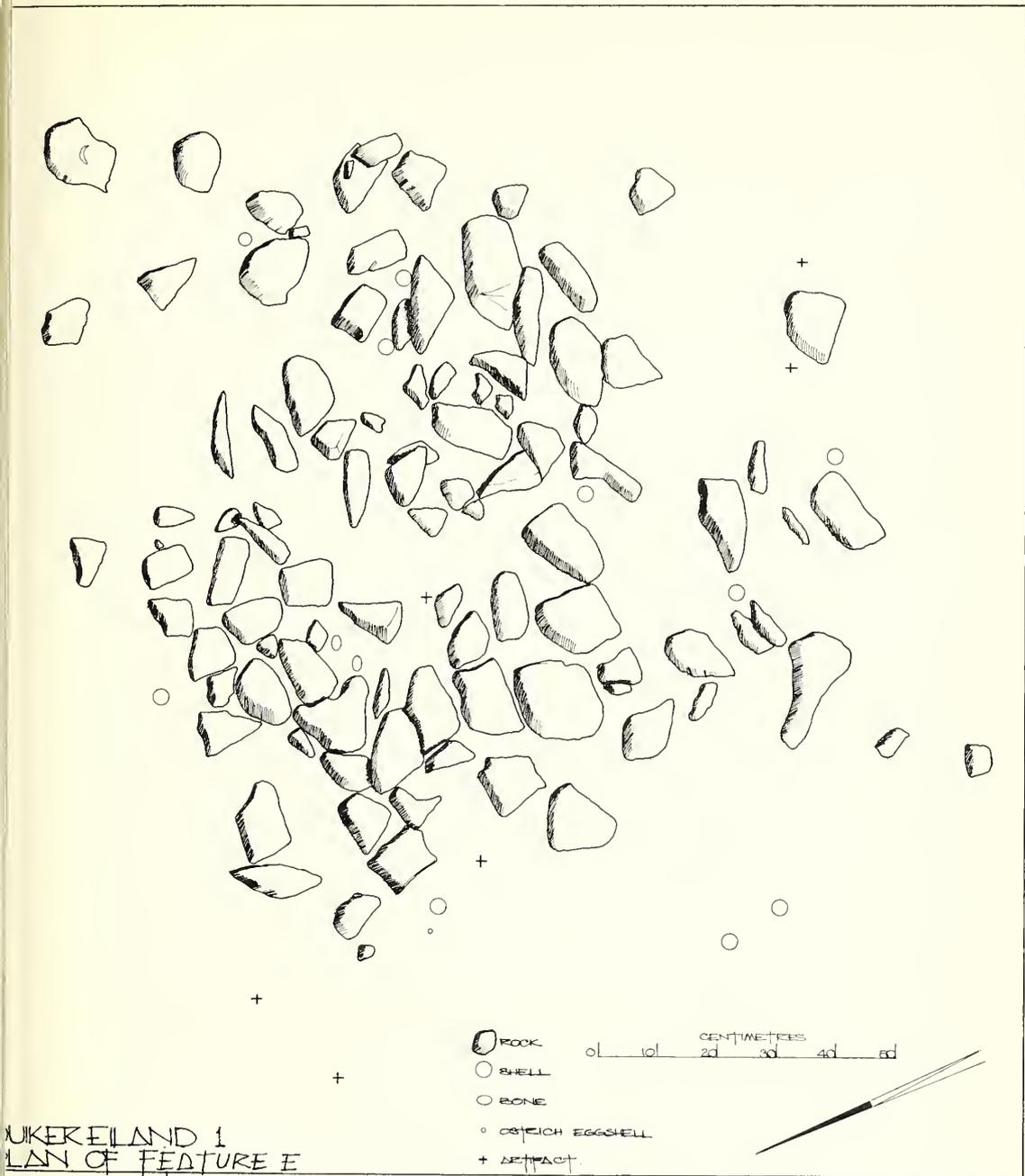


Fig. 11. Duiker Eiland. Plan of Feature E.



Fig. 12. Duiker Eiland: Feature E.

stone feature and the artefacts found upon it (Table 9), although a greater number of utilized and formal tools was found on "hut" floor D (Fig. 10) than elsewhere. It is interesting to note that stone artefacts are found in much greater abundance around the stone features than in the midden. This suggests that most on-site human activity was connected spatially with the stone features and that the midden was a heap of food refuse. Rudner (pers. comm.) reports that many of the stone assemblages he has collected from coastal sites have come from the area surrounding a midden rather than from the midden itself. His observations, therefore, seem to confirm that the patterning of artefactual debris recorded at Duiker Eiland is typical of other sites on the west coast.

The stone features at Duiker Eiland correspond to the types (1), (2), and (4) proposed by Avery (1974). No mounds of stones overlying burials were found at Duiker Eiland. Similarly, no features like those excavated by Cairns (1975) have been reported from the west coast. It is possible that regional types of coastal stone features existed but the sample of properly recorded and excavated features is small.

Prior to excavations at Duiker Eiland only one stone feature had been dated from the Cape coast. This was a hearth from Pearly Beach yielding a date of $1\ 680 \pm 50$ B.P. (Pta 1 069) (Avery, 1974: 112). A stone hearth from the inland cave of Boomplaas gave a date of $1\ 510 \pm 75$ B.P. (UW-307) (Deacon *et al.*, 1976: 142). Two dates have been obtained from the stone features at Duiker Eiland. Charcoal from hearth feature G (Fig. 14) was dated to $1\ 970 \pm 75$ B.P. (Pta 1 707), and charcoal from the hearth within feature I (Fig. 16) to $2\ 280 \pm 45$ B.P. (Pta 1 706). Therefore, stone feature G is in radiocarbon terms contemporary with layer 2 in the

TABLE 9

Duiker Eiland: Frequencies of stone artefacts by classes associated with different stone features

Stone Feature	Number of pieces			
	Waste	Utilized	Formal	Total
A	—	—	—	0
B	1	—	—	1
C	44	1	2	47
D	37	3	4	44
E	14	2	—	16
F	28	4	—	32
G	108	—	—	108
H	—	—	—	0
I	14	—	1	15
Total	246	10	7	263

midden, while feature I could be linked with either layer 3 or one of the unexcavated middens in the vicinity. The dates from Duiker Eiland are the earliest so far recorded from the Cape coast and show that stone features existed in probably pre-pottery and pre-sheep times. Therefore, their use can be associated with hunter-gathering as well as possibly herding groups. Inland a stone hearth feature has been dated recently to about 21 000 B.P. (Deacon & Brooker, 1976: 213), but there is no evidence to show continuity in the use of stone hearths between that date and about 2 000 B.P.

SUMMARY

This paper has reported on the excavation of a coastal shell midden and associated stone features at Duiker Eiland. Occupation took place sometime between the late first millennium B.C. and the first few centuries A.D. A wide range of marine and terrestrial resources was exploited and it seems probable that shellfish may have been the subsistence staples. Settlement was most likely seasonal and a number of lines of investigation point towards occupation of the site between June and November. Examination of the stone features indicates that some were used as hearths while others may be the remains of hut floors or foundations.

ACKNOWLEDGEMENTS

I would like to thank the owner of Duiker Eiland for permission to work on the site. Richard Klein, Graham and Margaret Avery, and Cedric Poggenpoel undertook faunal analyses and contributed much useful discussion. John Parkinson commented on earlier drafts of this paper. J. C. Vogel of the C.S.I.R. supplied the radiocarbon dates. Students of the University of Cape Town participated in the excavations which were financed by the Swan Fund.

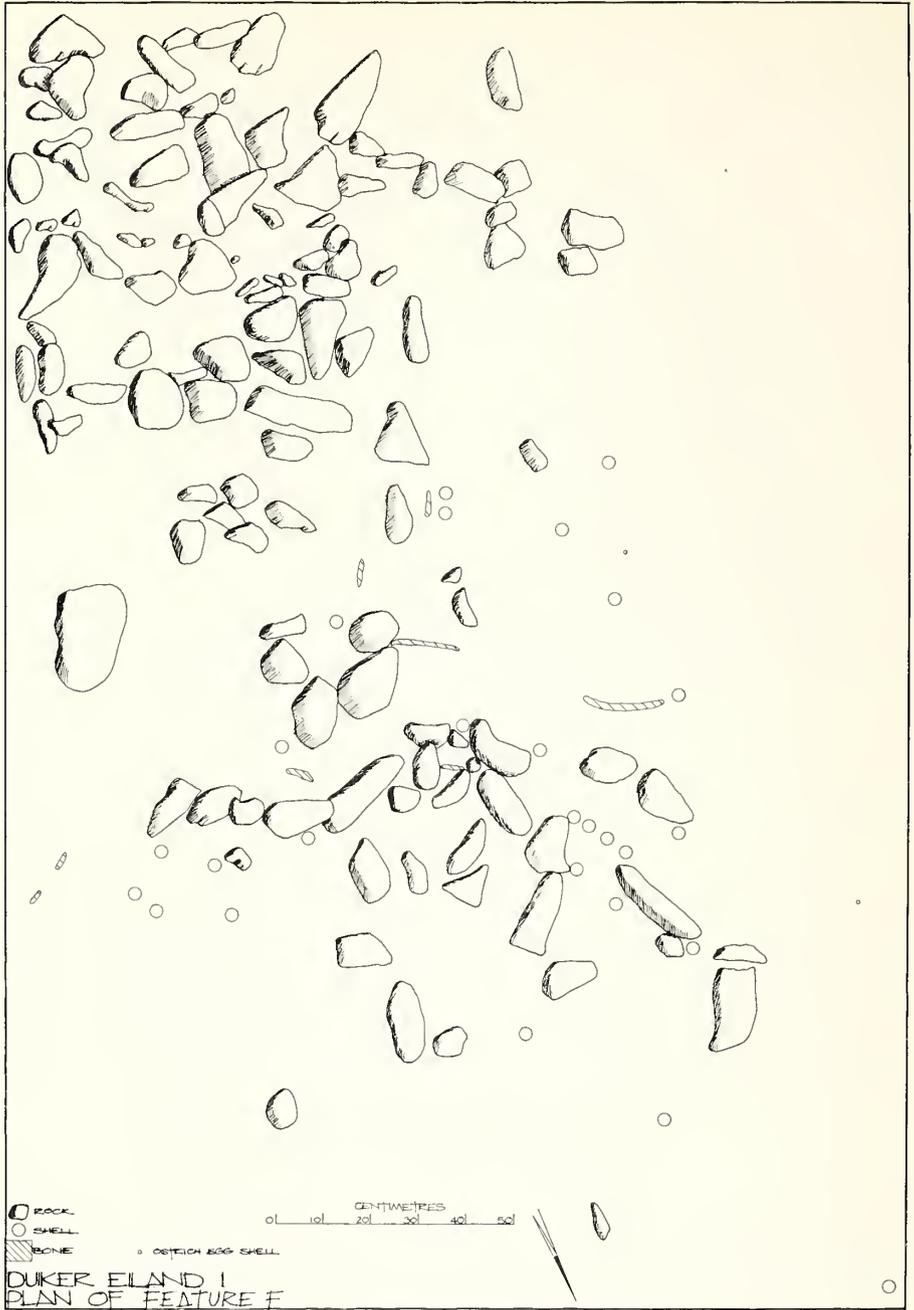


Fig. 13. Duiker Eiland: Plan of Feature F.

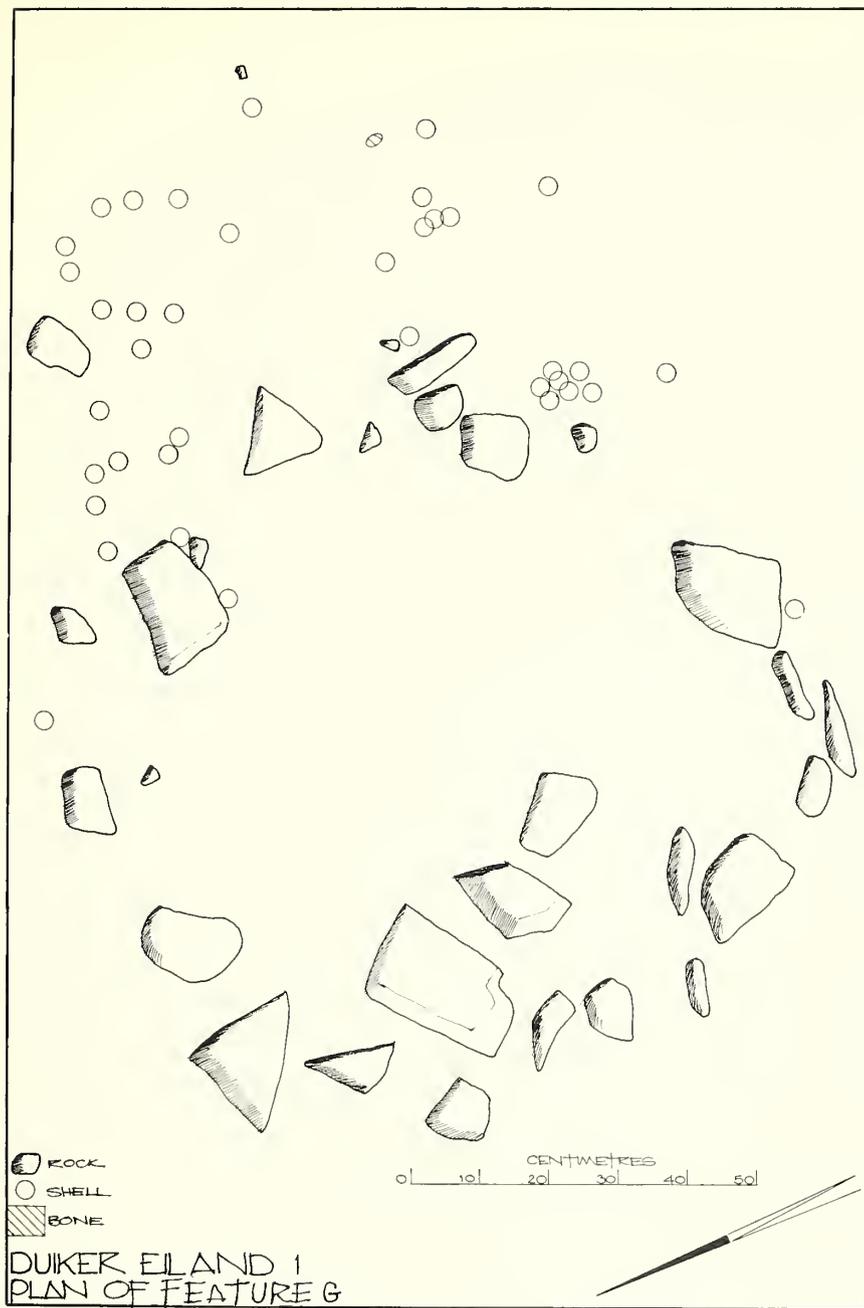


Fig. 14. Duiker Eiland: Plan of Feature G.

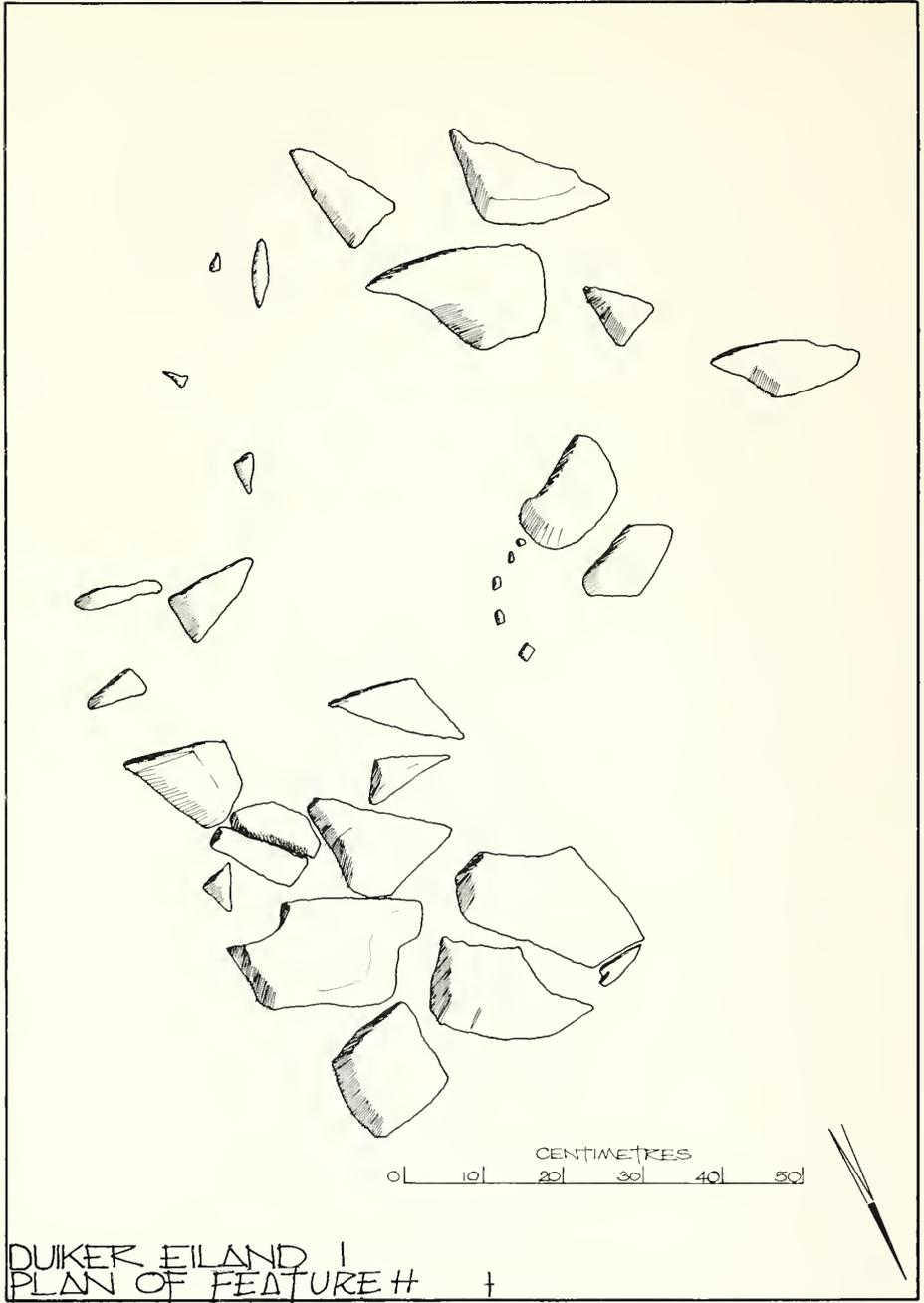


Fig. 15. Duiker Eiland: Plan of Feature H.

DUKER EILAND
PLAN OF FEATURE I

- ROCK
- SHELL
- ▨ BONE
- + METEOR

CENTIMETRES
0 10 20 30 40 50

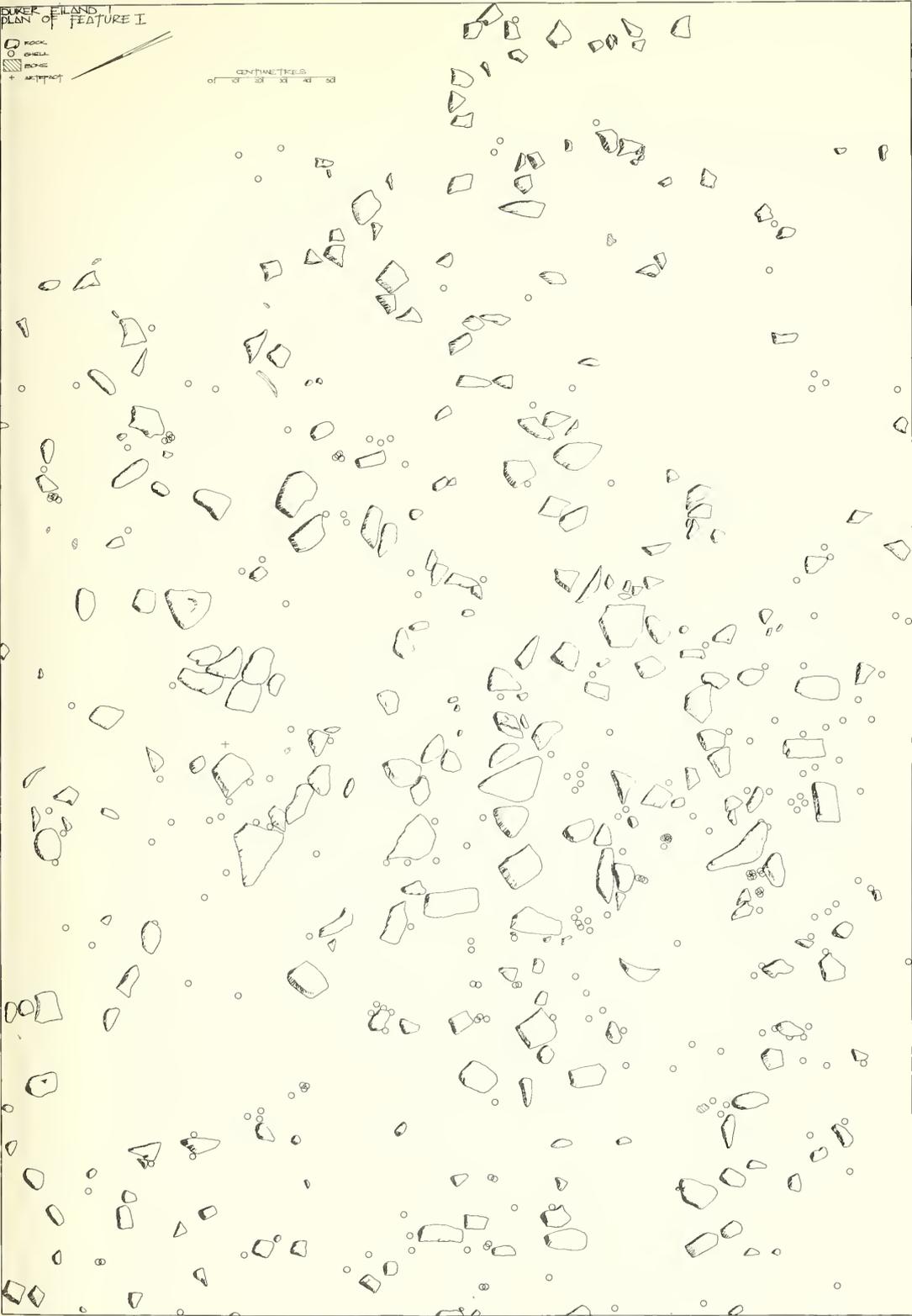


Fig. 16. Duker Eiland: Plan of Feature I.

REFERENCES

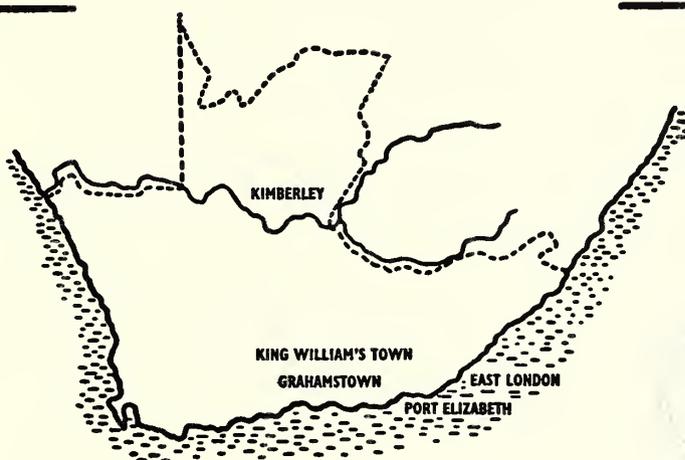
- AVERY, G. 1974. Open station shell midden sites and associated features from the Pearly Beach area, south-western Cape. *S. Afr. archaeol. Bull.* **29**: 104-114.
- AVERY, G. 1976. A systematic investigation of open station shell midden sites along the south-western Cape coast. Unpublished M.A. thesis, University of Cape Town.
- AVERY, G. 1977. Report on the marine bird remains from the Paternoster midden. *S. Afr. archaeol. Bull.* **32**: 74-76.
- BRANCH, G. M. 1974. The ecology of *Patella* Linnaeus from the Cape Peninsula, South Africa. 3. Growth rates. *Trans. roy. Soc. S. Afr.* **41**: 161-193.
- BUCHANAN, W. F., HALL, S. L., HENDERSON, J., OLIVIER, A., PETTIGREW, J. M., PARKINGTON, J. E., and ROBERTSHAW, P. T., 1978. Coastal shell middens in the Paternoster area, south-western Cape. *S. Afr. archaeol. Bull.* **33**: 89-93.
- CAIRNS, P. 1975. A report on circular stone features associated with coastal shell middens at Cape St Francis. *S. Afr. archaeol. Bull.* **30**: 36-39.
- COLSON, R. 1905. The Port Nolloth kitchen-middens. *Man* **5**: 93.
- DEACON, H. J. and BROOKER, M. 1976. The Holocene and Upper Pleistocene sequence in the Southern Cape. *Ann. S. Afr. Mus.* **71**: 203-214.
- DEACON, H. J., DEACON, J. and BROOKER, M. 1976. Four painted stones from Boomplaas Cave, Oudtshoorn District. *S. Afr. archaeol. Bull.* **31**: 141-145.
- DEACON, J. 1972. Wilton: an assessment after 50 years. *S. Afr. archaeol. Bull.* **27**: 10-48.
- FLETEMAYER, J. R. 1977. Age determination in the teeth of the Cape fur seal and its bearing on the seasonal mobility hypothesis proposed for the western Cape, South Africa. *S. Afr. archaeol. Bull.* **32**: 146-149.
- GEOLOGICAL SURVEY, 1972. Geological map of St Helena and Saldanha Bays. Sheets 3217D, 3218C, 3317B, 3318A. Pretoria: Govt. Printer.
- GOODWIN, A. J. H. 1946. Prehistoric fishing methods in South Africa. *Antiquity* **20**: 134-141.
- GRINDLEY, J. R. 1967. The Cape rock lobster *Jasus lalandii* from the Bonteberg excavation. *S. Afr. archaeol. Bull.* **22**: 94-102.
- GRINDLEY, J. R. and NEL, E. 1968. Mussel poisoning and shellfish mortality on the west coast of South Africa. *S. Afr. J. Sci.* **64**: 420-422.
- KLEIN, R. G. 1974. Environment and subsistence of prehistoric man in the Southern Cape Province, South Africa. *Wld. Archaeol.* **5**: 249-284.
- LEE, R. B. 1968. What hunters do for a living, or, how to make out on scarce resources. In Lee, R. B. and De Vore, I. eds. *Man the Hunter*. Chicago: Aldine.
- MABBUTT, J. A. 1955. Geomorphology, archaeology and anthropology from Bok Baai, Darling District, Cape Province. *S. Afr. archaeol. Bull.* **10**: 85-93.
- MAGGS, T. and SPEED, E. 1967. Bonteberg Shelter. *S. Afr. archaeol. Bull.* **22**: 80-93.
- MCLACHLAN, G. R. and LIVERSIDGE, R. 1970. *Roberts Birds of South Africa*. Cape Town: John Voelcker Bird Book Fund.
- PARKINGTON, J. E. 1972. Seasonal mobility in the Late Stone Age. *Afr. Stud.* **31**: 223-243.
- PARKINGTON, J. E. 1976a. Follow the San: an analysis of seasonal mobility in the prehistory of the south-western Cape, South Africa. Unpublished Ph.D. thesis, University of Cambridge.
- PARKINGTON, J. E. 1976b. Coastal settlement between the mouths of the Berg and Olifants rivers, Cape Province. *S. Afr. archaeol. Bull.* **31**: 127-140.
- ROBERTSHAW, P. T. 1977. Excavations at Paternoster, south-western Cape. *S. Afr. archaeol. Bull.* **32**: 63-73.
- ROBERTSHAW, P. T. 1978. Khoi and San: aspects of the later prehistory of the western Cape, South Africa. Unpublished Ph.D. thesis, University of Cambridge.
- ROBERTSHAW, P. T. In press. Archaeological investigations at Langebaan Lagoon, Cape Province. *Palaeoecology of Africa* **10**.
- RUDNER, J. 1968. Strandloper pottery from South and South West Africa. *Ann. S. Afr. Mus.* **49**: 441-663.
- SAMPSON, C. G. 1974. *The Stone Age archaeology of Southern Africa*. London and New York: Academic Press.
- SCHÖNLAND, S. 1903. On some Hottentot and Bushmen pottery in the collection of the Albany Museum. *Rec. Albany Mus.* **1**: 25-32.
- VAN NOTEN, F. L. 1974. Excavations at the Gordon's Bay shell midden, south-western Cape. *S. Afr. archaeol. Bull.* **29**: 122-142.

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Trompetter's Drift Fort, Eastern Cape Province

by

J. R. HEATON

Albany Museum (1820 Settlers' Memorial Museum)
Grahamstown, South Africa*

INTRODUCTION

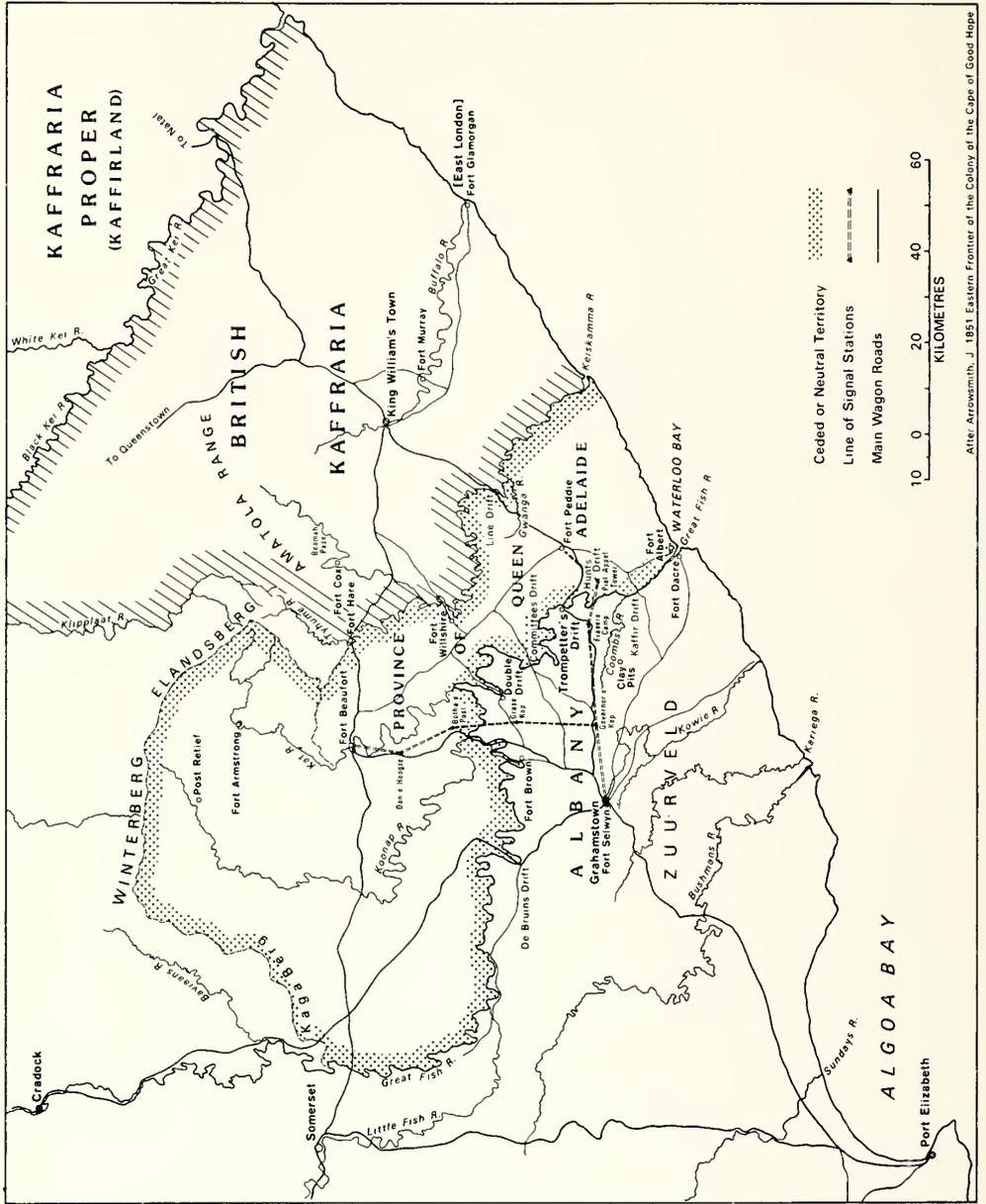
The century between 1779 and 1879 is usually remembered in the Eastern Cape as being one of insecurity, bloodshed and war. While there is a certain amount of truth in this general view, it is as well to remember that the wars were separated by lengthy periods of peace during which trade and communication between blacks and whites developed across the frontier.

At first various Governors attempted to prevent this interaction by determining rigid frontiers and by providing a death penalty for colonists who were caught trading with blacks across the Great Fish River. However, as no mechanism was provided for enforcing these decrees from Cape Town, they were generally ignored. After the arrival of the British settlers in 1820 trade with the interior expanded. Grahamstown was the largest centre for this trade, Fort Willshire, between the Great Fish and Keiskamma Rivers, played a prominent part in its development and Colesberg, Cradock and even Clay Pits in the Coombs Valley all played minor roles (Fig. 1). The last named site was important during the years when the trade between black and white was still illegal. For generations the Xhosa had crossed the Great Fish River to visit this spot to collect clay for cosmetic purposes. Settlers located in this region soon came to realize that this provided an excellent opportunity for the development of a market for bartered goods.

In due course official policy changed from outright hostility to the belief that trade should be regularized and encouraged. In 1824, therefore, the Governor of the Cape, Lord Charles Somerset, provided legislation that encouraged the development of trade by allowing regular fairs at Fort Willshire. Here licensed traders and tribesmen could meet and exchange goods under official supervision. In this way it was hoped that illicit traffic in firearms and powder could be prevented to a greater extent than had formerly proved possible.

Grahamstown had been sited by Ensign Andries Stockenström and Colonel John Graham, on the instructions of the Governor, to be suitable for the military and administrative headquarters of the new district of Albany. However, as result of the settlers moving from the land to take up their former skills Grahamstown grew rapidly as an important centre of trade and industry. Thus, though the town owes its origin to the army and civil service, much of its rapid growth in the years 1825–1850 was dependent on its traders and manufacturers. Grahamstown, therefore, grew on the twin pillars of war and trade. In 1832 nearly 2 000 wagons entered the town laden with produce from the interior. Sales, held on six days each week, were of skins, ivory, gum and feathers and made Grahamstown the second most important town in the Colony. The export of such products was valued at over £40,000 in 1843 and made the rewards of trade with the interior second only to wool in value of export earnings. In return tribesmen received beads, brass, copper, farm implements, horses and, illicitly, guns, powder and Cape brandy.

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After Arrowsmith, J. 1851 Eastern Frontier of the Colony at the Cape of Good Hope

Fig. 1 Map of the Eastern Cape Frontier.

TROMPETTER'S DRIFT PRIOR TO DECEMBER 1834

Of the three main routes into the interior, one of the most important crossed the Great Fish River at the drift named after Hans Trompetter. This route gave the trader access to "Kaffer Land" as far as Pondoland and Natal, a most valuable region for the trade with the interior. Thus the security of the crossing of the river at this point was of the greatest importance to the economy of the region. This was one of the main reasons why Trompetter's Drift played such an important part in the frontier conflicts of the first half of the 19th Century. It is no accident that the main road still crosses the Great Fish River at Hunt's Drift, a kilometre from Trompetter's Drift, on the route from Port Elizabeth to King William's Town, East London and Natal.

The first recorded reference to the Drift being named after one Hans Trompetter, a Hottentot Captain, dates from 1791-98. John Barrow recorded, in his "General Chart of the Colony of the Cape of Good Hope", Trompetter's Kraal on the east bank of the Great Fish River near the crossing.¹ However, even before the Drift was named after Trompetter it was to play a part in the Second Frontier War of 1789-1793. The unpopular landdrost of Graaff-Reinet, Honoratius Maynier, crossed the Drift at the head of a commando of about six hundred men. In a brief and unsatisfactory action at the Drift a few stolen cattle were recaptured. The commando then rode on to the Keiskamma River in the hope of capturing cattle thieves. While they were looking for a crossing over that river, the Xhosa made their way back to the Drift over the Great Fish River. In due course Maynier and the Commando returned to find that the Xhosa had made careful preparations to defend the crossing and thus prevent his return to the Colony. A Hottentot was directed to cross the Fish River further up. He successfully made his way to the Swellendam Burghers who were stationed near the present site of Grahamstown and their attack from the rear allowed Maynier to cross once more into the Colony.

What little we know of Trompetter is through references to him in connection with the aftermath of the Third Frontier War (1799-1808). Soon after the British occupied the Cape they were obliged to give their attention to the problems of a troubled Eastern Frontier where, by 1799, a confused three cornered contest had developed. The Dutch settlers at Graaff-Reinet had rebelled against British rule. In suppressing the rebellion the British had conscripted Hottentot levies to fight against their former masters. Subsequently the Xhosa took advantage of the unsettled conditions to raid the Colony. Trompetter and two other Hottentot Captains joined them when the British returned to Cape Town. The Hottentots, who had been armed and trained by the British, refused to return their muskets when peace was restored as it seemed that they did not trust the ability of the British to protect them from Boer vengeance. After the Third Frontier War Trompetter joined the mission at Bethelsdorp but, apparently becoming bored with mission life, stole a firearm and joined Ndlambe, who was regent for Nqika (Gaika). In due course he was captured by Field Cornet Erasmus and in September 1809 sent to Robben Island. After this he disappears from the pages of recorded history.

The Third Frontier War provided no lasting settlement to the problems of the frontier. By 1810 farmers were leaving the Zuurveld as they were finding it impossible to prevent the theft of their stock. By April 1810 almost every farm to the east of Uitenhage was reported to have been abandoned. In due course this movement west continued when farmers left their land in the Graaff-Reinet district. Hostility between the colonists and tribesmen increased and this escalated into the Fourth Frontier War of 1811-1812 after which the Xhosa were driven beyond the Great Fish River. Following the war it was decided that a number of posts should be established in the Zuurveld in order to provide for its defence. The present site of Grahamstown was chosen as the military headquarters for the region and Cradock as the most northerly garrison. In his autobiography Stockenström noted that he took Colonel John Graham to

Governor's Kop, about fourteen kilometres east of Grahamstown, and pointed out to him the two most important drifts over the Great Fish River, Trompetter's Drift and Hermanus Kraal (later Fort Brown). These were subsequently selected for the construction of posts.² During the years 1812–1819 a government infrastructure was steadily developed in the newly proclaimed district of Albany. In spite of this the area remained politically unstable and the white population extremely sparse. It was in these circumstances that it was decided to plant a large block of white settlers in the district of Albany. It was believed in official circles that such a move would provide a degree of permanence to the settlement of the region and would also allow the government to withdraw expensive garrisons.

It was during the planning of the settlement scheme of 1820 that war, once again, broke out on the frontier.

The crossing at Trompetter's Drift played only a small part in this Fifth Frontier War of 1881–1819. In January 1818 a commando consisting of mounted burghers and some troops of the Cape Corps crossed the Great Fish River at the Drift in order to prevent an attack on the Colony by the Xhosa chief Nqika. Just over 2 000 head of stolen cattle were collected and returned to the Colony. For months after the Battle of Grahamstown, 1819, the colonial forces carried out follow-up operations in the thick Fish River bush in the vicinity of Trompetter's Drift. On the 15th August 1819 Lieutenant Stockenström was encamped with his wagons a short distance from the Drift. Two female followers of Makana, the witchdoctor who had led the attack on Grahamstown, visited Stockenström and stated that Makana wished to speak with him. Stockenström made it clear that he would only talk with him if he gave himself up to the British and accepted British justice. Makana agreed to these terms and allowed himself to be taken prisoner. In due course he was taken to Robben Island and later died in an attempt to swim to the mainland.

The final phase of the war took place further east, beyond the Keiskamma and Buffalo Rivers. In the terms of the treaty that followed the war the boundary of the Colony remained at the Great Fish River. The territory of Nqika, however, was to start only on the east bank of the Keiskamma River. The land between the Great Fish River and the Keiskamma was to be neutral territory. The years from 1819 to 1834 were on the whole peaceful although they were punctuated with minor incidents. These were years that saw the arrival of the 1820 Settlers, the rapid development of the district of Albany and the expansion of trade across the frontier, developments which had the effect of increasing the strategic importance of Trompetter's Drift since it was on one of the main routes of access to the interior. When official Government policy allowed for the establishment of regular fairs, one such was started near Trompetter's Drift but it was not a success and was soon abandoned.³

In the late 1820s there was a gradual move away from trading at fairs, with the Government gradually relaxing control on licences for individual traders. Private trading with the interior was preferred by both sides as bargains could now be struck on the spot instead of both parties having to take their produce to a pre-arranged market.

THE ROLE OF TROMPETTER'S DRIFT IN THE SIXTH FRONTIER WAR (1834–1835)

The peaceful development of the region was abruptly halted by the outbreak of the Sixth Frontier War in 1834. It would seem that early in the war a small fort was constructed out of timber on the site of the present stone enclosure at Trompetter's Drift. The plan of 1836 (Fig. 2) was drawn for use by the Royal Engineers and provided for a bakery and butchery within the stockade. Certainly accounts of events at the Drift during the war make it clear that some kind of fortified enclosure existed as early as 1834, that is prior to the erection of the timber fort.

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE

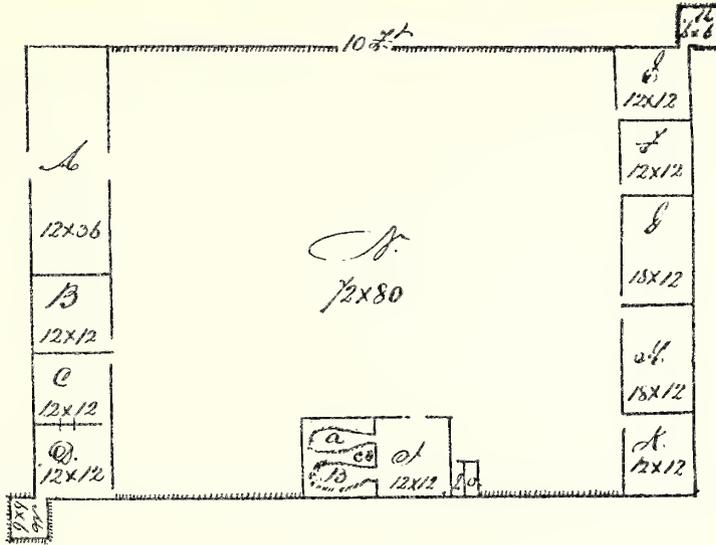


Fig. 2 Trompetter's Drift Fort as shown on a plan dated 1836. *Cape Archives, A1523.*

In December 1834 between twelve and twenty thousand tribesmen poured across the Great Fish River into the Cape Colony. The invasion was a complete surprise and, before defences could be organized and co-ordinated, twenty-four farmers and eight traders had lost their lives, many farm houses had been burned and large numbers of cattle, sheep, goats and horses had been carried off. Throughout December refugees poured into Grahamstown bringing with them distressing accounts of their hardships. It was reported that at the farm of Mr J. Howse, situated on the west bank at Trompetter's Drift, more than 500 head of cattle and 2 600 sheep had been taken. The messenger who brought this news to Grahamstown reported that the hills in the vicinity of the Drift were providing sanctuary for thousands of the invaders.⁴ A few days later a report was received from a farmer, who had coolly observed the Drift for two hours from a well concealed hiding place, stating that thousands of Xhosa had crossed over whilst he watched. Thus it was clear that the Drift was being used as an important means of access to the Colony and was also an important route for taking booty back into Xhosa territory.

At about the same time Messrs Simpson and Ford, returning to the Colony with laden wagons, were attacked and all their possessions taken. They themselves managed to escape into the thick bush. Albert Kirkman was not so fortunate as soon after this incident he was murdered while crossing with his wagon at Trompetter's Drift. At the beginning of January 1835 the chief Umkye crossed the Great Fish River at this point and was allegedly responsible for murdering John Shaw nearby. Immediately afterwards an attack was made on the farm of William Shaw, the brother of John. William managed to escape by using a little-known path that took him onto the high ground overlooking the Drift. Another trader, William Hogg, attempted to cross the river at the Drift at the end of January 1835 and was swiftly dispatched. The same fate awaited Mr Iles, also a trader, who a week later attempted to cross back into

the Colony. Cory notes that by the beginning of 1835 the Xhosa were masters of most of the district of Albany with the exception of a few garrisons and the towns.

The military authorities soon realized that a large portion of the invading force was entering the Colony at Trompetter's Drift. Furthermore, as the Drift was strongly defended by the Xhosa, preventive operations between the Great Fish and Keiskamma Rivers were rendered difficult. This point had been clearly illustrated when Captain Harries attempted to cross the river with a small force but finding his efforts heavily contested was obliged to make a wide detour to the mouth before he could cross to the east bank. As a result of this situation Colonel England of the 75th Regiment and Major Gregory of the 98th, with a detachment of 300 soldiers, were ordered to march to the Drift and report on the situation. In spite of the river being in flood (see Figs 3, 4, & Editors' note), the soldiers fought their way across, destroyed huts and captured 135 cattle.⁵ The situation was considered serious enough for Major Gregory to remain at the Drift with most of the soldiers while Colonel England returned to Grahams-town to make his report to Colonel Harry Smith, then Commanding Officer of the troops on the Eastern Frontier. Colonel Smith decided that the headquarters should be temporarily moved to Trompetter's Drift. He collected together 1 200 men, comprising sections of the 72nd and 75th Regiments, a troop of the Cape Mounted Rifles, burghers of George, Uitenhage and Port Elizabeth. In addition he was joined by the Albany Sharpshooters and some Hottentot levies.

Colonel Smith then divided this force into three sections, reserving for himself the command of the centre section which would march straight to Trompetter's Drift. The northerly section under the command of Colonel England was ordered to cross the Great Fish River at Committees Drift. The southerly section under Colonel Henry Somerset was ordered to cross at Kaffir Drift, to move onto the high ground on the other side and then to move up the bank until opposite the position occupied by Colonel Smith. It was intended that Smith would lead a frontal attack across the river while Somerset and England would cut off lines of retreat on the east bank. The force would then re-unite and move towards the Keiskamma to attack the kraal of Eno, one of the lesser chiefs in the area.

Smith arrived at Trompetter's Drift on the 7th February 1835 with most of his section, though it seems that the Albany Sharpshooters only arrived on the 10th. The river had been in flood for many days but by the 12th it had fallen sufficiently to allow the troops to cross. On the evening of the 11th, the day before the attack, Harry Smith summoned a meeting of all the officers and non-commissioned officers and addressed them in severe tones. He made it clear that Xhosa women were to be respected and, if he heard of any man treating them violently, he would have him drummed out of the camp. He appealed to the men to show bravery in the face of the enemy and not to be surprised if the enemy possessed firearms. Finally he reminded all present that they could only die once and it did not matter whether it was by the hands of this enemy or any other as it was all in the best interests of king and country.⁶

The following afternoon all the men crossed the river taking with them a six pounder field piece and a howitzer, the latter having been sent to Trompetter's Drift by Colonel Somerset. They were ordered to make their way through the bush so that they could command a view of the Great Fish River. Stringfellow gives a vivid account of this march with its heat and the continual sniping by the enemy who lay concealed in the bush. Three of his friends were killed when they rushed headlong after some Xhosa. The bush was so thick that it proved impossible to recover the bodies. Duncan Moodie who was employed by Harry Smith to act as guide for the troops later recalled how Smith gave him temporary rank of Captain in command of all the guides. He recounted how, in due course, all the troops were in position and how after some shots had been dropped into the valley by the six pounder and howitzer the troops moved through the bush as best they could.⁷ It was found that it was only possible to move in single file which gave the Xhosa ample opportunity for setting ambushes. After the military had ended

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE



Fig. 3 The Great Fish River from Hunt's Drift Bridge, normal flow.



Fig. 4 The Great Fish River from Hunt's Drift Bridge, in flood; note mud waves breaking.

three hot and frustrating days of fighting a hidden enemy the Xhosa gradually retreated to the Keiskamma River. In the operation 100 enemy were killed in hand to hand fighting and some 2 500 cattle taken. In the final engagement in which both the sections of Smith and Somerset attacked together more of the enemy were killed and another 2 500 cattle captured. The troops were finally recalled to Trompetter's Drift on the 14th February. Eleven soldiers were killed and five were wounded. Four of those killed had fallen at the hands of their own comrades in a tragic incident just a day or two before the recall. It appears that a detachment of the 72nd Regiment had been placed in position for the night but the men were ordered to keep their muskets loaded so that they would be ready in the event of a surprise attack. One man, it seems, woke suddenly thinking he had heard a noise. He panicked and discharged his musket into the night. In the ensuing chaos soldiers were shooting in every direction resulting in four men being killed and three wounded.

After re-grouping at the camp at Trompetter's Drift it was necessary to direct operations towards clearing the bush of the enemy on the Colonial side of the river. Accordingly, Colonel England was ordered to take a force through the bush, working up towards Committees Drift. The attack was a failure as the enemy escaped or hid in the thick bush in the sure knowledge that detection was extremely unlikely. Further efforts in the vicinity of Trompetter's Drift were now dropped as equipment was collected for an invasion of Xhosa territory. This proved to be a grave error as the Xhosa, who were still in the bush in the vicinity of Committees Drift, invaded the Colony. A detachment was ordered to follow them while the main force crossed the Great Fish River and marched into Xhosa territory. This detachment followed the Xhosa and when opportunity allowed they fired at them with a three pounder field gun,⁸ however, they were unable to catch up with them. Meanwhile only a small force had been left at Trompetter's Drift to guide the ferry that had been constructed there. The 700 Xhosa who had managed to keep ahead of their pursuers attacked the Fort, destroyed the ferry, wagons and supplies and killed nine soldiers. As Somerset arrived at the Drift too late to provide any assistance to the defenders he continued the pursuit. He in turn was ambushed and was obliged to fight a sharp battle in which he lost six men and five wounded. With this action the part played by the Drift in the Sixth Frontier War ends.

TROMPETTER'S DRIFT FROM 1835 TO 1846

In the years between the Sixth and Seventh Frontier Wars considerable attention was given to the defence of the Frontier. Even such well known figures as the Duke of Wellington, who was chief of the army, took a lively interest in the debate.⁹ It soon became quite clear that an ambitious policy of constructing permanent fortifications was to be employed, with temporary posts being replaced by well built stone structures. As part of this programme a large fort completed by 1843, was constructed at Trompetter's Drift. In the general plan of defence it was visualized that the Fish River boundary was to be defended by a chain of forts that would guard all the major crossings. The mouth of the Great Fish River was protected by Fort D'acre. Trompetter's Drift Fort was second in the line north and was followed by forts at Committees Drift, Double Drift and Hermanus Kraal (Fort Brown). It was planned that Fort Beaufort was to be a garrison of considerable size. A line of stone semaphore towers was built to connect Fort Peddie in the east and Fort Beaufort in the north with Grahamstown. Fort Peddie itself provided a new garrison situated midway between the Great Fish and Keiskamma Rivers. Trompetter's Drift Fort, situated between the new garrison and Grahamstown, was now to take on a new importance in providing for the defence of the Frontier. In due course, during the Seventh Frontier War, this role was to be severely tested.

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE

The first phase of the building programme which started almost immediately after the Sixth Frontier War in 1835 was supervised by Major Charles Jasper Selwyn. The high standard of stonemasonry attained in these buildings bears testimony to his careful supervision. In 1842 Selwyn was transferred to Canada and promoted to the rank of Lieutenant-Colonel. In the same year work was in progress on the stone fort at Trompetter's Drift.

A successor to Selwyn had been appointed to the Eastern Cape at the beginning of the previous year (1841): William Francis Drummond Jervis. Jervis, a Captain in 1841, was to become the most outstanding military engineer of his day in the British Army. He served at the Cape from 1841 to 1848 during which time he played a major role in the construction of the system of fortified posts and gun towers that was intended to defend the Frontier and supervised the erection of a large stone bridge over the Great Fish River at Fort Brown. In 1848 he returned to England, constructed the Wellington Barracks in London and was subsequently sent to Canada to take responsibility for the fortifications there and later, after being knighted, became Governor of the Straits Settlement.

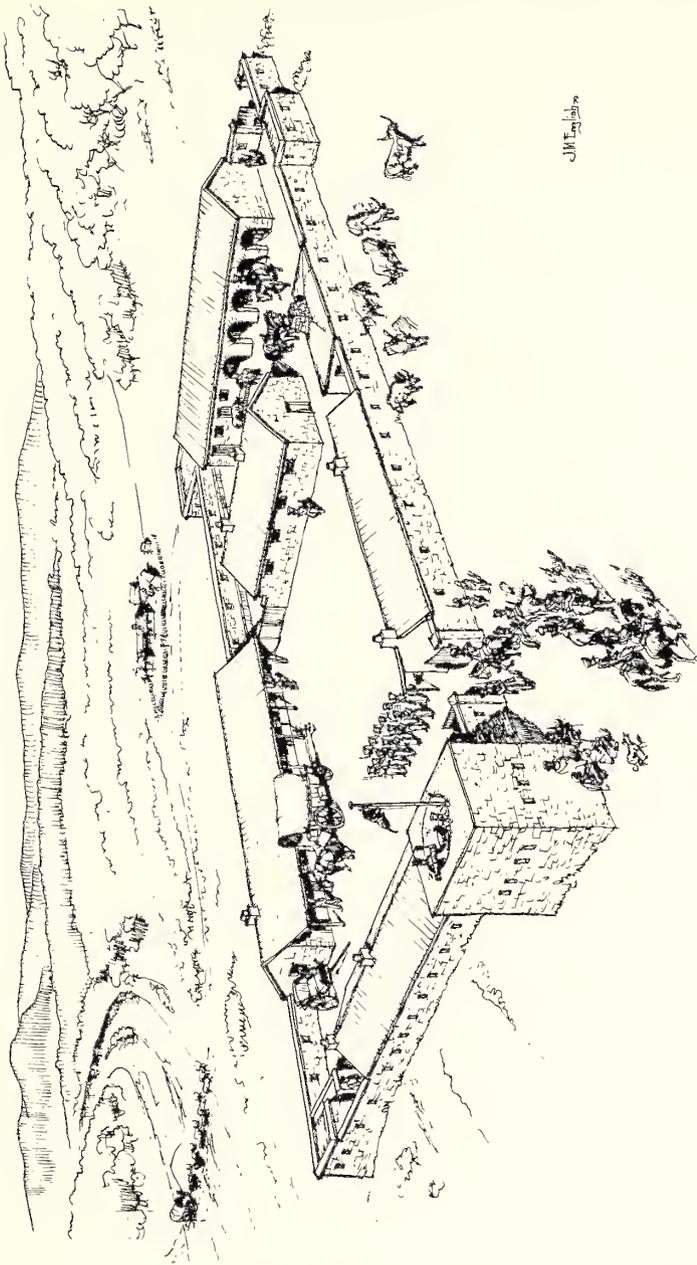
The commanding officer of the Royal Engineers at the Cape was Lieutenant-Colonel Lewis, the author of *Memoirs on Military Locations for the Defence of the Eastern Frontier of the Cape of Good Hope*.¹⁰ In this work, clearly addressed to Sir George Napier, he made it clear that he saw no value in a large number of stone forts on the Eastern Frontier, particularly as Napier had been ordered to reduce the cost of defence. Such a reduction necessitated the recall of soldiers from the Cape. Lewis advocated the development of "Military Locations"—complete military settler communities living off the land on the Frontier and defending it at the same time. These communities should be located, with small gaps between them, along the entire Frontier. Lewis was outspoken in his opposition to the new line of stone forts envisaged and wrote to Napier "I do not see cause for any of the permanent military works in progress, all of most expensive masonry. I do not hesitate to state as my military opinion that all such are unnecessary as defence against a naked and uncivilized enemy without artillery".¹¹ Of the forts already completed he conceded that Fort Peddie was of considerable importance and as Trompetter's Drift Fort guarded the route to Fort Peddie it is probable that he later came round to the view that it was also of value. With his Dispatch Lewis supplied Napier, who was still in England, with detailed returns of works and buildings of the Eastern Frontier that were proposed for the year 1839-1840. Against many of the forts he wrote "preposterous and unnecessary", while against the line of Fish River Forts he wrote "of no use whatever" and further commented that he would not agree to construction commencing until Sir George Napier had first visited the Frontier and reviewed the plans.

Sir George Cory attributes this Dispatch to Sir George Napier, written to the Secretary of State, but this is clearly an error as there is no doubt that the author is Lewis and that the Dispatch is addressed to Napier, who was shortly to embark for the Cape. A number of comments in the Dispatch are clearly addressed to Napier and are not from Napier.

As Napier had not arrived in the Cape when the plan for defence was drawn up and as Lewis was clearly against the policy of building stone forts, it is probable that the impetus for the scheme came from Sir Benjamin D'Urban, Governor until 1838, and also from the military authorities in London, certainly including Wellington.¹¹

It is interesting to note that in the return included with Dispatch 43 to Napier an estimate of £1 396-17-8d was allowed for the construction of a stone fort at Trompetter's Drift while the same amount was allowed for Double Drift Fort. When Double Drift Fort was completed it was significantly smaller than Trompetter's Drift and was completed for the sum of £1 048-3-5½d. It is possible that the reduction may have been due to representations made by Colonel Lewis. It is also open to speculation that the reason that such a reduction was not made in the case of Trompetter's Drift Fort was either that Lewis came to believe that the Fort was of some special value on the route to Fort Peddie or that the Governor came to this conclusion. Alter-

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TROMPETTER'S DRIFT FORT
EARLY 1840s

Fig. 6 Architect's "birdseye" view of the Fort as it would have looked in the early 1840s.

natively, such a conclusion might have been reached by higher authorities in London, though this is less likely unless influential support had come from the Cape.

In their work on the Frontier both Selwyn and Jervis were ably assisted by Henry Hall, also an officer in the Royal Engineers. Hall had the particular responsibility of the surveying and construction of the signal stations that stretched in two lines to Fort Peddie and Fort Beaufort. He did, however, also work energetically on the Fish River Forts. When the gun tower at Committees Drift was being taken down in 1874 a bottle was found wedged between some stones. This bottle contained a piece of paper with the following inscription: "This tower commenced A.D. November 1843: Completed July, 1844. Cost £500. Executed under superintendence of Henry Hall, Foreman of Works, aged 29 years, Native of Dublin."¹²

It is possible that Hall was also responsible for the construction of the beautifully finished tower at Trompetter's Drift Fort. It is fair to assume that the cost here was also about £500. Thus the tower alone was responsible for from between a third and a half of the total construction cost of the Fort. Hall, who is probably best known for his map of South Africa of 1857, returned to England in 1858. In the same year he had been promoted to the rank of Clerk of Works.

The plan of January 1843 (Fig. 5) shows that at that time the Fort was largely complete. When this is compared with the modern plan of the Fort as it is in 1979 (Fig. 8) it is at once clear that very little has changed over the past 130 years (comparative details are discussed more fully later in this paper). This, in itself, is clear evidence of the quality of workmanship.

The modern architect's impression of the Fort in the 1840s (Fig. 6) gives a clear impression of the extent of enclosure. Jones' drawing of 1873 (Fig. 7) shows the positioning of the Fort in relation to the Great Fish River and the whole of the Trompetter's Drift Post. This plan also shows Montgomery's Inn which was built to serve the numerous travellers who used the Drift. The Inn was constructed at some point between 1840 and 1870.

In general terms, the years between the 6th and 7th Frontier Wars, 1835-1846, were troubled ones on the Eastern Frontier. They were years that saw the proclamation of and subsequent abandonment of the new Province of Queen Adelaide (the land between the Great Fish and Keiskamma Rivers). In February 1836 Andries Stockenström was appointed as Lieutenant Governor of the Eastern Districts and empowered to make treaties with the Xhosa chiefs. The Governor, Sir Benjamin D'Urban, was recalled in January 1838 and replaced by Napier. Soon after Napier's arrival early in 1838 he visited the Eastern Frontier and came to realize that he had inherited a considerable programme of fort construction. At the same time he had been informed in England that he would have to reduce the garrison as it was too costly. In the years between his arrival and 1841 the Stockenström treaty system gradually broke down. It is of interest that it is alleged in the Stretch Memorandum¹³ that the Stockenström treaties failed because the necessary force to implement them was never supplied. On account of the breakdown of the old treaty system Napier was forced to revisit the Frontier in order to conclude new treaties with the Xhosa chiefs and in January 1841 travelled to Fort Beaufort where the treaties were modified. He then travelled to Fort Peddie where he had further discussions with the chiefs. On his return trip to Grahamstown in mid-January 1841 Napier and his wife spent the night in the Trompetter's Drift Fort.

In 1842 Britain annexed Natal and Napier sent Captain Smith overland to Port Natal to raise the Union Jack over the new colony. The Boers reacted immediately and besieged the small garrison. Dick King was ordered to ride over 600 miles back to the Cape Colony to obtain a relieving force. As the main route from Natal to the Cape crossed the Great Fish River at Trompetter's Drift, he crossed into the Colony at this point on the 3rd June 1842.

In spite of the fact that these were troubled years for the Colony, trade with the interior continued, though some of it involved illegal "gun running". Sir George Cory¹⁴ gives an account of an interview he had had with an old inhabitant of Grahamstown, born about 1800.

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TROMPETTERS DRIFT POST

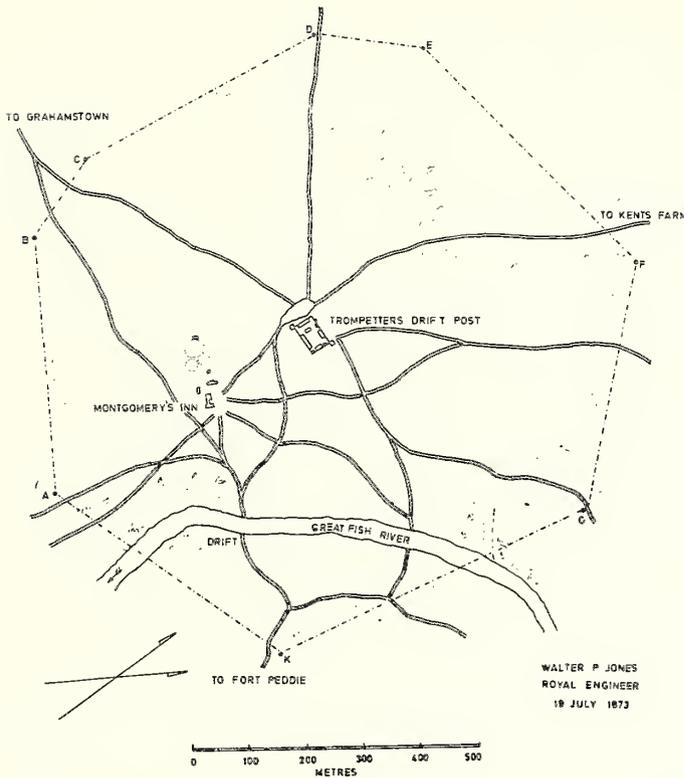


Fig. 7 Trompetter's Drift Post: map showing the fort and surrounding area. 1873. Walter P. James, R. E.

The old man described to Cory how he had been a wagon driver for a merchant involved in gun running. He then gave Cory an account of how they tricked the soldiers at Trompetter's Drift who were instructed to check all wagons heading into the interior. The guns were dismantled and packed into water barrels. When the wagon arrived at the Drift, before the soldiers made an inspection, the barrels were removed and rolled down to the water side where they were apparently filled with water. This was acceptable practice amongst travellers who might have a long dry journey ahead of them. The men would continue working on the barrels while the soldiers inspected the contents of the wagon and the barrels would then be dragged across the river and be made ready for reloading on the far bank. The apparent effort of moving the barrels would be accounted for by the weight of water they were now supposed to contain. The inspected wagon would then cross to the other side of the Drift and the barrels would be

loaded back. Sir George Cory noted that the old man stated that these events occurred between the years 1840 and 1845.

In a prelude to the Seventh Frontier War a missionary and his servant were murdered near Trompetter's Drift. It appears that three newly arrived German missionaries, travelling from Port Elizabeth to the German Mission at Bethel near the present site of Stutterheim, crossed the Great Fish River at Trompetter's Drift in the first week of November, 1845. Shepstone, Resident Agent amongst the Fingoes at Fort Peddie, provided them with three wagons for their use on the trip and these they outspanned on the high ground on the east bank of the river. During the night the camp was attacked and robbed and one of the missionaries and a servant were killed.

TROMPETTER'S DRIFT IN THE SEVENTH FRONTIER WAR (1846-1847)

The experience of the German missionaries at Trompetter's Drift in 1845 highlights the growing insecurity on the Frontier in the final twelve months before the outbreak of the 7th Frontier War. The Fort was to play a major part in the war as once again this route of access between the Colony and Xhosa territory became of great importance. From this point of view there was renewed urgency for the colonial authorities to keep the Drift open as supplies had, at regular intervals, to pass below the Fort along the road to the new garrison at Fort Peddie. The main incidents at the Fort were connected with determined Xhosa attempts to prevent supplies from reaching that garrison. In May 1846 Colonel Henry Somerset was ordered to take a small force to Lower Albany as information had reached Grahamstown that a number of incidents had taken place in that region. Accordingly he left Fort Peddie with 235 men, four wagons and two field pieces and marched to Trompetter's Drift where he intended to make his crossing. Somerset's force was immediately subjected to small arms fire when it reached the edge of the Fish River bush. The men were ordered to dismount and make their way to the Drift on foot. It took three hours of hard fighting to reach the Drift, during which time an attempt was made to capture the four wagons, eight men were wounded and seven horses killed. Thus it took over 200 men to take four wagons across Trompetter's Drift, a lesson that was not noted by the military authorities.

Two weeks later, on 18th May, a convoy of 40 wagons left Grahamstown for Trompetter's Drift with an armed escort of only 80 soldiers. The wagons contained provisions, including general stores, firearms and ammunition, badly needed at Fort Peddie. The convoy arrived at the Drift two days later but after a patrol had investigated matters on the east bank of the river it became clear that a larger escort was necessary. Lieutenant Dickson, therefore, sent four civilians to Fort Peddie to request that Colonel Lindsay send reinforcements. On the morning of the 21st May 60 men of the 91st arrived at the Drift, having run into few problems on the way. When all was ready the convoy moved off in the direction of Fort Peddie. After they had travelled about two miles they were fired upon as they traversed a steep path up which the wagons had to travel in single file. The fire was returned but it proved impossible to see the enemy who were well concealed in the thick bush. The Xhosa shot the oxen pulling the first wagon thus making further progress impossible and then an estimated 1 500 of them attacked the convoy simultaneously. The fighting became so severe that the troops were obliged to leave the wagons and retire to the Fort. The wagons were then looted and burned. The Xhosa, believing that the garrison at Fort Peddie was low in supplies, subjected that Fort to a determined attack which was beaten off. Soon afterwards another convoy was collected and dispatched to Fort Peddie by the less direct route of Committees Drift. Once again there was an attack on the convoy which, on this occasion, was successfully beaten off. Soon afterwards 60 wagons returning empty from Peddie to Grahamstown made a successful crossing at Trompetter's Drift after a diversionary attack had been mounted. As a result of these incidents the

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Governor of the Cape, Sir Peregrine Maitland, who had recently arrived in the Eastern Cape to gather information at first hand, decided that provisions destined for Fort Peddie should be offloaded at Waterloo Bay, a short distance east of the Fish River mouth. It was hoped that in this way the hazards of crossing the river further up could be avoided. Waterloo Bay was not, however, a success as it proved too exposed and the bottom too rocky, so the authorities were forced to continue using the drifts across the Fish River.

One feature of the wars on the Frontier was the fact that very few pitched battles were fought. The Battle of Grahamstown, the attack on Boomah Pass and the Battle of the Gwanga of 1847 between Fort Peddie and Trompetter's Drift were exceptions. The origin of the Battle of the Gwanga was a planned attack by two of the minor Xhosa chiefs, Umhala and Siyolo, on the Fort at Trompetter's Drift. It was their intention to storm the Fort and capture all the firearms and ammunition so that attacks could be renewed on the Cape Colony. In spite of warnings the two chiefs crossed the open ground between the Great Fish River and the Keiskamma during the day. Colonel Somerset who was patrolling in the region crossed the tracks of this large force and followed them. He finally caught up with the enemy force at the Gwanga River and in the ensuing cavalry charge the 7th Dragoon Guards routed it. The lesson of being caught in the open was learnt and this never occurred again. Information from prisoners suggested that the attack was also intended to cut communications between Fort Peddie and Grahamstown.¹⁵

After the Battle of the Gwanga no further actions were fought near Trompetter's Drift during the Seventh Frontier War. By the end of the war a force of more than 50 men was stationed at Trompetter's Drift. Included was a Royal Artillery trooper to man the heavy traversing cannon in the gun tower, soldiers from the 6th Regiment (Inniskillings), two sergeants and a drummer, 10 troopers from the Cape Mounted Rifles and one sergeant. The Fort was under the command of Captain Fraser of the 6th Regiment.¹⁶ In addition to the men, 10 horses were stationed at the Fort.

TROMPETTER'S DRIFT IN THE EIGHTH FRONTIER WAR (1850–1853)

The period of peace between the Seventh and Eighth Frontier Wars was brief, hostilities being renewed in 1850. A farmer near the Drift, Mr Hoole, did not drive the cattle from his property further into the Colony until after the start of the war. He then ordered all his servants to leave the farm and travel with the cattle to Grahamstown. On the way they were ambushed and both cattle and servants captured and taken into Xhosa territory. The only other incident to take place at Trompetter's Drift during the Eighth Frontier War was in connection with Hottentot mutineers. Their leader, Meyers, was joined by the Xhosa chief, Kreli, in a planned attack on Grahamstown early in 1851. It was decided that the Fort at Trompetter's Drift should be captured first and then, armed with powder and muskets captured, an attack was to be mounted on Fort Selwyn, Scott's Barracks and the Ordnance store, after which the rest of the town would be taken. The plan failed, the mutineers were surprised and many taken prisoner and the Xhosa driven off.

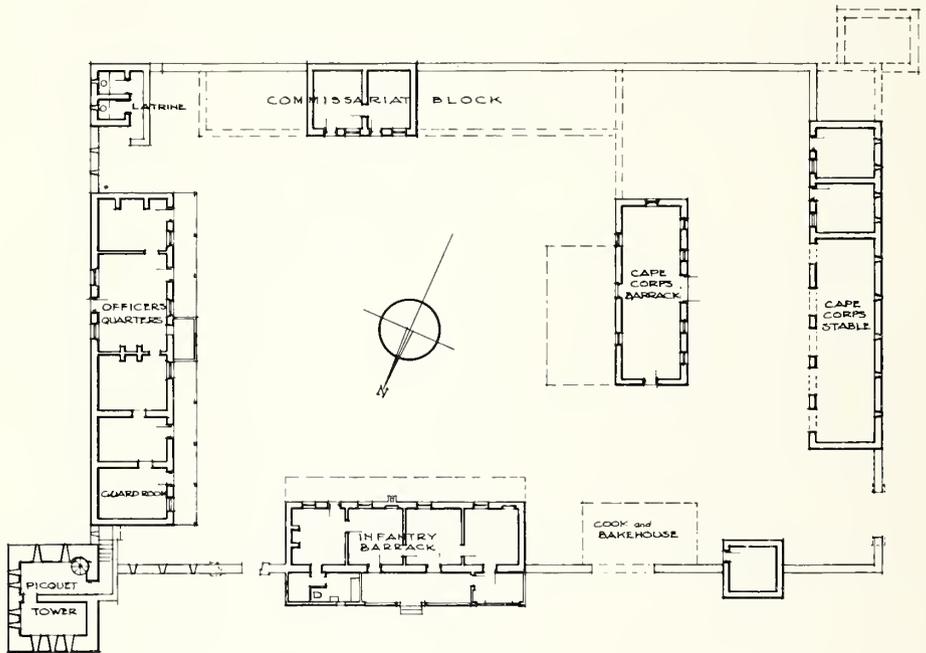
In the early part of the War, Sir Harry Smith, Governor of the Cape, decided that the Fish River bush should receive attention. It is possible that he remembered the problems he had had in this region some fourteen years before. Be that as it may, in August 1851 he ordered Colonel Eyre with half of the 73rd Regiment, 100 cavalry and 200 Fingoes, in all a force of 900 men, to scour the bush between Trompetter's Drift and Committees Drift. It appears that during the five days of the operation little success was achieved. Meanwhile, the main theatre of operations during the war had moved further east to beyond the Buffalo and Kei Rivers. As the lines of communication stretched between Grahamstown and the area of operations were

lengthy, a new point of supply was sought, the authorities finally settling on the mouth of the Buffalo River. Here, where the town of East London was to grow in the middle 1850s, Fort Glamorgan was built to protect the transport ships. In these circumstances the importance of the line of forts along the Great Fish River came to an end.

NOTES ON THE ARCHITECTURE AND CONDITION OF TROMPETTER'S DRIFT FORT

It is fortunate that the ground plan of the Trompetter's Drift Fort at its time of completion still exists in the Public Records Office in London (see Fig. 5). The existing buildings have been measured and were found, with one exception, to differ only superficially from their original form. The exception was the building which adjoins the south wall and which contained the Commissariat Offices and General Store. Only about a third of this structure still remains.

The latrines near the north-west gate have also long since disappeared as has the Forage Store at the south-west corner. In all other respects the buildings are intact. Much of the perimeter wall has collapsed, indeed the only sections still at their original height are those



PLAN OF TROMPETTER'S DRIFT FORT

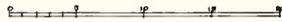


Fig. 8 Plan of Trompetter's Drift Fort: 1979.

between the Non-commissioned Officers' Barracks and the gun tower and that between the gun tower and the Guard Room. A small section also exists between the Kitchen and the double latrines at the south-east corner. The farmer, who owns the property and has lived there all his life (some forty years), recalled that, when he was young, the roof of the Bake House collapsed. It had been built of brick with the four corners meeting in the middle where the chimney was situated. This building now has a simple corrugated iron roof. He also recalled that large sections of the exterior walls had collapsed into piles of rubble and that he had employed a stone mason to raise it back to its present height of about a metre. In doing so he had sited the wall incorrectly at the south-west corner of the Fort, where he joined the east wall of the Officer's Stable to the south perimeter wall. The short section of wall between the General Store and the Cape Corps Barracks has long since disappeared, the only evidence remaining being key stones let into the south-east corner of the Cape Corps Barracks. The only verandah that remains is the one across the front of the Kitchen/Parlour/Bedroom Block (Officers' Quarters) which is still largely in its original condition. When the architect's two impressions of the Fort are compared (Figs 6 & 9), it becomes clear that few changes have taken place in the last 130 years.

The ground plan (Fig. 8) shows the existing buildings with a solid line and the ones dated 1843 with a broken line. The stable block at the west of the enclosure is almost entirely in its original condition. The roof is still supported by the original yellowwood, accurately jointed 'king post' roof trusses and purlins. The yellowwood lining above the trusses has been removed and the roof is now clad in corrugated iron. There is no doubt that the roof would originally have been covered in zinc, since such zinc roofs can still be found at Post Retief (Fig. 10). The floor of the stable block is laid in cobblestones which can still be seen where the cement topping has worn away. Two interior walls have been removed, namely both the Saddle Room walls, though it is still possible to see where these joined the outside walls. The front of the stable block has five most attractive arches (Fig. 11).

The Cape Corps Barracks (Fig. 12) is also still in impressively good condition and there the yellowwood lining above the roof trusses is still intact. On all the buildings in the Fort the zinc would have been laid in 60 cm wide strips down the slope of the roof with the side joints dressed over wooden rolls. The zinc would then have been attached to the yellowwood lining below. The windows along the west wall of the Barracks are the original ones.

The Infantry Barracks building is now occupied as a private dwelling. The original exterior walls and two interior walls are still in place. However, many of the window frames have been changed, a large verandah has been built onto the north side, outside the enclosure, and the south verandah, within the enclosure, removed. The pine ceiling in this building probably dates from the turn of the century. Much of the floor is still original yellowwood.

The Kitchen/Parlour/Bedroom Block (Officers' Quarters) has received some alterations. The east wall no longer has loop-holes which were replaced by sash windows, probably at about the turn of the century. The floors are still original as are the fireplaces, however, the ceiling has been replaced with Baltic pine ceiling boards which probably date from the turn of the century. The verandah is intact and some of the timber posts supporting it are clearly original. A small extra room has been added in the middle of the west side and extends to the outside edge of the verandah. The roof has been recently re-covered with corrugated iron.

Only two rooms remain of the Commissariat Block along the south edge of the enclosure. These rooms are still in good condition with original doors and windows.

The latrines at the south-east corner of the Fort are in original condition except, once again, for the roof which has been replaced by corrugated iron. Here even the seats on the latrines seem to date from the middle of the last century.

Access to the Gun Tower is gained by climbing a flight of steps, a portion of which can be seen in the photograph of the tower taken from the inner court (Fig. 13). The quality of the

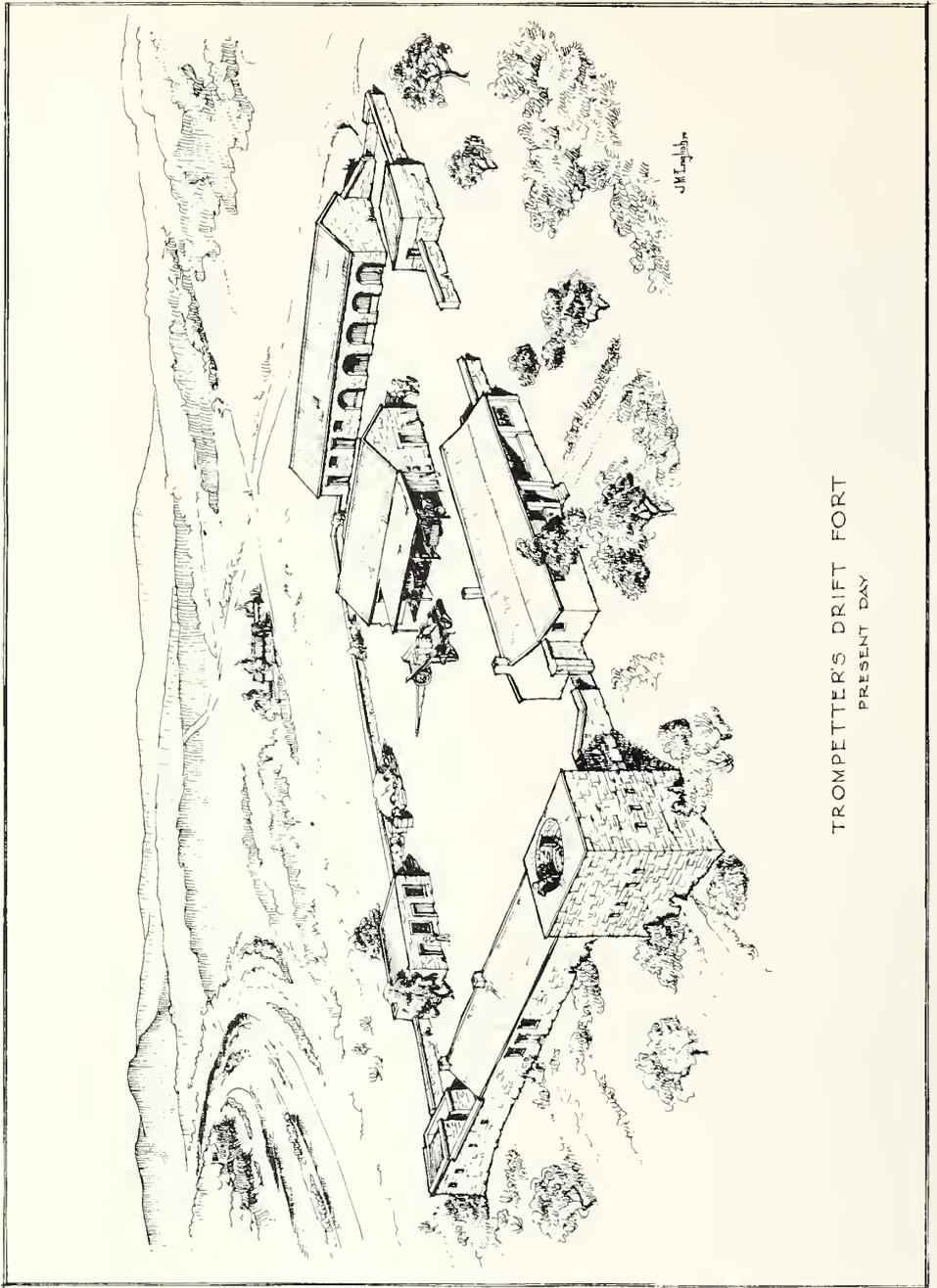


Fig. 9 Architect's "birdseye" view of the Fort at the present day (1979).

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE



Fig. 10 Zinc roof at Post Retief.



Fig. 11 Stable Block at Trompetter's Drift Fort, 1979. The arches were originally all open at the bottom.

masonry in the tower is very high and consequently this building is structurally in sound condition. The tower has three floors, access to the ground floor being *via* a trap door in the wooden floor and a step ladder. The first floor consists of two rooms with an arched ceiling of brick with the dividing wall running east-west. The gun slits are tapered to the middle of the outside wall so that a rifle could be traversed to some degree in both directions. A timber spiral staircase (Fig. 14) leads to the open top of the tower. The stairs are in poor condition as some of the treads are rotten. (They have since been repaired. Ed.) This is the last surviving example of the spiral staircases used in these towers in the Eastern Cape.

A narrow doorway leads to the circular enclosure in which the cannon was mounted. From here a commanding view of the curve of the Great Fish River, including the drift and also a view of the whole enclosure can be seen. (See Figs 15, 16).

The wall of the Gun Tower is about a metre thick and there is evidence that the top was sealed with a thick layer of tar to prevent damp working its way down into the rooms below. The stone step encircling the inner wall of the tower gave soldiers the ability to fire over the wall but more importantly it was the step along which ran the guide wheel for the traversing cannon. The timber fulcrum, bound with iron straps, is located in the middle of the enclosure around which the cannon traversed (Fig. 17). Such a cannon still exists in the Martello Tower in Fort Beaufort and a plan of one is shown in Fig. 18.¹⁷ Fig. 19 shows the Gun Tower at Trompetter's Drift from outside the walls of the enclosure.



Fig. 12 Cape Corps Barracks, 1979.

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE

TROMPETTER'S DRIFT FORT: A CASE FOR RESTORATION

During the past few years there has been a growing awareness in South Africa that a conscious effort should be made to preserve and restore old buildings. This movement has been evident particularly in the towns of the Eastern Cape, where old private dwellings and public buildings have been restored with great care. Both the private sector and the government have involved themselves in this work.

Little effort has yet been directed towards the preservation and restoration of British military forts constructed during the last century. Fort Murray near King William's Town has been only partly restored. A more complete restoration has been undertaken on Fort Selwyn which is situated on the hill above the city of Grahamstown. The deterioration of two of the signal towers on the line to Peddie has been halted, though the buildings still remain mere shells. Of the 80 to 100 forts constructed between Port Elizabeth in the west and the Kei River in the east between the years 1805 and 1880 most are either in ruins or have disappeared without trace. Thus a major feature of the architectural heritage of this region has been allowed to crumble. Of the forts that remain only Trompetter's Drift is still in outstanding condition, having been carefully preserved by the farmer who owns it. The buildings have been



Fig. 13 Corner of wall, door and steps (indicated by arrow) up to Gun Tower, photograph taken from the inner side.



Fig. 14 Staircase in the Gun Tower leading from 1st to 2nd floor; trapdoor visible in floor leading down to ground floor.

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE



Fig. 15 View of the Fish River from the top of the Gun Tower. The drift is just on the near side of the bend.

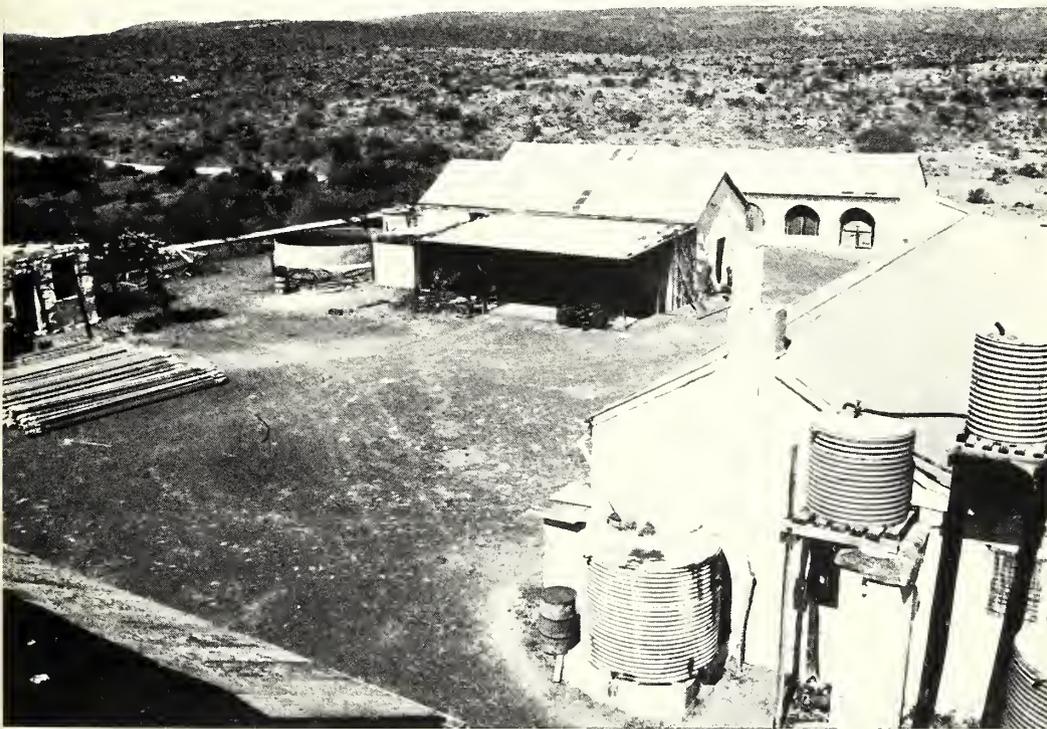


Fig. 16 View of Fort enclosure from top of Gun Tower.

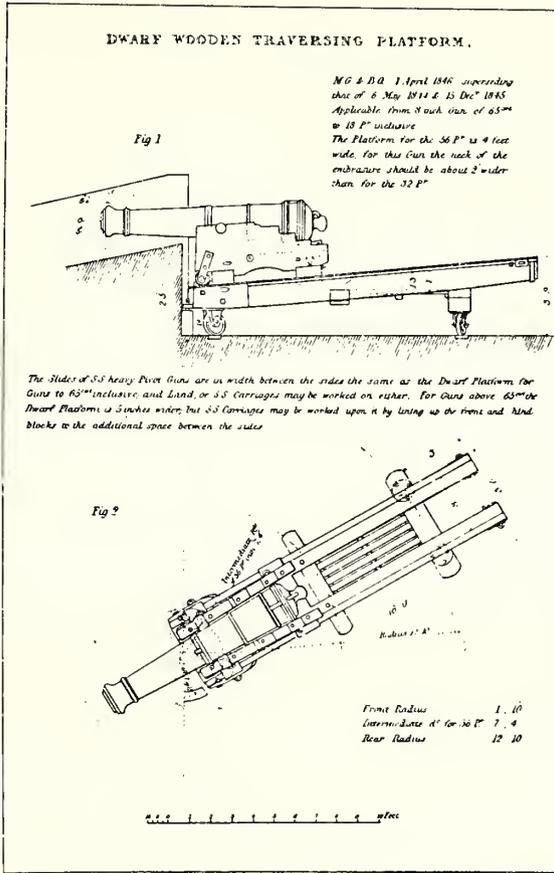


Fig. 17 Part of gun platform showing fulcrum for traversing cannon, ledge to take wheel and doorway into tower.

maintained for farming purposes and thus for practical reasons the Fort is not open to the public. The Gun Tower has been declared a National Monument but nothing has so far been done about the rest of the Fort.

, It is the belief of the author that a strong case exists for having this Fort at Trompetter's Drift carefully restored, as far as possible, to its condition at its date of completion in 1843. It would be a suitable memorial to an important aspect of the history of the Eastern Frontier.

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE



John Weale, 59 High Holborn, 1846

Fig. 18 Plan of traversing gun.



Fig. 19 Gun Tower from outside the walls of the Fort enclosure. The loopholes are on the first floor.

ACKNOWLEDGEMENTS

Grateful thanks are due to the following: Mr A. G. Willows, owner of Trompetter's Drift, for permission to visit the Fort; Mr J. M. English, Architect, Grahamstown, for the modern ground plan of the Fort and the two "birdseye" views of 1843 and the present (Figs 6, 8 & 9); Mr W. O. West, Cartographer, Geography Department, Rhodes University, Grahamstown, for the map of the Eastern Frontier (Fig. 1); Mr T. M. Archer of East London for the plan of Trompetter's Drift Post (Fig. 7) based on the original held by the Cory Library for Historical Research, Rhodes University, and for the photograph of Post Retief (Fig. 10); Dr K. M. F. Scott, Albany Museum, Grahamstown, for the photographs of the Fish River at Hunt's Drift (Figs 3 & 4).

Permission was obtained from the Cape Archives to reproduce the plan of Trompetter's Drift Fort (Fig. 2) and from the Public Record Office, London, to reproduce the ground plan of the loop holed inclosure at Trompetter's Drift, 1843 (Fig. 5).

REFERENCES

1. BARROW, J. 1806. *Travels into the interior of Southern Africa*. 2nd ed. London: Cadell and Davies.
2. STOCKENSTROM, SIR A. 1887. *The autobiography of the late Sir Andries Stockenstrom, Bart.* Vol. I. Cape Town: Juta, pp. 62-63.
3. CORY, SIR G. 1913. *The rise of South Africa*. Vol. II. London: Longmans, Green, p. 180.
4. GODLONTON, R. 1836. *Narrative of the irruption of the Kaffir hordes into the Eastern Province of the Cape of Good Hope, 1834-35*. Graham's Town: Meurant and Godlonton, p. 16.
5. *IBID.*, pp. 95-96.

TROMPETTER'S DRIFT FORT, EASTERN CAPE PROVINCE

6. STRINGFELLOW, T. 1835. Journal of Adjutant Stringfellow of the Albany Sharpshooters. MS, Albany Museum Archives, S.M. 13.
7. MOODIE, D. C. F. 1888. *The history of the battles and adventures of the British, the Boers, and the Zulus etc. in Southern Africa*. Vol. I. Cape Town: Murray & St. Leger, pp. 236-7.
8. It is possible that the brass three pounder at Fort Selwyn, a division of the Albany Museum, Grahamstown, is the same piece. This very rare cannon was known to have been used at Fort Peddie just a few years after this engagement.
9. British Public Records Office, C.O. 48/326.
10. LEWIS, LT.-COL. 1839. *Memoir on military locations, for the defence of the Eastern Frontier of the Cape of Good Hope*. Published by Brink, Mollett & Co. of Cape Town for limited circulation in official channels.
11. Dispatch to Napier. No. 43, 12th July, 1838.
12. ROCHLIN, S.A. 1961. Henry Hall: pioneer South African cartographer and littérateur, *Africana Notes and News* 14(7): 251-2.
13. STRETCH, C. L. Memorandum on the Stockenström Treaty System. In: Crankshaw, G. B. *The diary of C. L. Stretch: a critical edition and appraisal*. Unpublished M.A. thesis, Rhodes University, 1960.
14. CORY, SIR G. 1926, *op. cit.* Vol. IV, p. 337.
15. THEAL, G. McC. 1908. *History of South Africa*. Vol. III. London: Sonnenschein, p. 16.
16. State of the Troops serving on the Eastern Frontier, Cape of Good Hope, under the command of Lt.-General Sir George Berkeley K.C.B. 1st August 1847. MS. Albany Museum Archives S.M. 3055(j).
17. NELSON, R. J. 1846. *An aide memoire to the military sciences—coast defence*. Vol. I. London: Weale, plate 1.

Editors' Note The Great Fish River, like other large Eastern Cape rivers, is subject to periodical severe floods, during which it becomes completely impassable (see Figs 3 & 4). Such floods are possible any time of year and date from early on in recorded history (Barrow records such floods in the Orange River near Colesberg in 1797-8). Under present conditions the floods often alternate with prolonged droughts during which the river may be reduced to a dry bed with occasional stagnant pools. However, such conditions may well not have obtained during the last century as the Great Fish and Keiskamma Rivers appear to have acted as reasonable boundaries throughout the year.

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Editor

Dr F.W. GESS: 1978-

Excavations at Fairview rock shelter—a contribution to the prehistory of the Eastern Cape Province of South Africa

by

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ABSTRACT

This paper is a report on an excavation at Fairview rock-shelter located on the southern face of the Winterberg Mountains. The site was occupied intermittently during approximately the last 3 500 years by hunter-gatherers exploiting a wide variety of plant remains. The mammalian fauna suggests the exploitation of an environmental mosaic incorporating both forest and grassland elements. Climatic data and analysis of the food remains suggest that occupation may have taken place during the summer only. A model of seasonal movement between the southern slopes of the Winterberg and the environs of the Fish River has also been proposed. No evidence for economic change is documented at Fairview with the introduction of pottery and no domestic animals were identified in the faunal sample. Coastal contact is evidenced by the presence of a few marine shells scattered through the deposits.

The stone artefact assemblage from Fairview is dominated by scrapers, the changing morphology of which through time is documented. The nature of this change is poorly understood. However, adaptation to the flaking potentials of lydianite by people entering the region from an area in which lydianite is unknown may be a factor. Clearly the excavation of other sites in the interior of the Eastern Cape will aid comprehension of the intriguing problem of artefact and assemblage variability within the Later Stone Age of southern Africa.

*Formerly Albany Museum, Grahamstown.

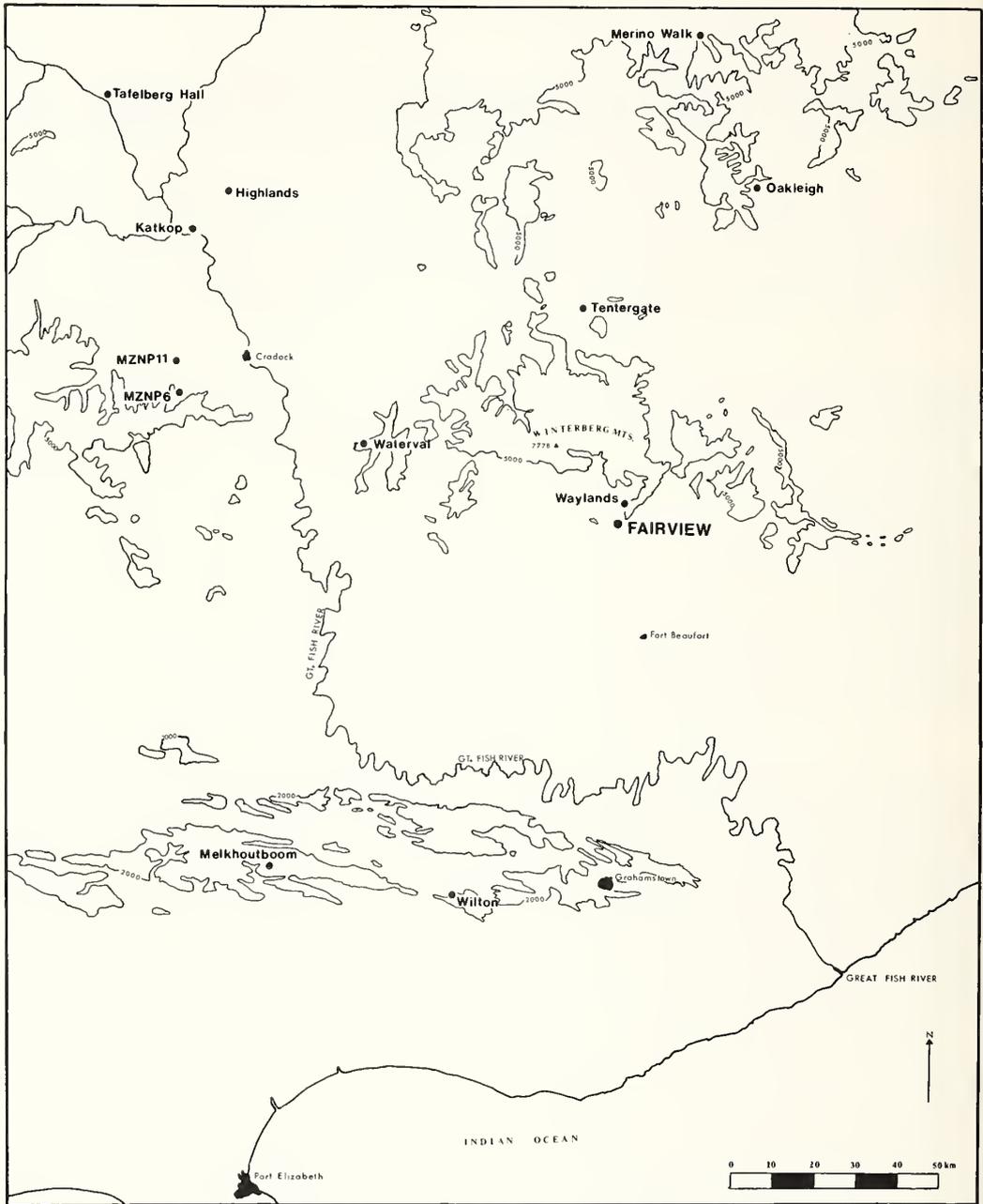


Fig. 1 The location of sites mentioned in the text.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

INTRODUCTION

Research into the archaeology of the Winterberg Mountains of the eastern Cape was initiated in 1978 with the aim of obtaining information on economic and artefact systems from the Later Stone Age from a range of mountains situated almost on the border between the Wilton and Smithfield lithic industries as defined prior to the 1970's (Clark, 1959: Map 12). Previous archaeological work in the eastern Cape has been centered in the mountains of the Cape Folded Belt, thus research in the Winterberg Mountains provides comparative data on prehistoric adaptations to a mountain region. At the same time research in this region yields insights into the nature of assemblage variability in the eastern Cape and in particular provides observations complementary to those made at the Highlands' site (H. J. Deacon, 1976).

Excavations at the site of Fairview (32° 31' 30"S; 26° 33' 30"E), Fort Beaufort District, are reported here. Prior to the present study archaeological research in the Winterberg Mountains was limited to a cursory survey of sites (Derricourt, 1977) and the recording of rock paintings by an interested farmer (Mr Eric Pringle). A number of sites which provide valuable comparative information have, however, been excavated in neighbouring regions (Fig. 1).

THE SITE AND ITS ENVIRONMENT

Macro-environment

The Winterberg Mountains mark a former southern position of the Great Escarpment. They are formed from rocks of the Beaufort Group of the Karroo System, comprising interbedded shales, sandstones and mudstones together with numerous intrusions of doleritic sills and dykes (Geological Survey, 1976). The mountains trend east-west reaching a peak of 2 369 m on the Great Winterberg. They form a significant environmental boundary; sparse vegetation is found in the rain-shadow of the northern slopes whereas the southern slopes are wetter and clothed by a more diverse vegetation.

Since the present investigation has been confined to the southern face of the Winterberg Mountains, this region will be examined in more detail. Rain falls on the southern slopes of the mountains in all months of the year, although approximately two-thirds of the annual precipitation occurs from October to March. March is the wettest month. Rainfall increases with altitude and snow often falls in winter above the 1 000 m contour. The average annual rainfall in the Winterberg is c.600 mm and comparable with that of the eastern Cape Folded Belt, however, the rainfall regime is erratic and unreliable, both in total amount and in periodicity (Weather Bureau, 1965; Childs, 1971). Temperatures vary with altitude; the higher areas for which no figures are available have warm summers and cold winters with frequent frosts whereas the lower slopes enjoy hot summers (January mean 22.3°C at Fort Beaufort) and mild winters (July mean 12.2°C), (Weather Bureau, 1954).

The climatic regime, together with the fertile soils derived from the weathering of the dolerite, influences the character of the vegetation. Acocks' map (1975) shows three vegetation types in the area, Dohne Sourveld on the higher slopes and Fish River Scrub and False Thornveld of the eastern Cape on the lower ground. Childs (1971), however, attempts a more detailed classification of the vegetation on the basis of plant communities rather than solely on agricultural potential. He recognizes eleven vegetation types ranging from macchia (fynbos) and sour grassland on the higher mountain slopes and summits, through various types of scrub woodland and Acacia savannah, to temperate evergreen forest on sheltered south-facing



Fig. 2 Fairview shelter from the west.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

slopes. The distribution of these types depends upon altitude and aspect. The ranges of both macchia and temperate evergreen forest appear to have been reduced by modern farming practices. Macchia is burnt to encourage the spread of sour grassland, while forest has been cleared for grazing, firewood, and building material. On the high ground and adjacent foothills, where mean annual precipitation exceeds 660 mm, the vegetation is sourveld, whereas on the low ground sweetveld predominates. Sweetveld is suitable for year-round grazing and can support a higher density of domestic stock than the sourveld which is palatable only in summer. The vegetation today supports a diverse mammalian fauna dominated by the smaller antelope. Black wildebeest (*Connochaetes gnou*), red hartebeest (*Alcelaphus caama*), eland (*Taurotragus oryx*), and quagga (*Equus quagga*) also occurred historically, as did elephant (*Loxodonta africana*) and the larger predators. Bushpigs (*Potamochoerus porcus*) and warthog (*Phacochoerus aethiopicus*) must have been present in the forested areas (Skead unpublished).

Micro-environment

There are two shelters on a stream on the farm Fairview. The higher shelter, upstream at an altitude of about 1 250 m was excavated. The cave was formed by differential weathering of sandstone and underlying mudstone and is situated beside a waterfall (Fig. 2). Dense undergrowth surrounds the immediate vicinity of the site. A notable feature is a large yellowwood tree, *Podocarpus latifolius*. The cave faces WSW and opens out into a small valley, the southern slope of which is clothed in sour grassland and the northern slope in dense bush which has been burnt in recent years and may historically have replaced forest. Some fynbos plants occur in the valley. The surrounding area is today dominated by sour grassland which is used in the summer months as grazing for cattle and sheep. The stream on which the site is located drains the higher slopes of the Katberg Mountain and flows throughout the year rising rapidly after heavy rains. Raw material for stone artefact manufacture is locally available where dolerite intrusions have baked the surrounding rock into workable forms of lydianite.

Since the cave faces WSW sunshine enters only in late afternoon in summer and even then it is screened by the undergrowth. The cave is therefore extremely cold in winter, when frosts are common, and cool in summer. The adjacent waterfall keeps the atmosphere moist.

No paintings occur in the excavated shelter. This may be either because the rock surface is uneven or because any paintings which may have existed have deteriorated in the damp climate. The downstream shelter contains a single painting in red of a cow. There are within a few kilometres of Fairview other paintings in which the dominant motifs are human and eland.

EXCAVATION

A plan of the site and the excavated area is shown in Fig. 3. A test pit was dug in squares H2 and H3 in August 1978 and 9 m² were excavated in January 1979. At the close of the excavation 4 m² had been dug to bedrock, 6 m² to the base of LSEB, and 1 m² to the middle of CL.

The deposits were separated stratigraphically on the basis of lithological and sedimentological distinctions (Fig. 4). The nomenclature of *members*, *units* and *sub-units* suggested by Deacon *et al.* (1978) for describing deposits is followed here. Two members were identified. The Upper Member consists of dark loam and ash deposits of varying texture and incorporates differing amounts of roof blocks and debris from the mudstone wall of the cave. The Lower Member, excavated from only 2 m², consists of clay loams of variable colour, hardness and rock inclusions.

The units, formed from various sub-units, within the Upper Member are as follows:

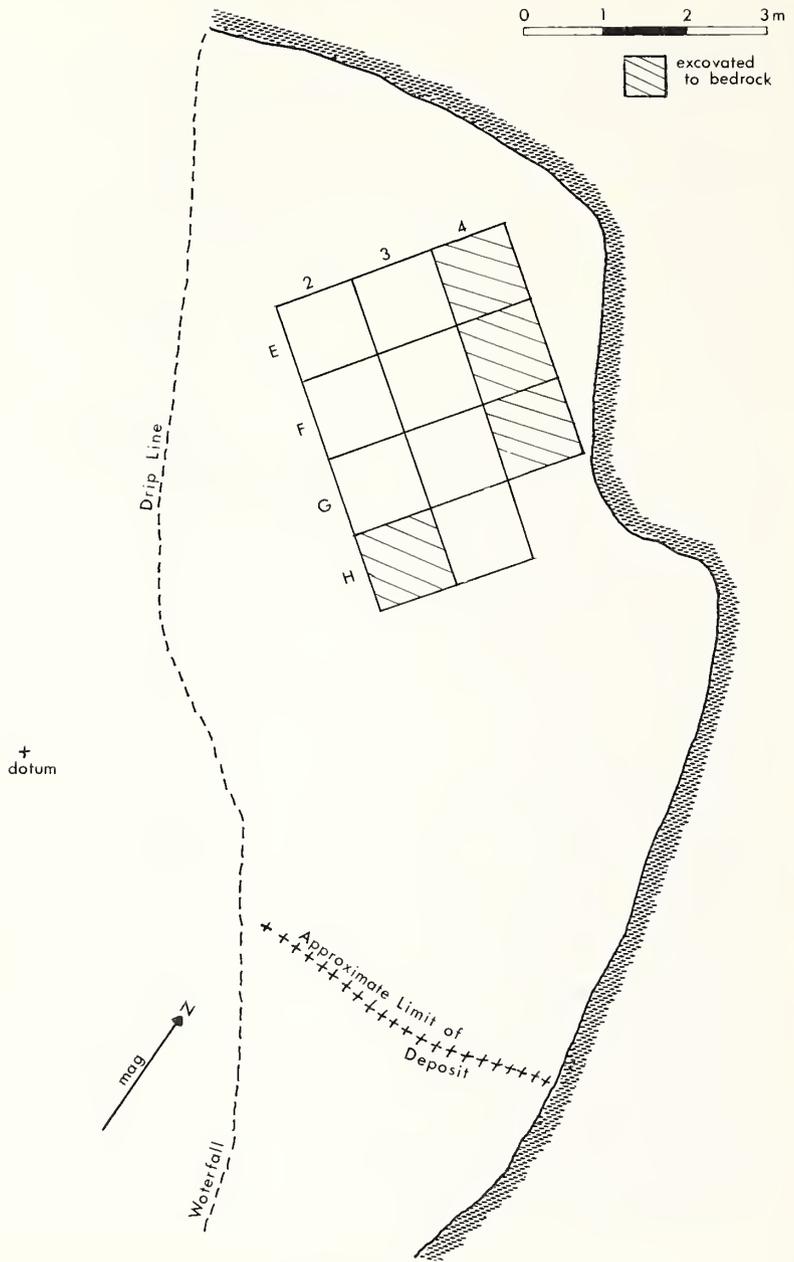


Fig. 3 Plan of Fairview shelter.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

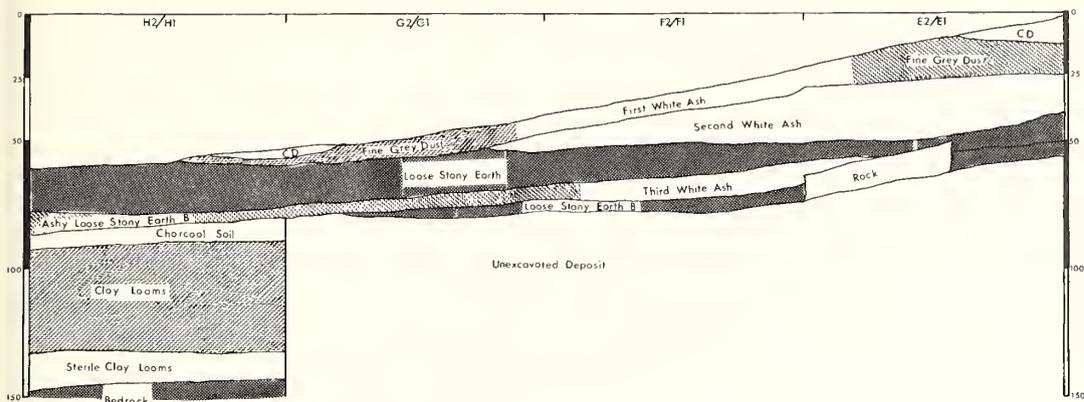


Fig. 4 A section through the deposits.

(1) Surface

Loose, brown earth forms the surface of the deposits. It includes a rich leaf litter dominated by yellowwood (*Podocarpus latifolius*) leaves and a considerable amount of dung. A few stone artefacts and bones were found in this material. Derricourt (1977:65) also collected four artefacts and some bone fragments from the surface.

(2) CD (consolidated dust)

This deposit, dark brown in colour, contained two small hearths, each about 1 m in diameter. Underlying one of these hearths in squares E4 and F4 was a distinct band of plant remains, among which corm bases and tunics of *Watsonia* predominated. Plant remains were preserved throughout CD and the majority of the pottery came from this unit.

(3) FGD/FWA (fine grey dust/first white ash)

The excavated portion of this unit consisted of a large ash mound, approximately 2 m in diameter, surrounded by a fine-grained, grey-brown soil. The uneven nature of the base of the soil horizon suggested that there may have been sleeping hollows surrounding a central hearth, though the size of the excavated area was not sufficient to confirm this hypothesis. At the base of the ash was a stone hearth feature, some 60 cm in diameter, underlain by a band of charcoal similar to those described from the upper layers of Boomplaas (Deacon *et al.*, 1978) and from various coastal sites (Avery, 1974; Robertshaw, 1979). Such features appear to be associated elsewhere except Duiker Eiland (Robertshaw 1979) with pottery and evidence of herding.

(4) SWA (second white ash)

This ash mound underlies FWA and covers approximately the same area. Unfortunately it was not possible to ascertain to which occupation horizon this ash related. It may have been the LSE unit, though in parts it appeared to overlay this unit.

(5) *LSE* (loose stony earth)

Large quantities of mudstone rubble from the back wall of the cave were included in this uncompacted, dark brown earth unit. It contained a high density of bone and a single small hearth. Occasional localized falls of small roof-blocks were also encountered.

(6) *Ashy LSEB/TWA* (ashy loose stony earth B/third white ash)

As in FGD/FWA, a large ash body, in places highly compacted, is surrounded by deposits similar in consistency to the LSE unit but containing a higher ash content and being therefore of a greyer colour. This unit appears to mark a change in scraper morphology; above Ashy LSEB/TWA scrapers tend to be long, narrow end-scrapers, whereas in this and lower units they tend to be smaller and more circular in shape.

(7) *LSEB* (loose stony earth B).

This unit is similar in lithology to LSE, though not as stony. It marks the base of excavations over much of the cave floor. It rests upon a loamy surface of a predominantly yellow colour, which may be the top of the Lower Member.

(8) *CS* (charcoal soil)

A thin band of charcoal was a distinctive marker horizon between the upper and lower Members in the excavation of the test pit in squares H2 and H3. It appears to be absent, however, from the rest of the excavated portion of the site.

The *Lower Member* comprises a single unit, *CL* (clay loam), which on the basis of changes in colour, density of rubble and compactness was subdivided into various sub-units during excavation. Bone was poorly preserved in this member and the last 30 cm approximately of deposit down to bedrock lacked both bone and artefacts. Bedrock in H2 was situated approximately 115 cm above the present level of the waterfall pool. The clay loams are similar in texture to the mud on the edge of the present pool. It is suggested that the *CL* unit consists of waterborne deposits marking a former level of the bottom of the waterfall. As the waterfall cut down through the soft mudstone to its present pool level so the *CL* unit became drier and more suitable for human occupation. Once the *CL* unit was raised well above the level of the pool, deposition of the earth and soil units of the Upper Member became possible.

Three radiocarbon dates have been obtained from charcoal samples submitted to the C.S.I.R. in Pretoria. They are as follows:

Pta—2 587 Sq.F2 FWA	2 450 ± 55 B.P.
Pta—2 597 Sq.F3 LSEB	3 320 ± 55 B.P.
Pta—2 593 Sq.H3 CL	3 670 ± 60 B.P.

The sample from *CL* was obtained from just above the base of the artefact-bearing deposits and thus provides an approximate date for the first occupation of the shelter. The age determination for FWA was obtained from charcoal situated at the base of the unit directly beneath the stone hearth feature. The date from FWA should not be associated with the pottery found in this unit since all seven sherds came from the fine grey dust rather than the white ash and it is quite likely that they are intrusive and are from the unit above.

CULTURAL REMAINS

Lithic

Lydianite was the major raw material used in the manufacture of stone artefacts. It is locally available at the contact zones between dolerite intrusions and other rocks. "Lydianite"

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is used here as something of a catch-all term to refer to any rock baked in contact with dolerite. It thus includes baked mudstones, siltstones and shales of varying hue and texture. It is preferable to the term "indurated shale" which is used by some archaeologists but has a far more specific definition and does not include all baked shales. Chert, in the form of pebbles, and the other raw materials with the exception of silcrete were also obtained near the site. Silcrete, which occurs almost entirely in the form of formal tools on the site, must have been procured from some distance to the south.

The typology employed in the analysis of the stone artefact assemblage is based upon that of J. Deacon (1972) and follows closely the one used by H. J. Deacon (1976) for Highlands Rock Shelter. One extra type, scraper/adze, has been added to the type list of formal tools. Scraper/adzes are formal tools exhibiting steep retouch with considerable step-flaking along one or both sides of the flake (i.e. the definition of an adze) combined with scraper retouch on the end of the tool. An inventory of the stone artefacts and raw materials is given in Tables 1 and 2 and some of the specimens are illustrated in Figs. 5, 6 and 7.

There is a comparatively high percentage of formal tools at Fairview, among which in all units scrapers are the predominant class. Adzes and scraper/adzes appear to increase in frequency in the upper units, though this is probably due to the increase in overall sample size in those levels. Scrapers were the only class present in sufficient numbers to warrant metrical analysis. The procedures employed are those outlined by J. Deacon (1972) and refined by H. J. Deacon (1976). Results of the analysis are presented in Tables 3-7 and Fig. 8. On all the attributes measured with the exception of radius of working edge and angle of retouch a reasonably clear stratigraphic division is discernible between those scrapers from the units Surface to LSE and those from Ashy LSEB/TWA to bedrock. Scrapers from the upper units tend to be large, longer than they are broad, parallel- or convergent-sided in morphology and to have retouch on the end. Those from the lower units are smaller, as wide as they are long, more variable in plan morphology and position of retouch and are made from a greater variety of raw materials. This distinction is easily seen in a casual visual inspection of both the scrapers themselves and the tables of measurements, as well as in the histograms of width/length ratios. The patterning was, however, tested by the application of the Mann-Whitney U-test (two-tailed) to the figures for scraper length and width. The results shown in Table 8 tend to confirm the visual impression, though not perhaps as clearly as one might have expected. Some of the "unexpected" results are possibly due to inadequate sampling, particularly of the Surface and CL units. Similarly the lack of certainty over the stratigraphic position of SWA might account for the variation in correlations between this and other units. It is possible that SWA perhaps represents a transitional stage between the scrapers of the upper and lower units. Unfortunately, sample sizes were too small to allow much statistical testing of variations in plan form and position of retouch. By combining attributive states 1 to 3 (divergent) and 4 and 5 (parallel/convergent) of plan form large enough samples for chi-square analysis of FGD/FWA, LSE and Ashy LSEB were obtained. Results show that scrapers from FGD/FWA and LSE are not significantly different in plan form at the 0,05 level but that scrapers from Ashy LSEB are significantly different ($p = < 0,01$) from those both of FGD/FWA and LSE. In the old cultural terminology the scrapers from the upper units could undoubtedly be termed "Smithfield", whereas the dimensions of those from the lower units fall well within the range recorded from Wilton (J. Deacon 1972). Comparisons between the assemblage from Fairview and those from other sites in the eastern Cape are discussed below.

TABLE 1
Fairview: Stone Artefact Inventory

	Surface		CD		FGD/FWA		SWA		LSE		Ashy LSEB/TWA		LSEB		CS		CL		TOTAL		
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	n	%	
WASTE																					
Chips	—	—	4	1,1	1	0,1	—	—	6	1,2	16	4,1	7	2,4	—	—	1	0,4	35	1,3	
Chunks	2	3,6	4	1,1	21	3,0	1	0,5	2	0,4	9	2,3	10	3,4	2	18,2	4	1,7	55	2,0	
Cores	2	3,6	1	0,3	2	0,3	—	—	4	0,8	—	—	—	—	—	—	—	—	9	0,3	
Unmodified Flakes	40	72,7	308	82,4	578	82,3	182	88,8	430	85,1	338	85,6	243	83,8	8	72,7	212	89,5	2 339	84,3	
Totals	44	79,9	317	84,9	602	85,7	183	89,3	442	87,5	363	92,0	260	89,6	10	90,9	217	91,6	2 438	87,9	
UTILIZED																					
Modified Flakes	3	5,5	8	2,1	18	2,6	7	3,4	17	3,4	6	1,5	5	1,7	—	—	7	3,0	71	2,6	
Modified/split/Flaked pebbles	—	—	2	0,5	2	0,3	—	—	—	—	—	—	—	—	—	—	—	—	4	0,1	
Rubbers	—	—	—	—	1	0,1	—	—	—	—	1	0,3	—	—	—	—	—	2	0,1	—	—
Rubbers/hammer-stones	—	—	—	—	—	—	—	—	1	0,2	—	—	—	—	—	—	—	—	1	0,0	
Grindstones	—	—	—	—	—	—	—	—	1	0,2	—	—	—	—	—	—	—	—	1	0,0	
Palquettes	—	—	2	0,5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	0,1	
Polished stones	—	—	—	—	—	—	—	—	—	—	1	0,3	—	—	—	—	1	0,4	2	0,1	
Bored stones	—	—	—	—	1	0,1	—	—	—	—	—	—	—	—	—	—	—	—	1	0,0	
Totals	3	5,5	12	3,1	22	3,1	7	3,4	19	3,8	8	2,1	5	1,7	0	0	8	3,4	84	3,0	
RETOUCHED FORMAL TOOLS																					
Scrapers	7	12,7	37	9,9	73	10,4	13	6,3	36	7,1	23	5,8	21	7,2	1	9,1	6	2,5	217	7,8	
Backed Pieces	1	1,8	—	—	—	—	—	—	—	—	1	0,3	2	0,7	—	—	1	0,4	5	0,2	
Segments	—	—	—	—	—	—	—	—	2	0,4	—	—	—	—	—	—	—	—	2	0,1	
Adzes	—	—	3	0,8	1	0,1	—	—	1	0,2	—	—	—	—	—	—	1	0,4	6	0,2	
Scraper/adzes	—	—	5	1,3	3	0,4	2	1,0	3	0,6	—	—	—	—	—	—	—	—	13	0,5	
Misc. retouched	—	—	—	—	1	0,1	—	—	2	0,4	—	—	2	0,7	—	—	4	1,7	9	0,3	
Totals	8	14,5	45	12,0	78	11,0	15	7,3	44	8,7	24	6,1	25	8,6	1	9,1	12	5,0	252	9,1	
TOTAL	55	99,9	374	100,0	702	99,8	205	100,0	505	100,0	395	100,2	290	99,9	11	100,0	237	100,0	2 774	100,0	

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

TABLE 2

Fairview: stone raw material usage by artefact class

	Surface	CD	FGD/ FWA	SWA	LSE	Ashy LSEB/ TWA	LSEB	CS	CL	TOTAL	
										N	%
WASTE											
Lydianite	43	314	602	183	442	361	259	9	197	2 410	98,9
Sandstone	—	—	—	—	—	—	—	1	—	1	0,0
Chert	—	—	—	—	—	2	1	—	17	20	0,8
Silerete	—	—	—	—	—	—	—	—	1	1	0,0
Jasper	—	—	—	—	—	—	—	—	2	2	0,1
Quartz	—	2	—	—	—	—	—	—	—	2	0,1
Glass	1	1	—	—	—	—	—	—	—	2	0,1
Totals	44	317	602	183	442	363	260	10	217	2 438	100,0
UTILIZED											
Lydianite	3	9	18	7	17	5	5	—	8	72	85,7
Sandstone	—	1	2	—	1	1	—	—	—	5	6,0
Chert	—	—	—	—	—	1	—	—	—	1	1,2
Mudstone	—	2	—	—	—	—	—	—	—	2	2,4
Dolerite	—	—	2	—	1	1	—	—	—	4	4,8
Totals	3	12	22	7	19	8	5	0	8	84	100,1
FORMAL											
Lydianite	8	45	77	15	44	20	22	—	8	239	94,8
Sandstone	—	—	—	—	—	—	—	—	1	1	0,4
Chert	—	—	1	—	—	4	1	—	3	9	3,6
Silerete	—	—	—	—	—	—	2	1	—	3	1,2
Totals	8	45	78	15	44	24	25	1	12	252	100,0
TOTALS	55	374	702	205	505	395	290	11	237	2 774	—

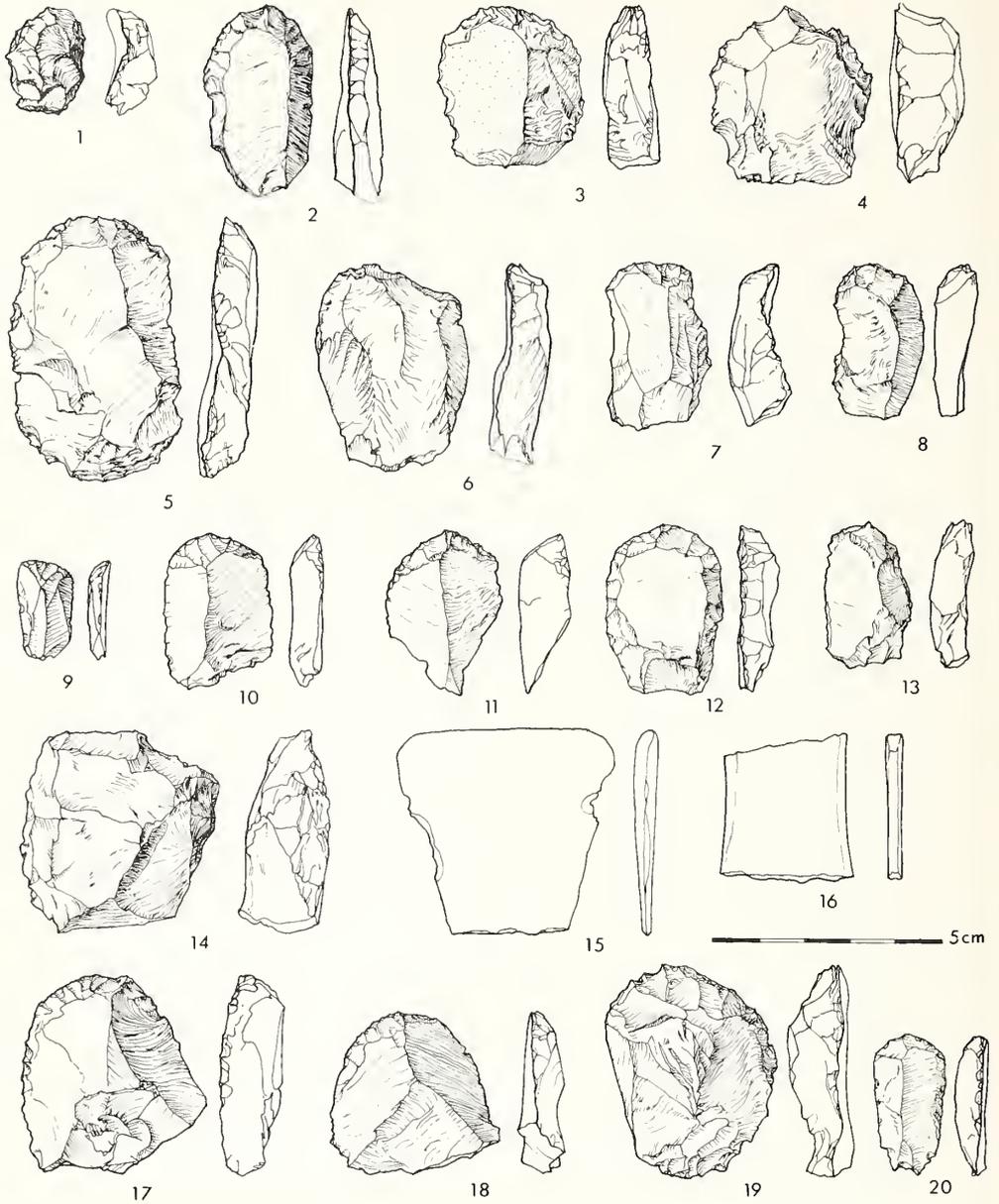


Fig. 5 Artefacts from Surface, CD, FGD/FWA. 1-3: scrapers (Surface); 4: core (on flake) (Surface); 5-12: scrapers (CD); 13-14: scraper-adzes (CD); 15-16: palette fragments (CD); 17-20: scrapers (FGD). All lydianite except 15 and 16: ?mudstone.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

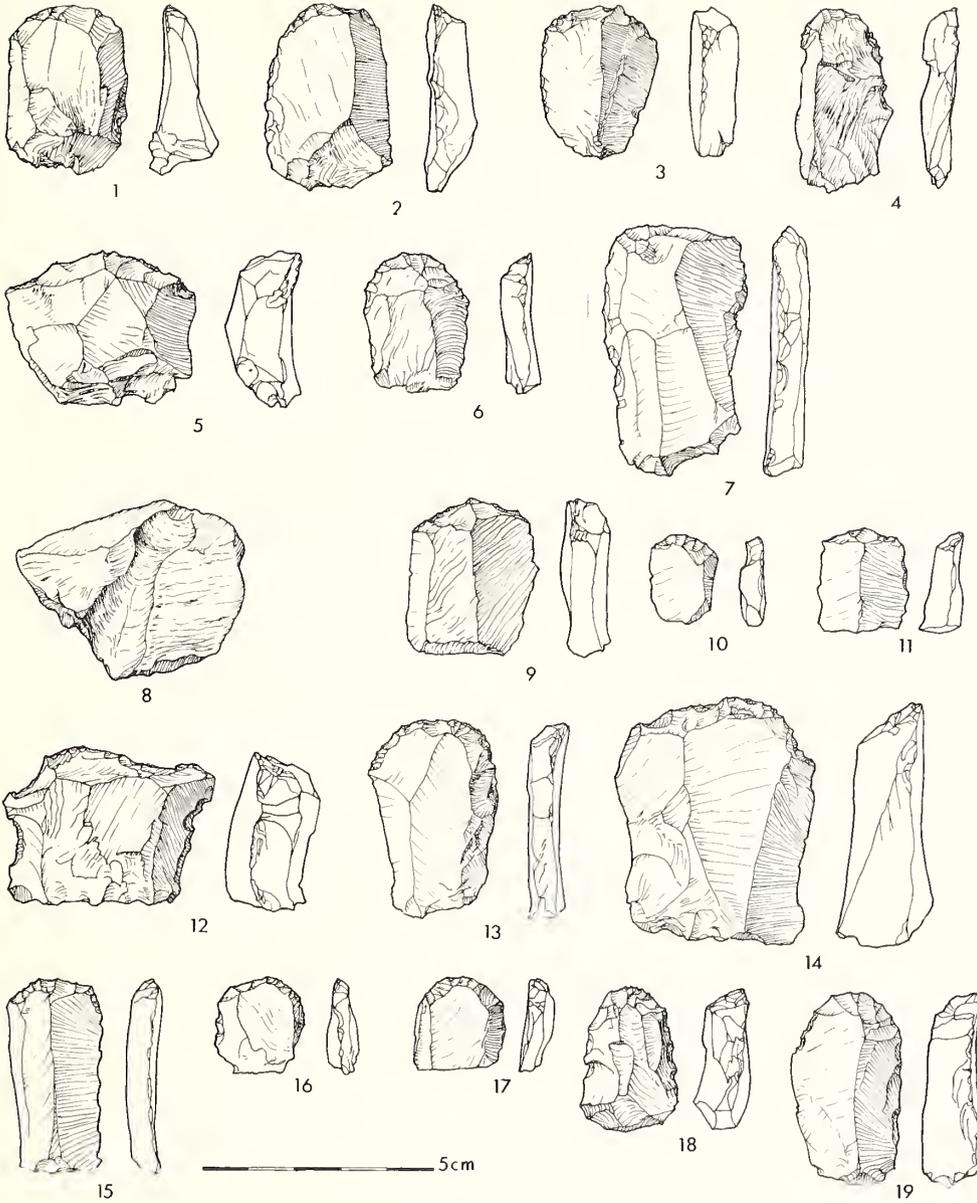


Fig. 6 Artefacts from FGD/FWA, SWA, LSE. 1-6: scrapers (FGD); 7: adze (FGD); 8: bored stone fragment (FGD); 9-11: scrapers (SWA); 12: scraper/adze (SWA); 13-17: scrapers (LSE); 18-19: scraper/adzes (LSE). All lydianite except 8: sandstone.

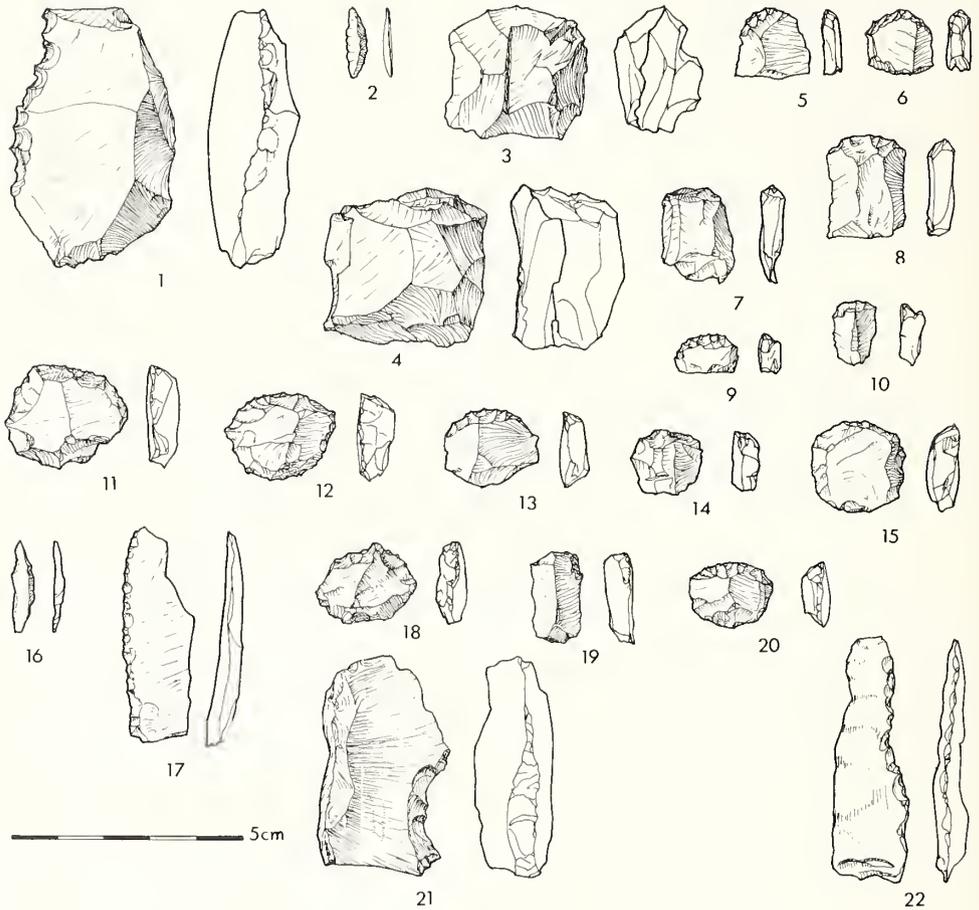


Fig. 7 Artefacts from LSE, Ashy LSEB/TWA, LSEB, CL. 1: adze (LSE); 2: segment (LSE); 3-4: cores (LSE); 5-10: scrapers (Ashy LSEB); 11-15: scrapers (LSEB); 16: backed blade(LSEB); 17: miscellaneous retouched (LSEB); 18-20: scrapers (CL); 21-22: miscellaneous retouched (CL). 1-8, 11-14, 16-19, 21-22: lydianite; 9-10, 20: chert; 15: silcrete.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

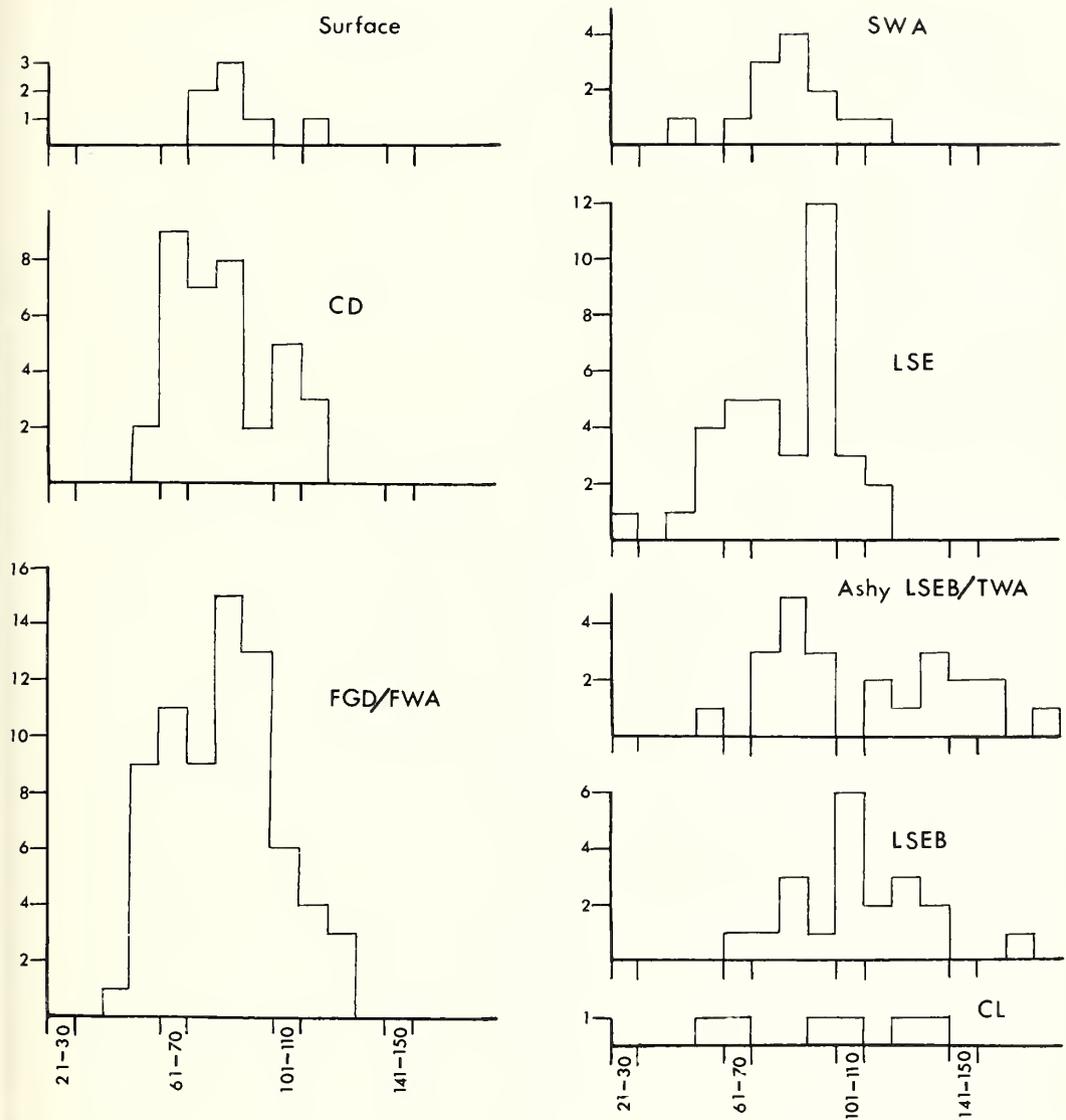


Fig. 8 Fairview: histograms of scraper width/length ratios.

TABLE 3

Fairview: analysis of scraper lengths (mm)

Unit	n	Mean Length	Standard Deviation	Standard Error	Range
Surface	7	27,57	9,76	3,69	15-36
CD	36	31,33	11,11	1,85	11-70
FGC/FWA	71	34,37	8,54	1,01	19-56
SWA	13	26,85	10,48	2,91	13-53
LSE	36	32,86	13,30	2,22	13-79
Ashy LSEB/TWA	23	18,96	8,07	1,68	10-44
LSEB	20	17,05	3,53	0,79	11-24
CS	1	25	—	—	25
CL	6	20,83	9,62	3,93	12-39

TABLE 4

Fairview: analysis of scraper widths (mm)

Unit	n	Mean Width	Standard Deviation	Standard Error	Range
Surface	7	23,57	7,39	2,79	14-32
CD	36	25,14	8,16	1,36	13-48
FGD/FWA	71	28,32	8,29	0,98	14-52
SWA	13	21,23	5,64	1,57	15-33
LSE	36	26,08	10,37	1,73	12-61
Ashy LSEB/TWA	23	19,17	5,18	1,08	11-35
LSEB	20	18,05	4,75	1,06	12-27
CS	1	28	—	—	28
CL	6	18,50	4,09	1,67	13-23

TABLE 5

Fairview: analysis of scraper heights (mm)

Unit	n	Mean Height	Standard Deviation	Standard Error	Range
Surface	7	5,43	2,30	0,87	2-8
CD	36	5,22	2,52	0,42	2-14
FGD/FWA	71	6,25	2,92	0,35	2-18
SWA	13	4,92	1,85	0,51	2-9
LSE	36	5,58	2,98	0,50	2-12
Ashy LSEB/TWA	23	4,13	1,42	0,30	2-7
LSEB	20	3,65	1,42	0,32	2-6
CS	1	9	—	—	9
CL	6	4,17	1,94	0,79	3-8

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

TABLE 6

Fairview: analysis of scraper width/length ratios

Unit	n	Mean width/length Ratio	Standard Deviation	Standard Error	Range
Surface	7	0,88	0,13	0,05	0,75-1,13
CD	36	0,84	0,18	0,03	0,58-1,18
FGD/FWA	71	0,84	0,19	0,02	0,44-1,25
SWA	13	0,84	0,19	0,05	0,44-1,15
LSE	36	0,83	0,21	0,04	0,30-1,17
Ashy LSEB/TWA	23	1,10	0,32	0,07	0,50-1,75
LSEB	20	1,09	0,25	0,06	0,60-1,69
CS	1	1,12	—	—	1,12
CL	6	0,98	0,30	0,12	0,59-1,36

TABLE 7

Fairview: analysis of other scraper attributes

Unit	Plan Form Codes									
	1		2		3		4		5	
	f	%	f	%	f	%	f	%	f	%
Surface	—	—	—	—	1	14,3	5	71,4	1	14,3
CD	2	5,6	2	5,6	4	11,1	28	77,8	—	—
FGD/FWA	1	1,4	6	8,5	9	12,7	48	67,6	7	9,9
SWA	—	—	—	—	4	30,8	8	61,5	1	7,7
LSE	—	—	4	11,1	3	8,3	28	77,8	1	2,8
Ashy LSEB/TWA	5	21,7	4	17,4	3	13,0	10	43,5	1	4,3
LSEB	5	25,0	6	30,0	2	10,0	5	25,0	2	10,0
CS	—	—	—	—	1	100,0	—	—	—	—
CL	—	—	3	50,0	1	16,7	2	33,3	—	—

Unit	Retouch Position Codes											
	6		7		8		9		10		11	
	f	%	f	%	f	%	f	%	f	%	f	%
Surface	4	57,1	3	42,9	—	—	—	—	—	—	—	—
CD	24	66,7	12	33,3	—	—	—	—	—	—	—	—
FGD/FWA	46	64,8	23	32,4	2	2,8	—	—	—	—	—	—
SWA	12	92,3	1	7,7	—	—	—	—	—	—	—	—
LSE	27	75,0	9	25,0	—	—	—	—	—	—	—	—
Ashy LSEB/TWA	11	47,8	4	17,4	1	4,3	6	26,1	1	4,3	—	—
LSEB	6	30,0	12	60,0	—	—	1	5,0	1	5,0	—	—
CS	—	—	1	100,0	—	—	—	—	—	—	—	—
CL	2	33,3	4	66,7	—	—	—	—	—	—	—	—

TABLE 7 (cont.)
Fairview: analysis of other scraper attributes

Unit	Angle of retouch							
	25°-50°		50°-75°		75°-85°		85°-90°	
	f	%	f	%	f	%	f	%
Surface	1	14,3	2	28,6	4	57,1	—	—
CD	3	8,3	22	61,1	10	27,8	1	2,8
FGD/FWA	2	2,8	31	43,7	29	40,8	9	12,7
SWA	1	7,7	5	38,5	4	30,8	3	23,1
LSE	1	2,8	19	52,8	15	41,7	1	2,8
Ashy LSEB/TWA	3	13,0	13	56,5	6	26,1	1	4,3
LSEB	1	5,0	10	50,0	9	45,0	—	—
CS	—	—	—	—	—	—	1	100,0
CL	—	—	3	50,0	2	33,3	1	16,7

Unit	Radius of scraper edge (cm)							
	< 0,5		1-1,5		1,5-2		> 2	
	f	%	f	%	f	%	f	%
Surface	3	42,9	2	28,6	2	28,6	—	—
CD	8	22,2	19	52,7	6	16,7	3	8,3
FGD/FWA	18	25,4	28	39,4	18	11,3	7	9,9
SWA	4	30,8	4	30,8	4	30,8	1	7,7
LSE	13	36,1	14	38,9	5	13,9	4	11,1
Ashy LSEB/TWA	10	43,5	11	47,8	—	—	2	8,7
LSEB	11	55,0	7	35,0	2	10,0	—	—
CS	—	—	—	—	1	100,0	—	—
CL	2	33,3	2	33,3	1	16,7	1	16,7

Methods of analysis from H. J. Deacon (1976).

Codes: 1 wide; 2 circular; 3 divergent; 4 parallel; 5 convergent; 6, 7, 8 end retouch; 9, 10, 11 side retouch.

TABLE 8
Fairview: matrices of Mann-Whitney U-test results on scraper lengths and widths

	Lengths							
	Surface	CD	FGD/ FWA	SWA	LSE	Ashy LSEB/ TWA	LSEB	CL
Surface	—	O	O	O	O	S	HS	O
CD	O	—	O	O	O	VHS	VHS	S
FGD/FWA	O	S	—	HS	HS	VHS	VHS	HS
SWA	O	O	HS	—	O	HS	VHS	O
LSE	O	O	O	O	—	VHS	VHS	HS
Ashy LSEB/TWA	O	VHS	VHS	O	HS	—	O	O
LSEB	O	VHS	VHS	O	VHS	O	—	O
CL	O	S	HS	O	S	O	O	—

Widths

O = samples not significantly different.
 S = samples significantly different at the 0,05 confidence level.
 HS = samples significantly different at the 0,01 confidence level.
 VHS = samples significantly different at the 0,001 confidence level.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

TABLE 9

Fairview: inventory of non-lithic artefacts

	Surface	CD	FGD/ FWA	SWA	LSE	Ashy LSEB/ TWA	LSEB	CS	CL
Potsherds	1	56	7	1	—	—	—	—	—
Ostrich eggshell beads	—	13	1	—	1	1	1	—	—
Ostrich eggshell fragments	—	9	6	3	3	—	1	—	—
Shell pendant	—	1	—	—	—	—	—	—	—
Marine shell beads	—	1	—	—	1	—	1	—	—
Glass beads	—	1	—	—	—	—	—	—	—
Bone points	—	6	2	—	3	—	1	—	—
Other worked bone	—	1	4	—	—	1	—	—	—
Ivory points	—	—	2	—	—	—	—	—	—
Worked wood	—	1	—	—	—	—	—	—	—
Tortoise shell bowl	—	1	—	—	—	—	—	—	—
Ochre fragments	—	1	2	—	6	2	7	—	—
Decorated ostrich eggshell	—	—	—	—	1	—	—	—	—

Non-lithic

The non-lithic artefacts from Fairview are listed in Table 9 and some of them are illustrated in Figs 9 and 10. All these artefacts come from the Upper Member and the majority from the upper units of this member.

Most of the bone artefacts are points made from bovid metapodials and are about 5 cm long. Of interest are a very small, needlelike point from LSEB (Fig. 9:6) and a piece of a tortoise bowl from CD. There are also two finely-made ivory points (Fig. 9:8 & 9). A single piece of worked wood from CD is a stick 16 cm long and 1,2 cm in diameter which has been chopped or sawn at one end and fire-blackened (Fig. 9:1).

Ostrich eggshell beads and fragments occur in most units of the upper Member. In addition from LSE there is a decorated fragment of ostrich eggshell (Fig. 9:2) which appears to be part of a button. Buttons of tortoise carapace, but not ostrich eggshell, have been reported from Byneskranskop in the south-western Cape (Schweitzer & Wilson, 1978).

The pottery sample (Table 10, Fig. 10) consists of fifty-seven sherds of which only two could be joined. Examination of the rims suggests that a minimum of four pots is represented. Sherd thickness ranges from 3,0 to 10,5 mm. The sherds from FGD/FWA have a larger mean thickness than those from CD (Table 10). The single sherd from SWA is considered to be an intrusion from the units above. Seven sherds have a burnished or glossy finish of a reddish colour. There are no decorated pieces. The sherds are characterised by grit and occasional quartz temper. A single lug, horizontally pierced and internally reinforced, indicates a relationship to "Hottentot" pottery (Rudner, 1968). Some of the thicker sherds, however, and the single everted rim piece suggest affinities with (Early?) Iron Age pottery types.

Marine shell is represented by possible beads from the units CD, LSE, and LSEB. A shell pendant in CD (Fig. 9:3) may also be of marine origin. These ornaments, together with a shell fragment tentatively identified as brown mussel (*Perna perna*) from LSEB and a shell of possibly *Oxystele* sp. from CD, represent the only marine elements in the site which is situated approximately 120 kilometres from the sea as the crow flies. Small amounts of the freshwater

5cm

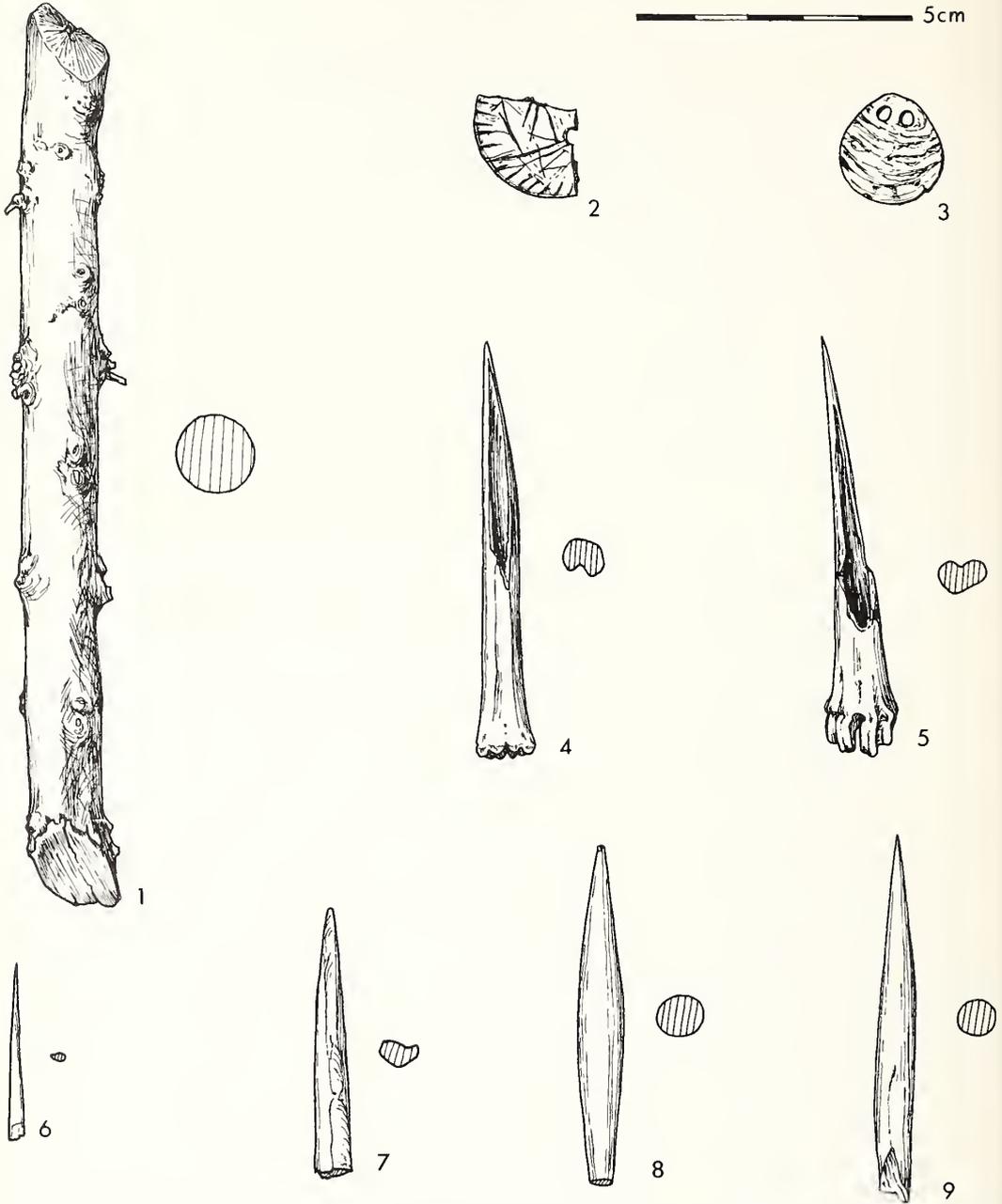


Fig. 9 Fairview: non-lithic artefacts. 1: worked wood (CD); 2: decorated ostrich eggshell (LSE); 3: shell pendant (CD); 4-5: bone points (CD); 6: bone needle (LSEB); 7: bone point (LSE); 8-9: ivory points (FGD).

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

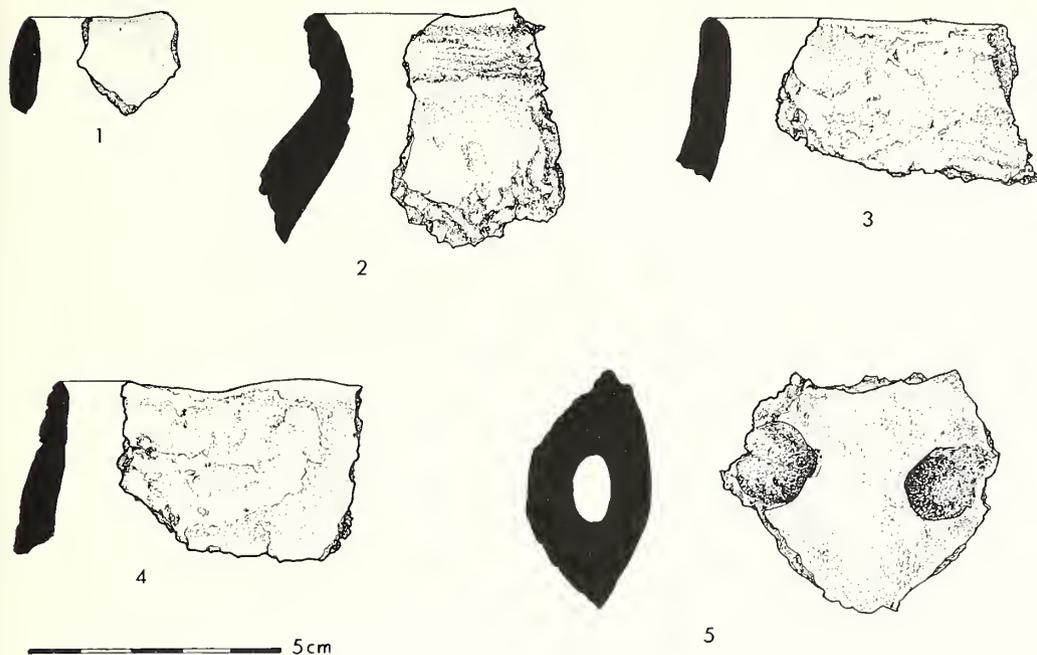


Fig. 10 Fairview: pottery from CD. 1-4: rim sherds; 5 lug.

mussel (*Unio caffer*) occur in all units of both Members, as do fragments of the land snail, *Achatina* spp. (Table 11).

Artefacts of European origin include a small, white glass bead in CD. A chunk of green bottle glass used as a core was found on the surface of the deposits and there was a glass flake in CD.

ANIMAL AND PLANT REMAINS

Fauna

Faunal remains were well preserved throughout the Upper Member at Fairview but less so in the Lower Member, the dense, clay deposits of which made careful excavation difficult. The larger mammalian bones were examined by Richard Klein of the University of Chicago, whose detailed report forms Appendix I. A wide variety of species is represented at the site. No positive identifications of domestic animals were made. The faunal remains show no significant changes through time in the frequencies of different species, apart from that of a mole rat (*Georychus capensis*) in FGD/FWA. Increase in mole rat perhaps reflects increased use of the shelter by owls correlated maybe with a longer hiatus in human occupation. The fauna as a whole suggests an environment similar to that of today with the site located either in a mosaic of forest and grassland or at the ecotone of these types of vegetation. Detailed reports on the micro-mammalian and arian remains are presented in Appendices 2 and 3.

TABLE 10

Fairview: pottery

	Surface	CD	FGD/FWA	SWA
Body sherds	1	51	7	1
Rim sherds straight	—	3	—	—
Rim sherds everted	—	1	—	—
Lugs	—	1	—	—
Total sherds	1	56	7	1
Mean thickness (mm)	6,5	5,41	6,93	6,5
Standard deviation	—	1,50	1,67	—
Sample size	1	54	7	1

Flora

Plant remains were very well preserved and abundant in the unit CD which included a distinct localized horizon of plant materials. Occasional plant remains also survived as deep as LSEB. Analysis of these materials was kindly undertaken by Estelle Brink of the Albany Museum herbarium. No quantified studies of the plant remains were made although relative abundance was recorded.

The majority of the remains consisted of corm bases and tunics chiefly identifiable as those of *Watsonia* sp. a plant still growing in this area. Also represented were corms of *Moraea* sp. perhaps assignable to *M. elliottii*. There was also an almost equal amount of corm scales belonging to one or more unidentified species of *Iridaceae*. Husks of seeds of the Cape chestnut, *Calodendrum capense*, a forest tree, were also present in quantity as were unidentified seeds with a knobby surface. Plant materials found less abundantly in the deposits included grass bases, uneaten corms and seeds of wild olive, *Olea* sp. Also noted, but rare, were seeds of

TABLE 11

Fairview: excavated shell (gm)

	Surface	CD	FGD/ FWA	SWA	LSE	Ashy LSEB/ TWA	LSEB	CS	CL
LAND									
Achatina sp.	11,0	198,6	191,6	14,6	129,3	56,7	53,4	2,0	3,3
FRESHWATER									
Unio caffer	0,3	25,8	67,8	4,2	36,3	10,9	1,1	—	0,8
MARINE									
Nassa sp.	—	0,3	—	—	—	—	—	—	—
Conus sp.	—	—	—	—	1,8	—	—	—	—
Marginella sp.	—	—	—	—	—	—	0,6	—	—
?Perna perna	—	—	—	—	—	—	1,3	—	—
?Oxysteles sp.	—	0,2	—	—	—	—	—	—	—
UNIDENTIFIED	—	0,9	1,4	0,4	0,8	0,4	—	—	—
TOTALS	11,3	225,8	260,8	19,2	168,2	68,0	56,4	2,0	4,1

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

Grewia sp., a bush locally known as "kruisbessie", the fruits of which are eaten today, and of *Scutia myrtina*, a common eastern Cape bush called "droog mijn keel" which bears small but much sought-after fruits. Only the CD unit produced a sample of any value and so no changes through time in the relative abundance of different plant foods could be estimated.

Also identified were various plant remains which presumably reached the site through natural agencies, such as wind drift. The bulk of this material was leaves of *Podocarpus* sp. A large yellowwood tree, *Podocarpus latifolius*, is growing just outside the shelter entrance. Also found were remains of *Rhamnus prinoides*, ?*Maytenus* sp. and ?*Scutia* sp. Plants of these genera are common bush constituents in the eastern Cape. Very rare remains of *Protea* sp. were also identified.

Pollen

Anton Scholz of the University of Stellenbosch kindly examined some sediment samples from Fairview for the presence of pollen remains. A sample from CD was rich in pollens, indicating a locally wet and wooded environment similar to that of today. However, pollen preservation is poor below CD and only fern and moss spores were present. Reasons for the lack of preservation could include alkaline ground water, burning and long exposure on a surface with available water (Scholz, pers. comm).

DISCUSSION

Artefacts

Comparisons between the artefact assemblage from Fairview with those from Wilton (J. Deacon, 1972) and Melkhoutboom (H. J. Deacon, 1976), situated in the Cape Folded Belt and considered to be examples of the Wilton industry, show that the lower units (Ashy LSEB/TWA—CL) from Fairview bear strong resemblance to the Wilton industry although they lack almost entirely the backed tools typical of the climax phase of Wilton. Scraper morphology and size, combined with the occasional use as raw materials of chert and silcrete as alternatives to lydianite, are similar to those of Wilton and Melkhoutboom. By contrast, the scrapers from the upper units (LSE—Surface) of Fairview, which tend to be end scrapers on long lydianite flakes, are far more typical of the so-called Smithfield industries of the interior regions and fall well outside the size range of scrapers from the upper levels of the Cape Folded Belt sites. The small size of the Fairview excavation makes it unclear whether the transition from Wilton-like to Smithfield-like scrapers is a gradual development or a sudden change between Ashy LSEB/TWA and LSE. Similar changes in scraper length and morphology have been documented at Highlands (H. J. Deacon, 1976) and suggested for the area of the Orange River Scheme (Humphreys, 1972). Humphreys (1972:52) discusses the ideas raised by Sampson (1970, 1972) and J. Deacon (1969) who hypothesized that a process of population expansion into the interior regions of the Eastern Cape by groups practising a Wilton technology began about 4 500 years ago (see also J. Deacon 1974; H. J. Deacon 1976) at a time of climatic amelioration noted by Van Zinderen Bakker & Butzer (1973). Through time the artefact traditions of these immigrants diverged from those of their forebears in response to the potentials of the newly available raw material (lydianite) and the different activities possible in the environments that they were now exploiting. The artefact assemblage from Fairview might be taken as lending further support to this model of population expansion and diverging artefact traditions.

Whereas comparisons between the artefact assemblage from Fairview and those from sites

in the Cape Folded Belt tend to emphasise divergence through time, comparisons between sites situated in the interior regions of the eastern Cape (i.e. inland of the Cape Folded Belt) show close similarities in the percentage frequencies of different tool classes (Table 12). While similarities in the size and morphology of tools within a particular class, such as scrapers, presumably reflects the fracture patterns and potential of the preferred raw material, lydianite, variations in the frequencies of different classes are perhaps best explained as resulting from activity variations between sites. It is therefore rather surprising to find that, with a single exception, Highlands, the assemblages from sites scattered over a wide area of the eastern Cape interior are all dominated by scrapers and so might be assumed to show the pursuit of similar activities at all the sites. However, as yet unknown patterns of artefact use and discard, as well as the absence of floral and faunal remains from most sites, may be giving a misleading picture of prehistoric activities in this region. Highlands differs from the other sites in its large component of backed pieces which are of low frequency at both Tafelberg Hall (Hewitt, 1931) and sites in the Mountain Zebra National Park (Brooker, 1977) situated less than 50 kilometres away. Clearly there may have been differences in the activities carried out at these sites as well as perhaps in the fauna and flora of each site's catchment area. Future research should perhaps be geared to the excavation of sites in different environmental regions of the eastern Cape interior in order to provide more information on assemblage variability in conjunction with the analysis of floral and faunal remains from excavated contexts.

Patterns of exploitation

Analysis of the food residues preserved in Fairview rockshelter indicate an economy based upon the exploitation of plant foods and the hunting of a wide variety of ungulates and other

TABLE 12
Comparisons between Eastern Cape Stone Artefact Assemblages

Sites	Tool Types			
	Scrapers	Adzes	Backed Pieces	Other+ Misc. Retouch
Fairview	230	19	7	9
Highlands ¹	159	18	124	14
Waylands ²	9	—	—	—
Waterval ²	21	5	—	2
Katkop ²	49	—	—	—
MZNP6 ³	198	7	11	2
MZNP11 ³	23	—	—	—
Oakleigh 8-2 ⁴	28	—	1	6
Tentergate ⁴	60	—	1	—
Merino Walk ⁵	32	1	—	1
Tafelberg Hall ⁶	34	4	2	1

References: ¹ H. J. Deacon, 1976;

² Albany Museum collection;

³ Brooker, 1977;

⁴ Derricourt, 1977;

⁵ Sampson, 1970;

⁶ Hewitt, 1931.

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animals. Corms of *Watsonia* predominate among the plant remains as they do at sites of similar age in the eastern Cape Folded Belt (H. J. Deacon, 1976), where they are regarded as a staple food. Clearly similar hunter-gatherer exploitation systems may have been operative in both the Cape Folded Belt and on the southern slopes of the Winterberg. Plant food staples were supplemented by a wide variety of game caught by hunting and trapping.

The mammalian species represented in the faunal sample from Fairview presumably reflect the local availability of different types of animal. The relative frequencies of different species show no apparent hunting preferences by the occupants of the shelter. Indeed animals from forest, bush and grassland habitats are all well-represented at the site. At Fairview there appears to have been no obvious concentration upon small browsing antelopes as evidenced at sites in the Cape Folded Belt. Taken together the plant and animal remains from Fairview indicate that the site may have been optimally located for the exploitation of an environmental mosaic including fynbos, temperate evergreen forest and grassland.

Some evidence can be led to suggest in which season settlement by hunter-gatherers took place at Fairview. Present climatic conditions would argue for summer occupation since frosts are common in the winter and direct sunlight enters the shelter only in the summer. Support for this hypothesis is provided by the plant remains. The presence of numerous *Watsonia* corms and seeds of the Cape chestnut, *Calodendrum capense*, is probably indicative of exploitation during the summer or possibly autumn months (see H. J. Deacon, 1976:96-101; Parkington, 1972; Wells 1965 for discussion of the seasonal availability and palatability of various plant foods including *Watsonia*). However, no evidence for the season of occupation is provided by the faunal remains although the small samples of ageable teeth make attempts at recognizing seasonality extremely hazardous.

If we accept the hypothesis of summer occupation at Fairview, we can reasonably speculate on what areas may have been occupied during the winter. The harsh winter climate with frosts on higher ground would argue for a retreat to warmer regions at lower altitudes. Such movement may also have occurred among grazing animals. The higher pastures of the Winterberg are sour grassland which loses its palatability and nutritional value during the winter months. By contrast the lower southern slopes of the mountains and the Fish River valley are sweetveld which retains its nutritional value throughout the year. Indeed many present-day farmers in the region still practise transhumance with their stock moving them down from the higher grasslands to the sweetveld in the autumn and sending them back in the spring. Thus seasonal movement from higher to lower ground by hunter-gatherers may have mirrored that of the grazing ungulates which they hunted. In addition winter is the dry season in the Winterberg and settlement may perhaps have clustered along the Fish River and its major perennial tributaries. Thus a model of seasonal movement is proposed here which would see hunter-gatherers exploiting a wide variety of plant and animal foods on the higher slopes of the Winterberg during the summer and retreating southwards to the warmer environs of the Fish River valley in the winter. Some evidence for coastal contact is present at Fairview in the form of marine shell, though this may result from trading networks rather than any regular movement to the coast.

Rock Art

Although no rock paintings were found in the excavated shelter at Fairview and rock art-recording in the Winterberg Mountains is still at an early stage, one or two points of interest already emerge from this line of research which are worthy of inclusion in this report. The first

is that stylistically the majority of the paintings appear to be related to the art of the Drakensberg and its foothills rather than to the art of the eastern Cape Folded Belt. Thus there are numerous polychromes and finely-depicted eland indicating that the paintings of the Winterberg belong in Bleek's (1940) Area 2. The paintings of the Cape Folded Belt, Bleek's Area 1, are by contrast far less realistic and usually monochromatic. Secondly, the Winterberg paintings commonly include paintings of cattle and figures carrying assegais which presumably depict the presence of Iron Age peoples in the region. The painting of a "white" man in a shelter on the farm Buffels Kloof in the Bedford District is thought to be a Xhosa *umkwetha* (i.e. an initiate to be circumcised into manhood). There are a few paintings of horse and riders and also one of the type of house erected by the first white settlers in the area indicating that rock art was still being produced in historic times. These preliminary observations clearly indicate that the rock art of the Winterberg would repay more detailed study.

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REFERENCES

- ACOCKS, J. P. H. 1975. Veld types of South Africa. *Mem.bot.Surv.S.Afr.* **40**: i-iv, 1-128.
- EVERY, G. 1974. Open station shell midden sites and associated features from the Pearly Beach area, south-western Cape. *S.Afr.archaeol.Bull.* **29**: 104-114.
- BLEEK, D. F. 1940. *More rock paintings in South Africa*. London: Methuen.
- BROOKER, M. 1977. The archaeology of the Mountain Zebra National Park. *Koedoe* **20**: 77-93.
- CHILDS, N. T. 1971. *The geography of the Bedford, Adelaide, Fort Beaufort, Stockenström and Victoria East Magisterial Districts*. Unpublished M.A. thesis, Rhodes University, Grahamstown.
- CLARK, J. D. 1959. *The prehistory of Southern Africa*. London: Pelican.
- DEACON, H. J. 1976. *Where hunters gathered: a study of Holocene Stone Age people in the Eastern Cape*. Claremont: South African Archaeological Society.
- DEACON, H. J., DEACON, J., BROOKER, M. L., and WILSON, M. L. 1978. The evidence for herding at Boomplaas Cave in the Southern Cape, South Africa. *S.Afr.archaeol.Bull.* **33**: 39-65.
- DEACON, J., 1969. *Re-excavation and description of the Wilton type-site, Albany District, Eastern Cape*. Unpublished M.A. thesis, University of Cape Town.
- DEACON, J. 1972. Wilton: an assessment after 50 years. *S.Afr.archaeol.Bull.* **27**: 10-48.
- DEACON, J. 1974. Patterning in the radiocarbon dates for the Wilton/Smithfield complex in Southern Africa. *S.Afr.archaeol.Bulletin.* **29**: 3-18.
- DERRICOURT, R. M. 1977. *Prehistoric man in the Ciskei and Transkei*. Cape Town: C. Struik.
- HEWITT, J. 1931. Discoveries in a Bushman cave at Tafelberg Hall *Trans.roy.Soc.S.Afr.* **19**: 185-196.
- HUMPHREYS, A. J. B. 1972. Comments on aspects of raw material usage in the Later Stone Age of the Middle Orange River area. *S.Afr.archaeol.Soc.Goodwin Series.* **1**: 46-53.
- PARKINGTON, J. E. 1972. Seasonal Mobility in the Late Stone Age. *Afr.Stud.* **31**: 223-243.
- ROBERTSHAW, P. T. 1979. Excavations at Duiker Eiland, Vredenburg District, Cape Province. *Ann.Cape Prov.Mus.(humanSci.)* **1**: 1-26.
- RUDNER, J. 1968. Strandloper pottery from South and South West Africa. *Ann.S.Afr.Mus.* **49**: 441-663.
- SAMPSON, C. G. 1970. The Smithfield industrial complex: further field results. *Mem.natn.Mus.(Bloemfontein)* **5**: 1-172.

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

- SAMPSON, C. G. 1972. The Stone Age industries of the Orange River Scheme and South Africa. *Mem.natn.Mus. (Bloemfontein)* 6: 1-288.
- SCHWEITZER, F. R. and WILSON, M. L. 1978. A preliminary report on excavations at Byneskranskop, Bredasdorp district, Cape. *S.Afr.archaeol.* 33: 134-140.
- SKEAD, C. J. n.d. Historical mammal incidence in the Cape Province. Vol. 2: The eastern half of the Cape Province including the Ciskei, the Transkei and East Griqualand. In press.
- South Africa (Republic) Dept. of Mines. Geological Survey. 1976. *Geological Series Map 3226 King William's Town 1:250000*. Pretoria: Government Printer.
- South Africa (Union) Dept. of Transport. Weather Bureau. Climatology Branch. 1954. *Climate of South Africa. Part 1. Climate Statistics*. Pretoria: Government Printer.
- South Africa (Republic) Dept. of Transport. Weather Bureau. Climatology Branch. 1965. *Climate of South Africa. Part 9. Average montly and annual rainfall and number of rain-days up to the end of 1960*. Pretoria: Government Printer.
- VAN ZINDEREN BAKKER, E. M. and BUTZER, K. W. 1973. Quaternary environmental changes in Southern Africa. *Soil Science* 116: 236-148.
- WELLS, M. J. 1965. An analysis of plant remains from Scott's cave in the Gamtoos Valley. *S.Afr.archaeol.Bull.* 20: 79-94.

APPENDIX 1: The remains of larger mammals from Fairview shelter

by

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The faunal remains from Fairview Shelter were analysed at the South African Museum in August 1979. "Macromammal" bones, the majority of which were fragmented and not identifiable to either skeletal part or taxon, constituted by far the largest portion of the total bone sample. The bone from the upper member at Fairview was less fragmented than that from the Lower Member and indeed was less fragmented than in many (probably most) southern African archaeological sites.

The macromammal species represented at Fairview are listed in Table 13, along with the minimum numbers of individuals by which each species is represented in each layer. Unfortunately, because of the exigencies of printing costs, the numbers of different kinds of skeletal elements of each species and the minimum number of individuals represented by these elements in each layer are not listed here. However, this information is available on request from the author or from the Curator of Archaeology, Albany Museum, Grahamstown. Table 14 lists the numbers of reptile, amphibian, fish and crab remains.

The mammals of southern Africa include several pairs of species which are very similar in size and morphology and which are thus difficult to distinguish from one another on isolated skeletal elements. The problem is particularly acute with like-sized species of bovids and it has therefore become common practice to assign bovid postcranial remains only to size categories within the family. The categories used here correspond closely to the four bovid size classes chosen by Brain (1974, 1980). The minimum number of individuals in each size category in Table 13 includes some or all of the individuals listed separately by species in the Table and must not be regarded as an increment to the numbers of individuals listed separately by species.

Even with teeth, some bovid species are very difficult to distinguish from one another. The most problematic pairs of bovid species probably represented in the Fairview faunal remains include: roan and blue antelope; grysbok and steenbok; and black wildebeest and Cape hartebeest. Klein (1974) concluded that the blue antelope was significantly smaller on average than the local variety of roan. Marked differences in size were therefore the criteria used for sorting the Fairview *Hippotragus* teeth between the two species. However, it remains possible that individual identifications based on dental size may be mistaken. Except for a single grysbok mandible it was not possible to separate the other two pairs of bovid species and they have therefore been listed together.

Problematic species pairs also occur in several other families. Although comparative material was lacking, two species of hare are believed to be represented at Fairview—the Cape

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

TABLE 13

The minimum numbers of individuals by which larger mammalian species are represented at Fairview Shelter

	Surface	CD	FGD/ FWA	SWA	LSE/ BSG	Ashy LSEB/ TWA	LSEB	CS	CL
Leporidae gen. et sp. indet., hares	—	3	3	1	4	1	2	—	—
<i>Georychus capensis</i> , mole rat	—	8	40	3	9	1	—	—	—
<i>Hystrix africae-australis</i> , porcupine	—	1	1	—	—	—	—	—	—
<i>Papio ursinus</i> , chacma baboon	—	1	—	—	1	1	—	—	—
<i>Cercopithecus aethiops</i> , vervet monkey	—	—	1	?1	—	—	—	—	—
<i>Canis mesomelas</i> , black- backed jackal	1	1	1	—	1	1	—	—	—
<i>Vulpes chama</i> , silver fox	1	1cf	—	—	1	—	—	—	—
<i>Lycan pictus</i> , hunting dog	—	—	1	—	1	—	—	—	—
<i>Aonyx capensis</i> , clawless otter	—	—	1	—	1	—	—	—	—
<i>Genetta</i> sp., genet	—	1cf	—	—	—	—	—	—	—
<i>Atilax paludinosus</i> , water mongoose	—	—	—	—	—	—	1cf	—	—
<i>Herpestes ichneumon</i> , Egyptian mongoose	—	2	1	—	—	1cf	—	—	—
<i>Herpestes pulverulentus</i> , grey mongoose	—	1	1	—	—	—	—	—	—
Hyaenidae gen. et sp. indet., hyena(s)	1	1	1	—	1	1	1	—	—
<i>Felis libyca</i> , wildcat	—	1	1	—	1	—	—	—	—
<i>Felis caracal</i> aut serval, caracal and/or serval	1	1	1	—	1	1cf	—	—	—
<i>Panthera pardus</i> , leopard	—	—	—	1	1	—	—	—	—
<i>Orycteropus afer</i> , aardvark	—	—	1	—	—	—	1	—	—
<i>Procavia capensis</i> rock hyrax	1	3	5	1	9	3	3	1	2
<i>Equus (Hippotigris) sp.</i> , ze- bra/quagga	—	1	1	1	—	—	—	—	—
<i>Phacochoerus aethiopicus</i> , warthog	—	—	1	—	—	—	—	—	—
<i>Potamochoerus porcus</i> , bushpig	1	3	2	—	1	1	1	—	—
Suidae—general	1	3	2	1	1	1	1	1	1
<i>Taurotragus oryx</i> , eland	—	—	2	—	2	1	—	—	—
<i>Tragelaphus strepsiceros</i> , greater kudu	—	?1	1	—	2-3	—	—	—	?1
<i>Tragelaphus scriptus</i> , bush- buck	1cf	4	4	—	2	1	1	—	3
<i>Hippotragus cf. equinus</i> , roan antelope	—	—	—	—	2	—	—	—	—
<i>Hippotragus cf. leuco- phaeus</i> , blue antelope	—	—	—	—	1	1	2	—	—
<i>Redunca arundinum</i> , south- ern reedbuck	—	1	1	1	3	1	—	—	—

[TABLE 3 (Cont.)]

	Surface	CD	FGD/ FWA	SWA	LSE/ BSG	Ashy LSEB/ TWA	LSEB	CS	CL
<i>Redunca fulvorifula</i> , mountain reedbuck	—	1	3	—	2	1	—	—	1
<i>Pela capreolus</i> , vaalribbok	—	1	1	1	3	2	2	—	—
<i>Alcelaphus buselaphus</i> / <i>Connochaetes gnou</i> , Cape hartebeest/black wildebeest	1	3	1	2	1	1	1	—	—
<i>Antidorcas marsupialis</i> , springbok	—	1	—	—	—	—	—	—	—
<i>Cephalophus monticola</i> , bluc duiker	—	—	5	—	1	1	—	—	—
<i>Ourebia ourebi</i> , oribi	—	2	1	1	1	1	1	—	—
<i>Raphicerus</i> sp(p), grysbok/steenbok	—	2	3	1	4	1	4	—	2
<i>Syncerus caffer</i> , Cape buffalo	—	1	1	—	—	—	—	—	1
Bovidae—general									
small	2	3	8	2	6	2	3	2	2
small medium	1	7	5	4	6	4	3	1	3
large medium	1	4	3	1	9	3	3	1	1
large	1	1	3	1	2	1	1	—	1

hare (*Lepus capensis*) and less certainly the Bushman hare (*Bunolagus monticularis*). The hyena bones are assignable to either the brown or the spotted species, both of which occurred in the area historically. Similarly the medium-size cats may be either caracal or serval. There is also no basis for specific identification of the equid remains, both quagga and mountain zebra may be represented.

Finally, it was not possible to separate consistently the postcranial remains of warthog and bushpig. Thus the "Suidaegeneral" category may include the same individuals listed separately by species (i.e. identified on teeth).

TABLE 14

The numbers of reptile, amphibian, fish, and crab remains at Fairview Shelter

	Surface	CD	FGD/ FWA	SWA	LSE	Ashy LSEB/ TWA	LSEB	CS	CL
tortoise—carapace/plastron fragments	2	15	13	1	3	—	—	—	—
snake—vertebrae	4	13	8	—	2	12	—	—	—
—ribs	—	—	—	—	—	1	—	—	—
crocodile—teeth	—	—	—	—	1	—	—	—	—
amphibian—dentaries	—	—	—	1	1	—	—	—	—
—postcranial bones	1	—	1	—	7	2	—	—	—
fish—vertebrae	—	—	—	—	2	1	—	—	—
crab—cheliped fragments	4	39	11	6	3	2	1	—	—

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Smaller animals tend to be well-represented at Fairview by a wider variety of skeletal parts than do larger animals. The contrast is particularly clear in the bovids, where the largest animals are represented almost exclusively by teeth and foot bones alone. This is a common pattern in southern African archaeological faunas (Klein 1980a). The difference in extent of skeletal part representation presumably reflects the fact that people tended to bring home smaller animals more or less intact, but only selected parts of larger animals from the place where they were killed.

Even for the smaller species, however, not all skeletal elements are represented in their anatomically expectable frequencies. It is probable that most of these discrepancies reflect the differential durability of different bones in the face of pre- and post-depositional destructive pressures.

So far it has been assumed that the bones at Fairview were brought to the site by its Later Stone Age occupants. However, owls were probably responsible for most or all of the micro-fauna (see Appendix 2) and perhaps for some of the smaller animals listed in Table 13, especially the mole rats. Although the porcupine is represented in the assemblage, porcupine-gnawed bones are absent, suggesting that porcupines did not play an essential role in its formation (see Brain 1968, 1980). Hyena individuals are more common at Fairview than in any other southern African archaeological fauna studied by the author. It is possible, therefore, that hyenas occasionally occupied the site when people were absent. However, other signs of significant hyena presence—especially coprolites and a high frequency of jackal bones (Klein 1975 and n.d.) are lacking. Additionally, the abundance of hyenas at Fairview may be exaggerated by the method of counting, whereby it was assumed that hyena bones in different layers must come from different individuals. Thus the sum of the evidence suggests hyenas were not important contributors to the Fairview bone assemblage, and it seems most reasonable to conclude that the majority of animal bones found at Fairview were brought there by its Later Stone Age inhabitants.

Except for mole rat, the fluctuations in the frequency of which may simply reflect changes through time in the extent of owl use of the shelter, there are no significant differences between levels in the relative abundance of different species. Thus it is reasonable to treat the fauna as a single unit for the purpose of environmental reconstruction.

Nearly all the species represented at Fairview were either recorded nearby historically or may reasonably be assumed to have occurred nearby on the basis of records from adjacent areas. The single exception is the blue antelope which was very rare east of Swellendam and unknown east of Plettenberg Bay. However, it is possible that the blue antelope suffered substantial reduction in its range (and numbers) as a result of the introduction of domestic stock to southernmost Africa about 2 000 years ago (Klein 1974). At Fairview, this event is probably recorded by the appearance of pottery, which occurs only in layers overlying those with remains of blue antelope. The Fairview record in fact supports evidence from other sites that the blue antelope was both more widespread and probably more numerous prior to 2 000 B.P. than afterwards. By historic times it was extremely rare, and the last known individual was sighted about A.D. 1800.

From a palaeo-environmental perspective the most remarkable feature of the Fairview fauna is the mix of species such as zebra/quagga and springbok which prefer relatively open grassy settings with ones such as bushpig and kudu which prefer more closed bushy to forest settings. Also present are species such as eland, roan and blue antelope, grysbok/steenbok which might be at home in either setting or in one which consisted of a mosaic of grassveld and

bush, or forest. The most plausible interpretation of the overall species mix is that it reflects human exploitation of a vegetational mosaic comprising expanses of grassveld, fynbos ("macchia"), and bush/evergreen forest, perhaps closely similar to the mosaic that existed near Fairview historically. The relative abundance of mountain reedbuck and vaalribbok, species with a distinct preference for steep grassy slopes, reflects the fact that the topography then as now was relatively broken.

The "mixed" species composition of the Fairview fauna is particularly striking when compared to the more homogeneous composition of the faunas from broadly contemporaneous archaeological sites located to the southwest and north of Fairview (Klein 1980b with references). The faunas from these sites are heavily dominated by bush/forest/fynbos and grassveld mammal species respectively. However, it is interesting to note that the "mix" in the Fairview fauna is broadly reminiscent of that in the early Holocene fauna from Nelson Bay Cave in the forest/fynbos area, suggesting that the historic vegetation nearby Fairview might serve as an analogue for the early Holocene vegetation near Nelson Bay.

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REFERENCES

- BRAIN, C. K. 1968. Who killed the Swartkrans Ape-Men? *S. Afr. Mus. Assoc. Bull.* **9**: 127-139.
- BRAIN, C. K. 1974. Some suggested procedures in the analysis of bone accumulations from southern African Quaternary sites. *Ann. Transv. Mus.* **29**(1): 1-8.
- BRAIN, C. K. 1980. Some criteria for the recognition of bone-collecting agencies in African caves. In: Behrensmeier, A. K. & Hill, A. P. eds, *Fossils in the making*. Chicago: University of Chicago Press, pp. 107-130.
- KLEIN, R. G. 1974. On the taxonomic status, distribution, and ecology of the blue antelope, *Hippotragus leucophaeus* (Pallas, 1766). *Ann. S. Afr. Mus.* **65**: 99-143.
- KLEIN, R. G. 1975. Paleoanthropological implications of the non-archeological bone assemblage from Swartklip 1, south-western Cape Province, South Africa. *Quaternary Res.*, N.Y. **5**: 275-288.
- KLEIN, R. G. 1980a. The interpretation of mammalian faunas from stone-age archeological sites, with special reference to sites in the southern Cape Province, South Africa. In: Behrensmeier, A. K. & Hill, A. P. eds, *Fossils in the making*. Chicago: University of Chicago Press, pp. 223-246.
- KLEIN, R. G. 1980b. Environmental and ecological implications of large mammals from upper Pleistocene and Holocene sites in southern Africa. *Ann. S. Afr. Mus.* **81**: 223-283
- KLEIN, R. G. n.d. The mammalian fauna from Equus Cave: carnivore and ungulate ecology in the southern Kalahari during the Last Interglacial. Unpublished manuscript.

APPENDIX 2: The micromammalian fauna from fairview shelter

by

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The micromammalian remains from Fairview were all obtained from the Upper Member, level LSEB upwards (see Robertshaw, main text). Dates of $3\ 320 \pm 55$ BP for level LSEB and of $2\ 450 \pm$ for the base of level FGD/FWA indicate that the sequence represents a relatively short period of time during the later part of the Holocene.

The samples are small, except for that from level CD which is moderate (Table 15). It is consequently not possible to establish whether or not the environment was stable during this period. On the available evidence, however, it would appear likely that conditions were essentially similar to those pertaining at present. The majority of the species represented indicate fairly dense moist undergrowth (*Myosorex varius*, *Crocidura flavescens*, *Rhabdomys punilio*), specifically grass (*Otomys laminatus*), waterside vegetation (*Dasymys incomtus*) or both (*Otomys irroratus*). *Amblysomus hottentotus* is probably also indicative of grass although it may be found in forests (Roberts 1951:109) or near trees which are themselves suggested by *Thallomys paedulus* and *Dendromus mesomelas*. This latter species tends to live in tall damp grass but never far from trees (Shortridge 1934:249). In particular, *T.paedulus* is said generally to frequent acacia trees (Roberts 1951:485). The general interpretation agrees closely with Acocks' description of the Eastern Province Thornveld (1975:24) in which he states that "although the climax vegetaion would have been short forest and scrubforest, this veld is today essentially thornveld, with few species besides *Acacia karroo* and that "grass is dense and of sourish mixed type".

The possible occurrence of *Thallomys paedulus* at Fairview requires some comment since this would represent a southwards extension of some 500 km to the known present range of this species (Davis 1974:146). There are two left mandibles which are thought to be referable to *T.paedulus* but, in view of the magnitude of the possible range extension involved, it would be preferable to acquire further material before taking this fact as confirmed. There would seem, however, to be no theoretical reason why this species should not have occurred so far south in the recent past even if perhaps it is no longer to be found south of about 29°S. *T.paedulus* is a Southern Savanna species (Davis 1962, 1974) and this biotic zone extends to approximately Port Elizabeth in the eastern half of South Africa. Prior to the introduction of agriculture it is to be expected that the vegetation was much more closed, as is suggested by Acocks' remarks quoted above. If, in fact, *T.paedulus* no longer occurs in the vicinity of Fairview it could probably suggest that the vegetation has opened or, more probably, been opened at some time within about the last 2 000 years. This could well have resulted from the arrival of pastoralism and agriculture in the area.

TABLE 15

Minimum numbers of individuals of micromammals from Fairview

	S.	CD	FGD/ FWA	SWA	LSE BSG	Ashy LSEB/ TWA	LSEB
<i>Amblysomus hottentotus</i> , Hottentot golden mole	2	7	1	3	1	—	1
<i>Myosorex varius</i> , forest shrew	—	1	—	1	—	—	—
<i>Crocidura flavescens</i> , red musk shrew	—	5	1	3	—	—	—
<i>Rhinolophus clivosus</i> , Geoffroy's horseshoe bat	—	1	—	—	—	—	—
<i>Rhinolophus capensis</i> , Cape horseshoe bat	—	—	—	1	1	—	—
<i>Cryptomys hottentotus</i> , common mole-rat	—	1	1	—	—	—	—
<i>Dasymys incontinus</i> , shaggy swamp rat	—	2	1	—	1	—	—
<i>Rahbdomys pumilio</i> , striped field mouse	—	2	—	4	—	—	—
<i>Thallomys paedulus</i> , black-tailed tree rat	—	1	—	1	—	—	—
<i>Dendromus mesomelas</i> , chestnut climbing mouse	—	—	—	1	—	—	—
<i>Otomys laminatus</i> , laminate vlei rat	1	16	2	5	3	1	1
<i>Otomys irroratus</i> , vlei rat	3	54	10	8	11	2	3
TOTAL	6	90	16	27	17	3	5

The presence of *Dasymys incontinus* and *Otomys laminatus* provides more evidence that these species occur or have occurred in the apparent distribution gap between the southwestern Cape and the east coast, as shown by Davis (1974: 152, 171) and discussed previously with respect to the southern Cape (Avery 1977).

REFERENCES

- ACOCKS, J. P. H. 1975. Veld types of South Africa. *Mem. bot. Surv. S. Afr.* 40: i-iv, 1-128.
- AVERY, D. M. 1977. Past and present distribution of some rodent and insectivore species in the southern Cape Province, South Africa: new information. *Ann. S. Afr. Mus.* 74: 201-209.
- DAVIS, D. H. S. 1962. Distribution patterns of southern African Muridae, with notes on some of their fossil antecedents. *Ann. Cape Prov. Mus.* 2: 56-76.
- DAVIS, D. H. S. 1974. The distribution of some small southern African mammals (Mammalia: Insectivora, Rodentia). *Ann. Transv. Mus.* 29: 135-184.
- SHORTRIDGE, G. C. 1934. *The mammals of South West Africa*. London: Heinemann.

APPENDIX 3: Avian remains from Fairview shelter

by

G. Avery

(South African Museum, P.O. Box 61, Cape Town, 8000)

A small number of bird bones was recovered from Fairview rockshelter (32° 31'S; 26° 33'E), Fort Beaufort district. Small sample size and lack of a full range of comparative material limited identifications and thus any interpretations based thereon. Taxonomic determinations are given in Table 16. The excavated units were lumped according to stratigraphic units and minimum numbers were calculated from the most common element for each taxon in each unit. This may have resulted in under-representation of taxa such as Aquilidae and Phasianidae.

TABLE 16

Fairview: taxonomic determinations and minimum number of individuals

TAXON	STRATIGRAPHIC UNIT									COMMON NAME
	Sur-face	CD	* FGD/ FWA	SWA	LSE/ BSG	Ashy LSEB/ TWA	** LSEB	CS	*** CL	
Aquilidae										
Gen. et sp. indet. (medium)	0	1	(1)	(1)	1, (1)	0	1	0	0	eagle, hawk
Gen. et sp. indet. (small)	0	0	1	0	(?1)	1, (?1)	1	0	0	hawk
Phasianidae										
Gen. et sp. indet.	0	1	1	1	2	0	1	0	0	francolin
<i>Columba cf guinea</i>	0	1	0	0	0	0	0	0	0	Rock Pigeon
<i>Tauraco corythaix</i>	0	?1	0	0	0	0	0	0	0	Knysna Loerie
<i>Bubo capensis</i>	0	0	0	1	0	0	0	0	0	Cape Eagle Owl
<i>Corvus cf capensis</i>	0	(1)	0	0	0	0	0	0	0	Black Crow
<i>Corvultur albicollis</i>	0	0	0	0	0	1	0	0	0	Whitenecked Raven
Turdidae										
Gen. et sp. indet.	0	0	0	0	0	?1	0	0	0	thrush
Motacillidae										
Gen. et sp. indet.	0	0	?1	0	?1	0	0	0	0	wagtail, pipit, long claw
TOTAL BONES IDENT.	0	9	11	3	20	4	3	0	0	50
No. TAXA	0	5	4	3	5	3	3	0	0	10
MIN. NO. INDIV.	0	5	4	3	6	3	3	0	0	24

Note: () = no of immature individuals; *2450 ± 55 BP (base); **3320 ± 55 BP; ***3670 ± 60 BP.

dae but the proportions arrived at are a reasonable reflection of the total sample, accepting that small samples are themselves inherently inaccurate (Avery 1980).

Although the total sample is assumed to represent primarily the debris of prehistoric human activity the occurrence of eagles/hawks, Cape Eagle Owl, Black Crow and Whitenecked Raven raises the question of whether other agencies were also responsible for accumulation not only of some of the mammalian remains (see Klein Appendix 1) but also of the birds. The abovementioned birds could have roosted and bred on rocky ledges round the rockshelter, a suggestion supported by the occurrence of bones of a number of immature individuals. In addition, breeding birds bring prey to the roosting site to feed chicks which could account for the occurrence of the other bird forms, with the possible exception of the francolin although this could certainly have been taken by *Bubo capensis*, Cape Eagle Owl. Although fragmentary this species is identified in preference to *B. lacteus*, Giant Eagle Owl, as the latter does not use rocky areas for roosting or breeding (P. Steyn, pers. comm.). Further, it appears that in most cases only limb bones remain. The lack of fragments of other body parts relating to the trunk reflects observations of body parts found under the roosts of medium sized Falconidae, falcons, (Avery, in prep.) and also of the remains of avian carcasses eaten by small carnivores, including *Herpestes* sp., mongoose (pers. observ.). The latter case, however, is probably discounted here by the limited evidence for tooth marks or chewing on the bones. Five bones, however, did show depressed punctures which could have been caused by avian or mammalian predators. One bone had been gnawed by a small rodent.

The role of predators and scavengers as contributors to bone accumulations has long been discussed. More recently D. M. Avery (1979), Brain (1980) and Klein (1980) have discussed the role of barn owls, porcupines, larger carnivores and hyaenas in the accumulation of micro-mammalian and large mammalian remains and the characteristics of such accumulations. It is reasonable to assume that the same or similar factors should be operating with other birds of prey and avian scavengers which utilize ledges or rock shelters. Also, as with barn owls, bone accumulations in which large numbers of like-sized animals occur, especially with high proportions of juveniles, have been influenced in this manner. Investigation of this problem has led to the suggestion (G. Avery in prep.) that *Bubo capensis* was responsible for the accumulation of the large numbers of young *Bathyergus suillus*, Dune Mole Rat and lagomorpha, hare, remains from the Middle Stone Age levels at Die Kelders Cave (Klein 1975). Mole rats are known to surface at times and would therefore, be accessible to predators (J. U. M. Jarvis, W. R. Siegfied pers. comm.). Following this it is considered likely that the relatively large numbers of *Georychus capensis*, Common Mole Rat, and other smaller faunal elements of the sample reported on by D. M. Avery and Klein (Appendices) were taken by birds of prey such as the Cape Eagle Owl and/or medium-sized eagle (approximately the size of *Buteo rufofuscus*, Jackal Buzzard). It is noted, however, that the situation is complex and that a variety of carnivores including hyaenas (Mills & Mills 1978) and mongooses (G. Avery, pers. obs.), which occur in the mammalian sample, not only take or scavenge smaller mammals but also birds the remains of which could be found at breeding dens.

It is well reported in ethnographic sources that both living and 'contact period' hunter-gatherers and herders living inland regularly caught small numbers of birds, especially game-birds, for food. Although there is no direct evidence for their dietary use here, there is evidence that bird bones were being utilized as raw materials (Fig. 11). In one case the proximal shaft of a francolin tibiotarsus was cut around the circumference with a sharp instrument and snapped across. Presumably this was repeated at the distal end resulting in the production of a

EXCAVATIONS AT FAIRVIEW ROCK SHELTER

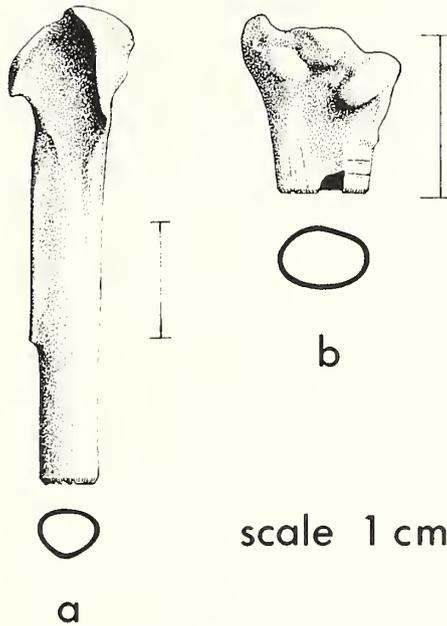


Fig. 11 Artefactual waste from Fairview (a) Tibiotarsus of francolin (FGD) and (b) humerus of ?hawk (TWA).

tube. In another case the distal shaft of a humerus probably of a hawk (the bone is burnt and possibly distorted) was similarly cut. Bone tube segments produced in this manner in coastal sites are thought to have been used as beads. It is impossible to determine whether these birds were actively hunted or whether bones found on the surface were utilized.

Although some of the forms identified include species which are habitat specific this potential is severely limited by the small size of the sample and problems of identification. The presence of francolin would suggest that there was at least some open country, perhaps at the fringe of thickish bush or even forest which would be indicated, if *Tauraco corythaix* is correctly identified. *Corvus capensis* is essentially a bird of more open country while *Corvultur albicollis* is mostly found in mountainous regions (McLachlan & Liversidge 1978, Winterbottom 1975).

Acknowledgements

The author is indebted to P. T. Robertshaw for the opportunity to work on the sample and for information on stratigraphy and dates. R. G. Klein separated the bird remains from the rest of the faunal sample and allowed the present author to comment on results obtained from his analysis of the larger mammalian fauna. The illustrations shown on Fig. 11 were prepared by C. M. Hunter.

REFERENCES

- AVERY, D. M. 1979. *Upper Pleistocene and holocene palaeoenvironments in the southern Cape: the micromammalian evidence from archaeological sites*. Unpubl. D.Phil. thesis, University of Stellenbosch.
- AVERY, G. 1980. Avian remains from the Driel rock shelter, Natal, South Africa. *Ann. Natal Mus.* **24**: 69-70.
- BRAIN, C. K. 1980. Some criteria for the recognition of bone-collecting agencies in African caves. In: Behrensmeyer, A. K. & Hill, A. P. eds, *Fossils in the making*. Chicago: University of Chicago Press, pp. 108-130.
- KLEIN, R. G. 1975. Middle Stone Age man-animal relationships in southern Africa: evidence from Die Kelders and Klasies River Mouth. *Science* **190**: 265-267.
- KLEIN, R. G. 1980. The interpretation of mammalian faunas from stone age archaeological sites, with special reference to sites in the southern Cape Province, South Africa. In: Behrensmeyer, A. K. & Hill, A. P. eds, *Fossils in the making*. Chicago: University of Chicago Press, pp. 223-246.
- MCLACHLAN, G. R. & LIVERSIDGE, R. 1978. *Roberts birds of South Africa*. Cape Town: John Voelcker Bird Book fund.
- MILLS, M. G. L. & MILLS, M. E. J. 1978. The diet of the brown hyaena *Hyaena brunnea* in the southern Kalahari. *Koedoe* **21**: 125-149.
- WINTERBOTTOM, J. M. 1975. Notes on the South African species of *Corvus*. *Ostrich* **46**: 236-250.

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Dr F.W. GESS: 1978 –

A study of the wood and iron houses of East London, South Africa

by

G. N. VERNON

East London Museum, East London, South Africa

INTRODUCTION

The idea that the wood and iron houses of East London were worth studying was first put forward in 1980 by Mr Andrew Montgomery who had become interested in them when he was organizing an Urban Trail for his pupils. He began the study by looking at the prefabricated aspect of these buildings and his article *Prefabrication—A Brief History* has since been published in the Journal of the Border Historical Society, *The Coelacanth* Vol. 20 No. 1 April 1982. At first the present author's contribution was intended to be a sample study of three houses. However, while doing research on this project, it became apparent that these wood and iron cottages played an important rôle in the early history of East London and it was decided to make a more detailed study than was originally anticipated.

Wood and iron houses provide a record of a form of late nineteenth and early twentieth century vernacular architecture and social history. They were originally built as temporary homes in the first areas to be settled in East London, however, they proved to be so functional that by the turn of the century a distinctive and ornamental style had made its appearance and the later houses were built as permanent residences. Restrictions on the use of corrugated iron for walling, however, has resulted in the progressive disappearance of these old homes.

"In the early days of the Diamond Fields comforts there were absolutely none. Not a single substantial dwelling afforded shelter from the burning sun: men lived under canvas, and the owner of a wood and iron shanty was looked on as a lord" (1886).¹

The use of galvanized corrugated iron to build temporary houses began in the mid-nineteenth century. Buildings with a structural framework of wood and with external walling and roofing of corrugated iron proved to be easy and inexpensive to erect. They fulfilled a need which had arisen in the new settlements established during the period of British Colonial expansion. Temporary houses, shops, offices, warehouses and churches sprang up wherever traders, miners and settlers moved to areas where there were shortages of materials required for building and few competent builders.

The corrugated iron sheet proved to be a first class building material as it is light, strong, water- and fireproof and corrosion resistant. The process of enhancing the strength of iron sheets by fluting or grooving i.e. corrugating, was first developed on a commercial basis in England during the 1820's. In 1837 in Britain James Craufurd patented a method of hot-dip

galvanising which rendered the sheets corrosion resistant. By the 1850's corrugated iron sheets were being manufactured and were exported from Britain in large quantities. Manufacturers began to make prefabricated buildings and 'portable houses' were sent to all the colonies.² The iron for walls, flooring and sashes for one three-bedroomed house could be packed into a case 7' × 2'4" × 2'6" (2130 mm × 710 mm × 760 mm) weighing only two tons, which made transportation relatively easy.³

An advantage of erecting a temporary building of corrugated galvanized iron was that it could be dismantled and re-erected elsewhere or the iron used for other purposes and so the used material had a cash value and a mobility which was very useful in a situation where instant shelter was required in circumstances which could prove temporary. A report from the *Mayor's Minute* in 1898 (p. 21) illustrates this point.⁴

"The caretaker's cottage has been removed from the northern side of the dam and replaced by a new three-roomed wood and iron cottage on the East London side. The old materials were re-used as far as possible."

The earliest reference, seen to date, to an iron house being built in the Eastern Cape is from 1855. A mission was to be established among Chief Kreli's Gcalekas on the White Kei River. "On August 31, 1855, Mr Waters left Grahamstown with Mrs Waters and their family. They had three wagons with them, and two others laden with an iron house."⁵

In 1872 a series of advertisements appeared in the *East London Dispatch and Shipping and Mercantile Gazette* in which W. Symons, a King William's Town builder, offered "Portable Houses built for the Diamond Fields and East London."⁶

There were 379 wood and iron houses in East London in June 1982. Of these 108 were in West Bank, 82 in Quigney, 64 in Cambridge, Vincent, Berea and Nahoon (the pre 1941 Cambridge Municipality), 62 in Southernwood, 52 in the C.B.D.—formerly East London East and Panmure—and North End, 6 in Amalinda and 5 in Abbotsford (Table 1 & Fig. 1). Five architectural styles can be distinguished.

TABLE 1. Numbers and distribution of wood and iron houses in East London in June 1982.

Style	West Bank	C.B.D. & Northend	Southernwood	Quigney	Cambridge Vincent Berea Nahoon	Amalinda	Abbotsford	Total
A	51	27	16	4	11	1	2	112
B	48	10	30	57	26	3	3	177
C	8	15	15	16	21	2	—	77
D	1	—	1	5	1	—	—	8
E	—	—	—	—	5	—	—	5
Total	108	52	62	82	64	6	5	379

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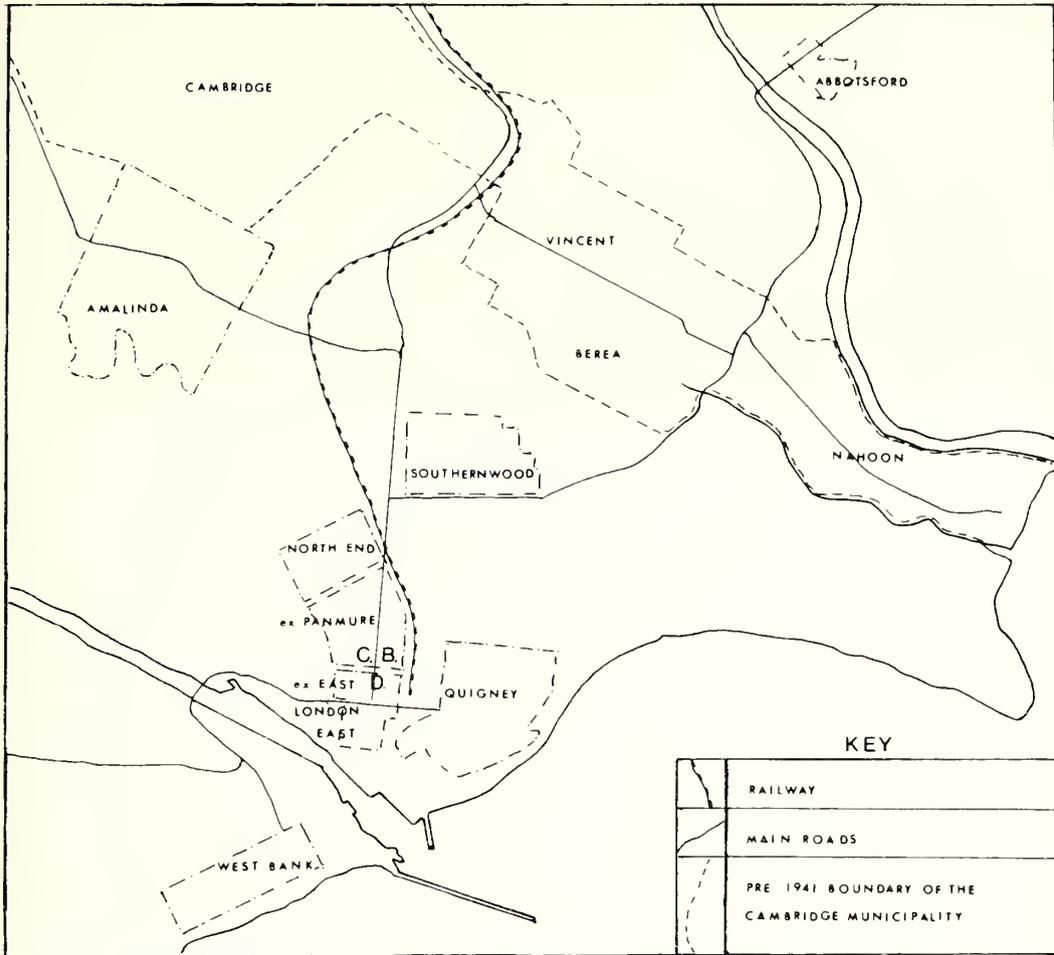


Fig. 1. Plan showing areas in East London where wood and iron houses are situated.

ARCHITECTURAL STYLES

Style A (Fig. 2)

Houses of this style have a simple rectangular plan with a double pitched roof, a veranda at the front and a lean-to at the back. The sizes of the houses built on this plan vary but they are all small with a roof width which varies from 3,86 metres to 7,9 metres. The lean-to or af-dak houses the kitchen which had a brick oven and chimney built onto the outside wall.

The interior arrangement of rooms varies but a common feature in the houses examined is a central passage with a room on each side and a symmetrical arrangement of sash windows on the front facade.

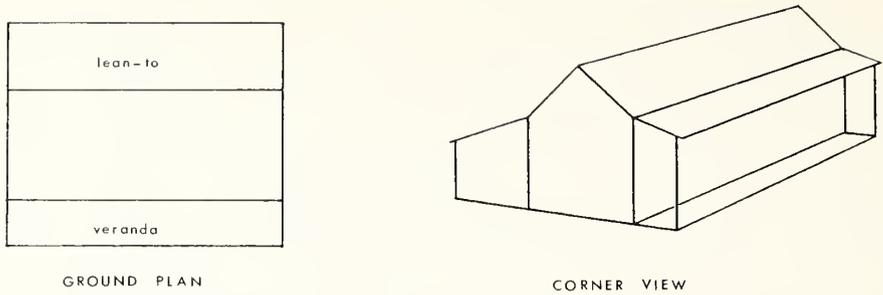


Fig. 2. Style A, ground plan and corner view.



Fig. 3. Style A, 49 Smith Street, West Bank.

Most of the Style A cottages, 51 of the total of 112 (Table 1), are found on the West Bank which was the first area in East London to be settled. An example of a Style A house is 49 Smith Street (Fig. 3). A pair of semi-detached houses, 5 and 7 Smith Street, has been chosen for a detailed study.

Style B (Fig. 4)

Houses of this style have a square plan with a hipped roof, a veranda at the front and a lean-to at the back. In a few cases the veranda extends to the sides. This is the most common style of wood and iron house, 177 out of the total of 379. It is the most common in the Quigney

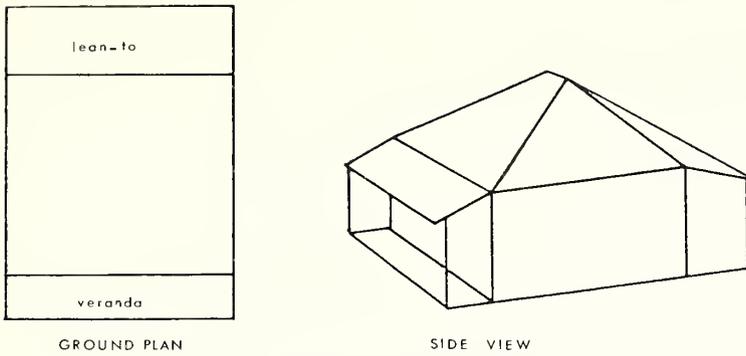


Fig. 4. Style B, ground plan and side view.



Fig. 5. Style B, 52 Hood Street, West Bank.

where there are 57 (Table 1). The example selected to illustrate Style B is 13 White Avenue in Abbotsford.

The front door of this style of house is usually off-centre as it leads directly into the living-room. The interior is usually divided into four rooms under the main hipped roof. Typical of this style is 52 Hood Street, West Bank (Fig. 5).

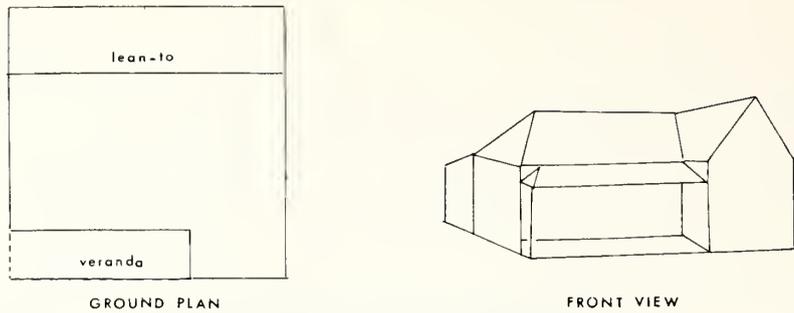


Fig. 6. Style C, ground plan and front view.



Fig. 7. Style C, 23 Rissling Street, Vincent.

Style C (Fig. 6)

Houses of this style have an L-shaped plan. One extension gable has been added at right angles to either a square main building with a hipped roof or a rectangular main building with a pitched roof. There is a front veranda and a lean-to at the back. There are 77 of this style and most (21) are found in the old Cambridge Municipal area, the present day suburbs of Cambridge, Berea, Vincent and Nahoon, (Table 1). The front gables usually have single or double sash windows set flush with the wall. A few, however, have bay windows with a small separate roof over the bay and a few have wooden casement windows. Nearly all have large louvred ventilators in the gable and many have iron canopies over the windows. Some have

VERNON: A STUDY OF THE WOOD AND IRON HOUSES OF EAST LONDON, SOUTH AFRICA

decorative wooden bargeboard and veranda fascias on the facade. Typical of this style is 23 Rissling Street, Vincent. (Fig. 7).

Style D (Fig. 8)

Houses of this style have a U-shaped plan. Two extension gables with pitched roofs extend at right angles at each end of the main part of the building which is rectangular with a pitched roof. There are only 8 of this style in East London with 5 of them in the Quigney. They seem to have been built to house two separate families as all are sub-divided (Fig. 9).

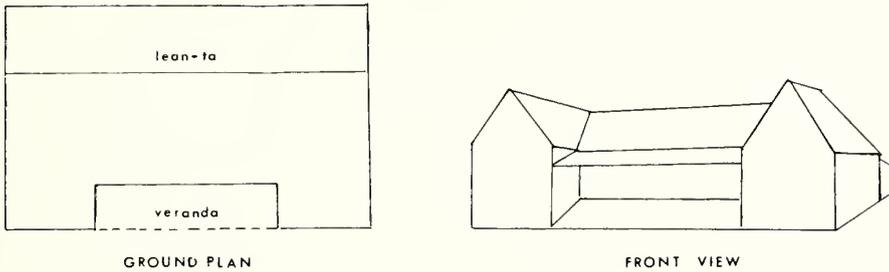


Fig. 8. Style D, ground plan and front view.



Fig. 9. Style D, 71 Currie Street, Quigney.

Style E (Fig. 10)

Houses of this style are similar to those of Style C except that they have two extension gables and a right-angled veranda connecting these. There are only 5 of these houses and they are all found in Cambridge and Vincent. The gables were originally all decorated with finials and decorative bargeboards. The veranda roofs have concave-convex curves and decorative wooden fretwork brackets and fascias. Unfortunately much of the ornamentation is in a poor state of repair. The fascia boards and bracket junctions have fallen off and not been replaced and much has been lost. To illustrate this style of house, 4 Lake Street, Vincent has been selected. It retains some of its decorative fascias and bargeboarding and few major structural alterations have been made (Fig. 29). Almost identical to 4 Lake Street is 10 Bucholtz Street, Vincent, one block away. These houses were certainly built from the same plan (Fig. 11).

There are only two references to double-storeyed wood and iron houses in East London. One was in the North End but it collapsed in 1973.¹⁹ The other was in Southernwood but it has been demolished (Pers. comment Mr R. Bridge).

There are some features which with a few minor variations were common to the wood and iron houses. They were built on a fairly substantial foundation, often stone, with the floor supported by sneezewood posts. The main body of the house had a framework of timber with corrugated iron bolted on to form the exterior walls and roof. The interior walls and ceilings were constructed of 155 mm (6") wide tongued and grooved boards of Baltic deal. There have been two reports of an interior fabric walling (Pers. comment Mr H. Archer and Mr D. Comins). Nearly all had sliding sash windows on the front facade. In the gabled houses there were large louvred ventilators which helped to modify the extremes of temperature to which iron is subject (Fig. 12). The space between the exterior iron and interior wooden walls insulated the interior to some extent. The front veranda which shielded the front door and windows helped to keep the house cool. An iron canopy over the windows to provide shade was a feature in some houses (Fig. 13).

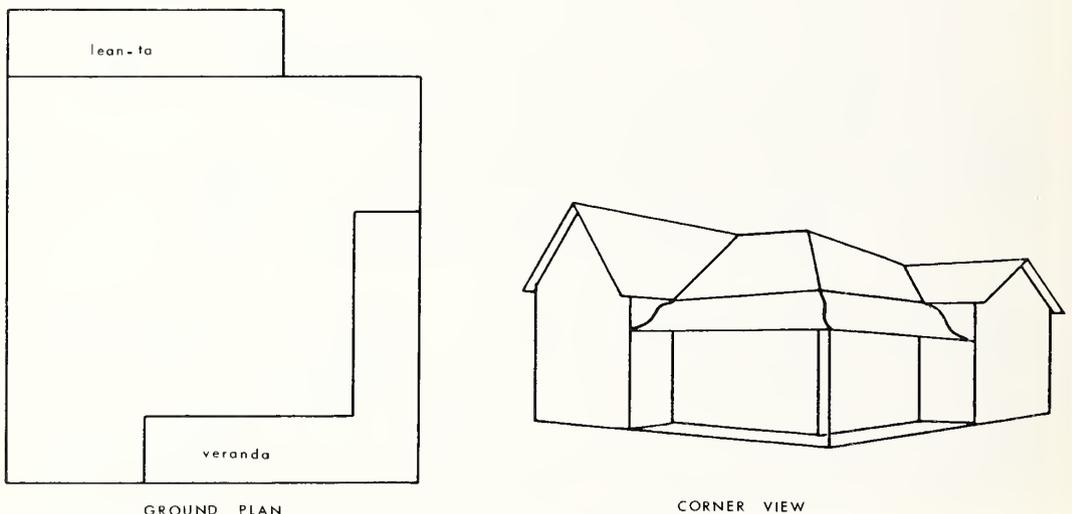


Fig. 10. Style E, ground plan and corner view.



Fig. 11. Style E, 10 Bucholtz Street, Vincent.



Fig. 12. A gable ventilator, 23 Rissling Street, Vincent.

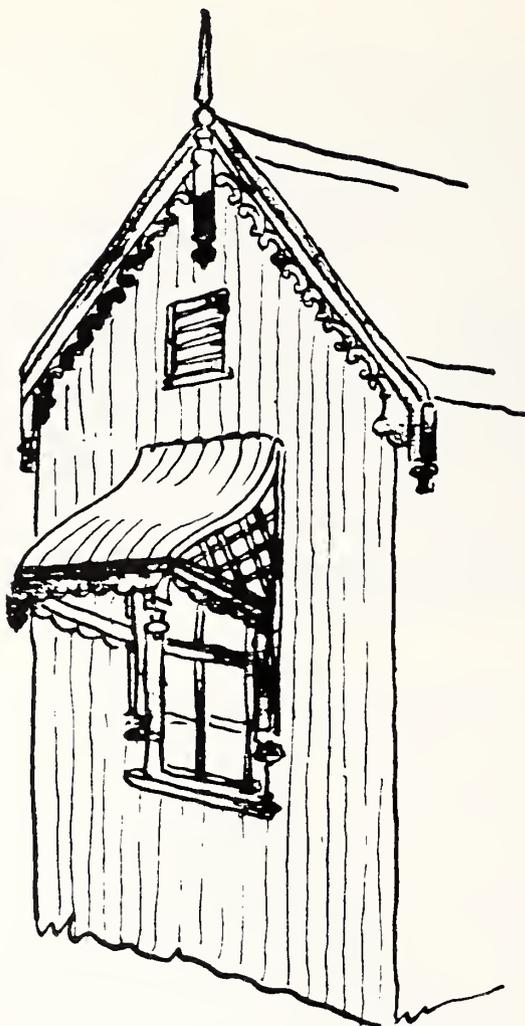


Fig. 13. Window canopy with decorative fretwork, 3 Tennyson Street, Quigney.
Drawn by Miss A. F. Dodd.

In an effort to convert these houses from temporary to permanent dwellings many have been plastered over and fairly extensive changes have been made. The front doors and sash windows have often been replaced (Fig. 14).

The original kitchens had a brick oven or embrasure with a brick chimney built against an outer wall with the opening on the inside. The section of the wall where the oven and chimney were placed was also of brick or masonry (Fig. 15). Very few of these chimneys remain.



Fig. 14. Cement bricks being used to cover the exterior iron walls, 32 Jackson Street, West Bank.



Fig. 15. Brick oven, 10 Bucholtz Street, Vincent.

The Style A type of cottage is very similar to the nineteenth century cottage in its vernacular form as described by Dr D. Radford in his article on *The South African Cottage in the 19th Century*. He states that "the most important characteristics of the early cottage are its small size and limited number of rooms, its simple rectangular plan, limited roof width (± 3 m) caused by lack of suitable wood for roof trusses, and parapeted gables."⁶ Many of the Style A cottages are known to predate 1880. The roof widths vary from 3,86 metres, housing one range of rooms, to 7,9 metres, housing two ranges of rooms, under the main roof and a kitchen under the lean-to or afdak. There is no parapet gable but some have decorative bargeboarding on the end gable. All the cottages examined have a symmetrical arrangement with a central door, leading into a passage, and two flanking windows. The semi-detached cottages also have a symmetrical arrangement. A feature of the Style B or square style of cottage, which was the next style to evolve in the wood and iron vernacular, is lack of symmetry in the arrangement of door and windows on the front facade. The front door opens into one of the front rooms.

THE GROWTH OF THE SETTLEMENT WITH REFERENCE TO THE CONSTRUCTION OF WOOD AND IRON HOUSES

East London was founded in 1848 as a port to be used to land military supplies for the Frontier Wars. The period before 1870 was one of very slow growth but, in spite of totally inadequate port facilities, ships did visit East London. From the years 1855 to 1869, an average of 5.2 ships called per month.⁷ Imported building materials were therefore likely to have been available although in limited quantities and variety. Local supplies of building materials must have been available as copies of two maps in the East London Museum collection, dated 1857, show a lime kiln on the West Bank and two brick kilns in Cambridge.²⁰

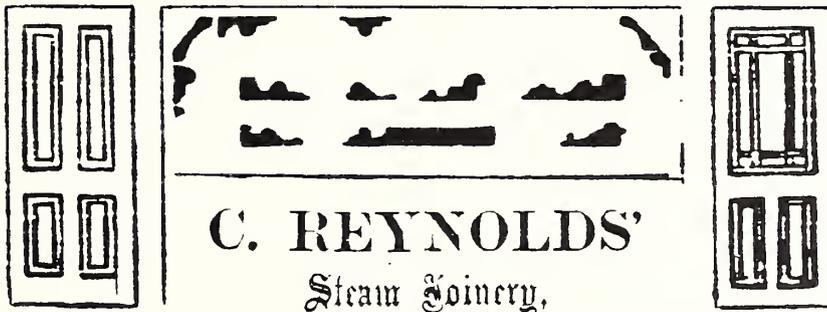
The German Settlers arrived during the years 1857 to 1859 and were settled on one and ten acre lots in Panmure, East London East, Cambridge and Amalinda on the East Bank of the Buffalo River and in other villages further inland. They did not as a rule use wood and iron for their buildings.

The first land grants were made in 1849 on the West Bank of the Buffalo River along Strand, Smith and Toby (now High) Streets. Other grants followed and the area bounded by Strand, Victoria (now Dale), Frere (now Hood) and West Streets is the oldest settled area of East London. With the construction of the railway line on the East Bank of the river in the 1870's the main settlement moved there and the residential area of West Bank became a backwater with the result that there have been relatively few changes. Many of the very early houses still remain, making possible the study of the original situation. Of the 157 houses in this area in 1982, 3 were built of wood, 50 were built of wood and iron, 35 appear to have been originally of wood and iron but the walls have been completely plastered over, and the remaining 69 are of masonry. Using the earliest map available which shows buildings, dated 4 June 1880, 28 extant houses which correspond to the sites and shapes can be identified.²¹ Of these, 17 are of wood and iron, 3 are of timber, 6 are masonry and 2 are similar in style to the wood and iron but are plastered at present. These are likely to be the earliest houses in East London. It is not possible at present to obtain an exact date of construction as the title deeds give no indication as to when each house was built. The houses are all small and usually built very close together with two occupying one of the original plots. Of the 17 wood and iron cottages, 8 are rectangular (Style A), 7 are square (Style B) and 2 are of Style D. Of the two which have been re-plastered, one is rectangular and one is square.

During the 1870's East London grew rapidly. The harbour works and the construction of the railway line to the interior were begun and the opening of the Diamond Fields boosted trade as East London was used as a transit port. From 1870 to 1879 the average number of ships visiting East London increased to 10,3 per month⁷ and building activity increased. Advertisements show that corrugated iron was the most commonly available building material. An advertising leaflet announced that 2 000 sheets of corrugated iron and other salvage goods from the wrecked barque 'Crixea' were to be auctioned on 3 December 1872 (East London Museum collection). Builders such as T. H. Venn & Co. on 28 October 1874, Thomas Barra-ble & Co. on 6 November 1876 and Malcher & Malcomess on 27 September 1879 advertised corrugated iron and timber for building purposes in the *East London Dispatch and Frontier Advertiser*.¹¹

Baltic (or Swedish) deals, sashes, doors and window glass in standard sizes were all available during the 1870's. It seems that the earliest houses were strictly functional, little attention having been paid to aesthetic considerations. Early travellers poured scorn on their appearance. In 1877 a visitor wrote "the houses were nearly all made of corrugated iron and looked more like packing cases than anything else."⁸

By 1872 brickmaking must have been well established as the newly constituted body of Municipal Commissioners called for licences to be taken out and stone for building was advertised. Materials for more permanent buildings were therefore available.⁹ There were a large number of builders in the town. Of 333 residents listed in the *1878 King William's Town and East London Directory*¹⁰ 21 were builders. Some of these offered their services as funeral direc-tors as well.



Moulding Mills and Furniture Factory.

Furniture manufactured from Colonial Wood at Lowest Charges.

Mouldings cut to any Section at short notice.

Office Fittings made to Order. Bricks always on hand.

Fig. 16. Advertisement in the *East London Advertiser*, 24 Dec. 1886, which shows the types of doors and mouldings which were manufactured in East London at that time.

During the 1880's and 1890's growth in East London continued and the number of ships visiting the port from 1880 to 1899 increased to an average of 32,6 per month.⁷ The range of building materials on offer increased and builders became more specialized. C. Reynolds advertised his "Steam Joinery—Moulding Mills and Furniture Factory. Mouldings cut to any section at short notice" (24 December 1886) (Fig. 16).⁹

In the *E.L. Dispatch and Frontier Advertiser of 28 February 1880* Bettington & Wrights' prices current gives an indication of what was available and the cost of materials.

'Morewoods' and 'Star' brands of galvanized iron were sold per 100 lbs at prices from 25s.6d to 29s.

Baltic Ceiling and Flooring Boards—American and Baltic were sold from 2⁷/₈d to 3d per foot.

Doors were sold from 8/6 to 18/- and complete windows cost 25/- to 40/-.

On 5 December 1883 F. W. Bompas & Co. were advertising "Wall Papers (newest designs) Paints, Oils and Varnishes."¹¹

During the 1880's and 1890's many substantial and imposing public buildings were erected in the town and the need for temporary homes seemed to have passed. However, there was still a demand for wood and iron houses and it would seem that the relatively low cost and the speed of erection were factors which influenced people to utilize this type of building. In the *E.L. Dispatch and Frontier Advertiser* on 28 February 1880, G. Pell, Carpenter and Builder, offered "plans and estimates for all kinds of wood and iron houses", and on 5 July 1898 E. H. Elton advertised "Houses built without a brick. Handsome, durable and easily erected".¹¹

During these years the main business area began developing in the villages of Panmure and East London East and most buildings were erected along Oxford Street. Although there was a large number of wood and iron buildings there in the early days only a few remain today. There is one shop in Buffalo Street (M. Abdoola & Co.) and a few houses in the residential area just south of Park Avenue, in Bushview Terrace, College, Wolseley and Albany Streets.

North End and Southernwood had been granted to the German Settlers as acre lots in the 1850's. Later these lots were sub-divided and sold. As these sub-divisions took place before any Municipal regulations governing the size of plots or buildings had been promulgated, the plots were very small and the houses were built very close together. Even as late as 22 August 1905 *East London Daily Dispatch and Frontier Advertiser* reported that "In North End and East End of Southernwood private owners are allowed to cut up acre lots with the result that roadways are only narrow lanes" (Fig. 17). Until fairly recently many wood and iron houses remained in the North End. Most have now been demolished in order to develop the area for industry. Those that remain are in the area bounded by Park Avenue, Beaconsfield Road, St. John's Road, Chapel Street and Stewart Lane. They are in a dilapidated condition and are situated very close together.

In lower Southernwood, there are 21 closely packed wood and iron houses in one block in Nahoon Valley Road and 10 along one side of Usher Street in the same block. In places they are only one metre or less apart and the roof guttering actually touches (Fig. 18).

The first land grant in the Quigney area was made to J. C. Fitzpatrick in 1864 and the land west of Currie Street was granted to the Municipality in December 1880. In 1897 the land east of Currie Street was sold and the first houses were erected in 1898. By 1905 there were 700 houses and other buildings in the areas known as Quigney and Beach. Wide streets were constructed such as Fitzpatrick, Moore, Tennyson and Longfellow Streets. This elicited the com-



Fig. 17. Cross Street, North End.



Fig. 18. The narrow gap between 15 and 17 Usher Street, Southernwood.

ment "We can see that the Town Council is to make this district one of the prettiest parts of the town where iron buildings are allowed." (Leader article 22 August 1905).¹¹ However, in spite of these efforts Quigney did not become a desirable residential area and in the following year the newspaper reported "Quigney has the largest number of empty houses in East London. At this date there are 51 (excluding the Beach cottages below Brighton Street). Of these 30 are of wood and iron and 21 are brick. Of the wood and iron, it may be said that many of them are sadly in need of repair." (Leader Article 13 August 1906).¹¹

Most of the wood and iron houses which remain today in the Quigney are found in the area bounded by Tutton Terrace, Signal Street, Caxton Street and Fitzpatrick Road, an area which was made available for development in 1880. Of these 4 are the rectangular Style A, 28 are the square Style B and 6 are variations with the extension gables (Styles C, D & E). Many have been plastered over and most are in good condition. Closer to the beach and east of Moore, Goldschmidt and Coutts Streets are identical square Style B houses built very close together. Most are in a poor state of repair.

This type of high density housing occurred because property owners took advantage of *lacunae* in Municipal regulations and built on their properties as many houses as they could as cheaply as possible. These they then sold. This created the depressed areas in these early settled parts of East London and was one of the factors which brought wood and iron houses into disrepute.

THE FIRST RESTRICTIONS ON WOOD AND IRON HOUSES

During the early years of the twentieth century the first restrictions were placed on wood and iron buildings by the Town Council. The Building Regulations which were gazetted in 1903 stated that the areas where they could be built were restricted and even then special permission had to be obtained from the council.²² In addition all plans had to be submitted for approval to the Medical Officer of Health.¹³ The large amount of timber used in the construction of wood and iron buildings and the heat conducting properties of iron made them highly inflammable. In 1904 the Town Engineer said that "it would be well in the near future to further limit these areas and in time to prohibit the erection of the wood and iron buildings entirely" (1904, p. 73).⁴ In the following year he said, "Wood and iron buildings are a fire hazard. Very likely during the ensuing year the Council will see their way to prohibit the erection of wood and iron buildings at the rear of permanent buildings as this is a source of danger" (1905 p. 29).⁴

Opposition to wood and iron buildings was obviously shared by many. In a leader article in the *East London Dispatch and Frontier Advertiser* of 14 September 1905 the editor wrote, "The Mayor playfully spoke of the Stone Age as being past. Here in East London we have had a pretty long spell of the iron age and the authorities are doing their best to get the owners of property to go back to the stone age or at least to the age of good burnt brick and we are happy to say that substantial progress is being made in that direction".¹¹

However, in spite of the restrictions many wood and iron houses were still being built at that time. During the years 1900, 1901 and 1902, 134 wood and iron and 198 brick houses were built in the Municipal area. No figures were published for 1906 but from 1907 to 1914 out of a total of 220 houses erected 72 were of wood and iron.⁴ A leader article 12 April 1906 expressed surprise at the continuing popularity of a house which was originally only intended to be temporary. "Strange to say, the wood and iron cottage is still being erected in East London. Bricks

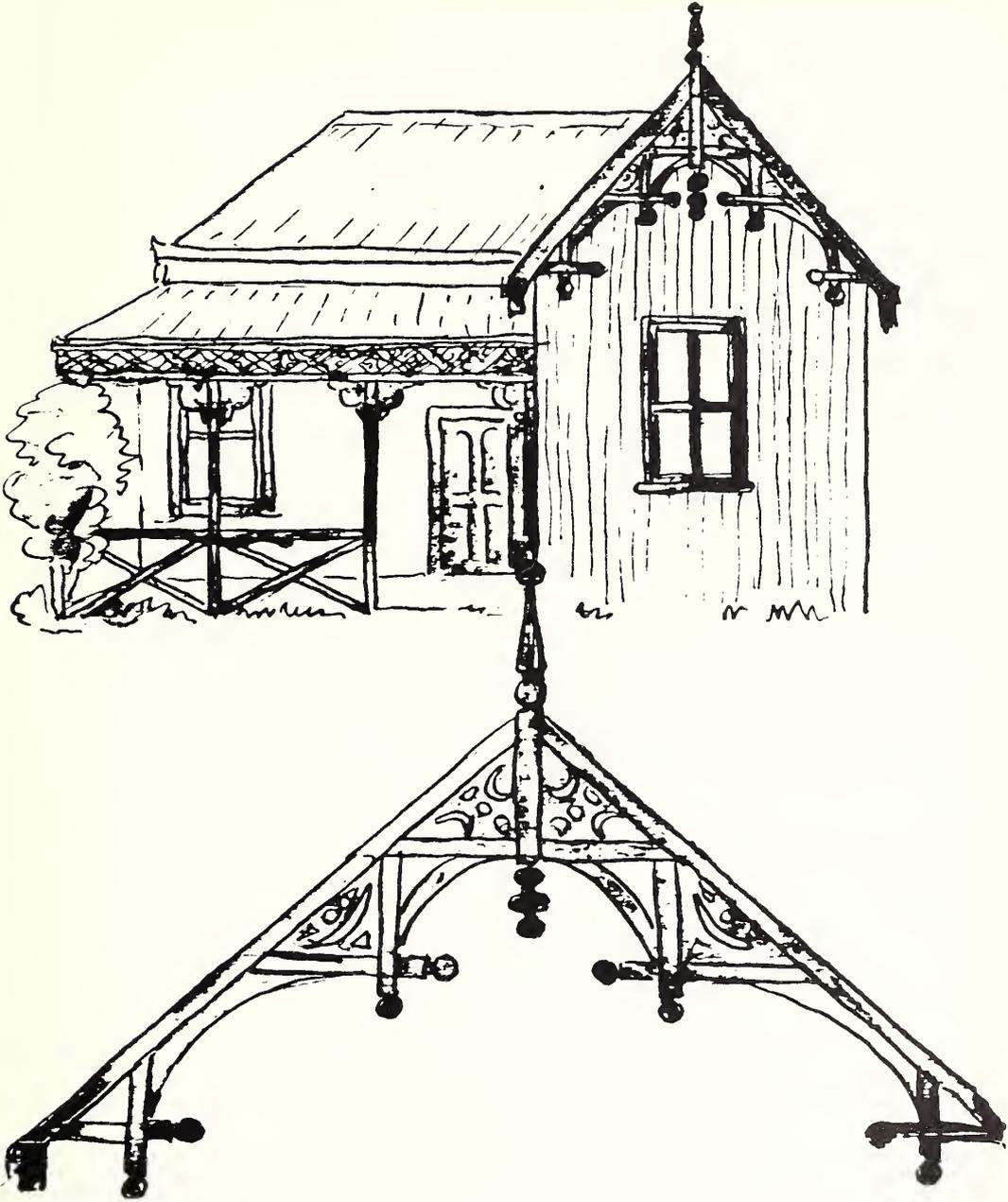


Fig. 19. Decorative bargeboard and finial on front gable, Tapson Street, Cambridge. Now demolished.
Drawn by Miss A. F. Dodd.

are cheap and we hope for the good of the town that if we are to have a revival of house building in a small way, bricks will be more in evidence in the houses than was the case a few years ago".¹¹

Ironically, it was during the period that restrictions were being placed on their construction that a very attractive style of corrugated iron house appeared in East London. These houses were built mainly in the present day suburbs of Vincent and Cambridge which, until 1942, were all a part of Cambridge Municipality. The Cambridge Municipality apparently learnt from the East London mistakes and early insisted on a quarter of an acre being the minimum size for a plot (12 April 1906).¹¹ With very few exceptions, the wood and iron houses in this area are not found grouped together but are distributed singly in the suburbs and are usually fairly attractive.

The trade generated by the Anglo-Boer War brought some wealth to East London, the standard of living rose fairly dramatically and there was a marked increase in population. Some very palatial homes, for example the one which is now the Ann Bryant Art Gallery, date from the immediate post Boer-War period. The wood and iron homes which were built during this Edwardian period were ornamented in the fashion of the time. Gables were decorated with finials and wooden fretwork bargeboarding (Fig. 19). The veranda had special treatment with a curving roof supported by wooden posts, decorative wooden fretwork brackets and fascias (Fig. 20). Builders' advertisements of the time reflect the fact that a much wider variety of building materials and ornamental items was available than previously. Offers can be seen of such as "verge or bargeboards, veranda brackets, finials, turned and sawn balusters and adjust-



Fig. 20. Decorative veranda fascia and brackets, 20 Surrey Road, Vincent.

able gable ornaments" by C. P. Reynolds & Son in the 1906 *Red Book*.¹² These more ornate wood and iron houses are situated on fair sized plots and are found throughout Vincent and Cambridge. They are much larger and more complex in plan than the earlier houses and usually have extension gables as in the Styles D and E. It would seem that these houses were not built as temporary homes but for the man with a modest income and they reflect a pride of ownership.

THE RURAL AREAS

There are a large number of wood and iron houses in the rural areas and villages near East London. Whereas most of the farm houses have been abandoned and now serve as barns many houses in villages, such as Macleantown and Komga, are still occupied. The ease and mobility of building with wood and iron in areas where building materials were scarce and transport slow and limited was clearly convenient and widely used. M. F. Dickerson must have done good business. In 1906 he advertised: "Wood and Iron Buildings to order for Transport/Made in sections and forwarded to any part of the country/Quick Despatch assured" (p. 80).¹²

THE END OF THE EPOCH OF WOOD AND IRON HOUSES

It has not been possible to trace a complete list of the building regulations for East London. In 1926 the Cambridge Municipality amended their regulations to declare: "The walls of every new dwelling to be erected shall be constructed of brick, stone, concrete block or other similar hard and incombustible material solidly put together with a good mortar".²² No allowance was made for wood and iron buildings.

In 1942 the East London and Cambridge Municipalities combined.¹⁴ In 1944 Abbotsford was incorporated into East London¹⁵ and in 1948 Amalinda was incorporated into the East London Municipality.¹⁶

In 1950 a regulation was promulgated for the East London Municipality which stated: "No wall cover with iron sheeting can be erected except on land for industrial use".¹⁷

Today the corrugated iron house is usually regarded with some contempt. Building Societies will not grant loans for bonds to purchase a wood and iron house. Many have rusted, fret-work veranda fascias and decorative bargeboarding have been neglected and the houses are rapidly being demolished.

Although the original concept of the wood and iron house was to provide temporary shelter it has had remarkable lasting qualities. Despite the competition from more permanent building materials corrugated iron survived the temporary phase and the later houses were both comfortable and attractive. In recent years corrugated asbestos, aluminium sheeting and fibreglass have largely replaced corrugated iron, especially as a roofing material.

In Australia in recent years there has been what is termed a 'Tin Roof Revival' and some architects are using corrugated iron "as an imaginative tool in dramatic unexpected shapes to create roof volumes at once bizarre yet geometrically tidy. Strong shadows caused by sunlight on the corrugations create a directional effect, whether horizontal or vertical. This increases its visual impact. The curved profiles exaggerate the lightness—the result is surprisingly elegant. It is also very practical."¹⁸ Nineteenth century colonial settlement in Australia was very similar to that in South Africa and it will be interesting to see whether South African architects will attempt to recreate a well-designed form of the corrugated iron period of vernacular architecture.

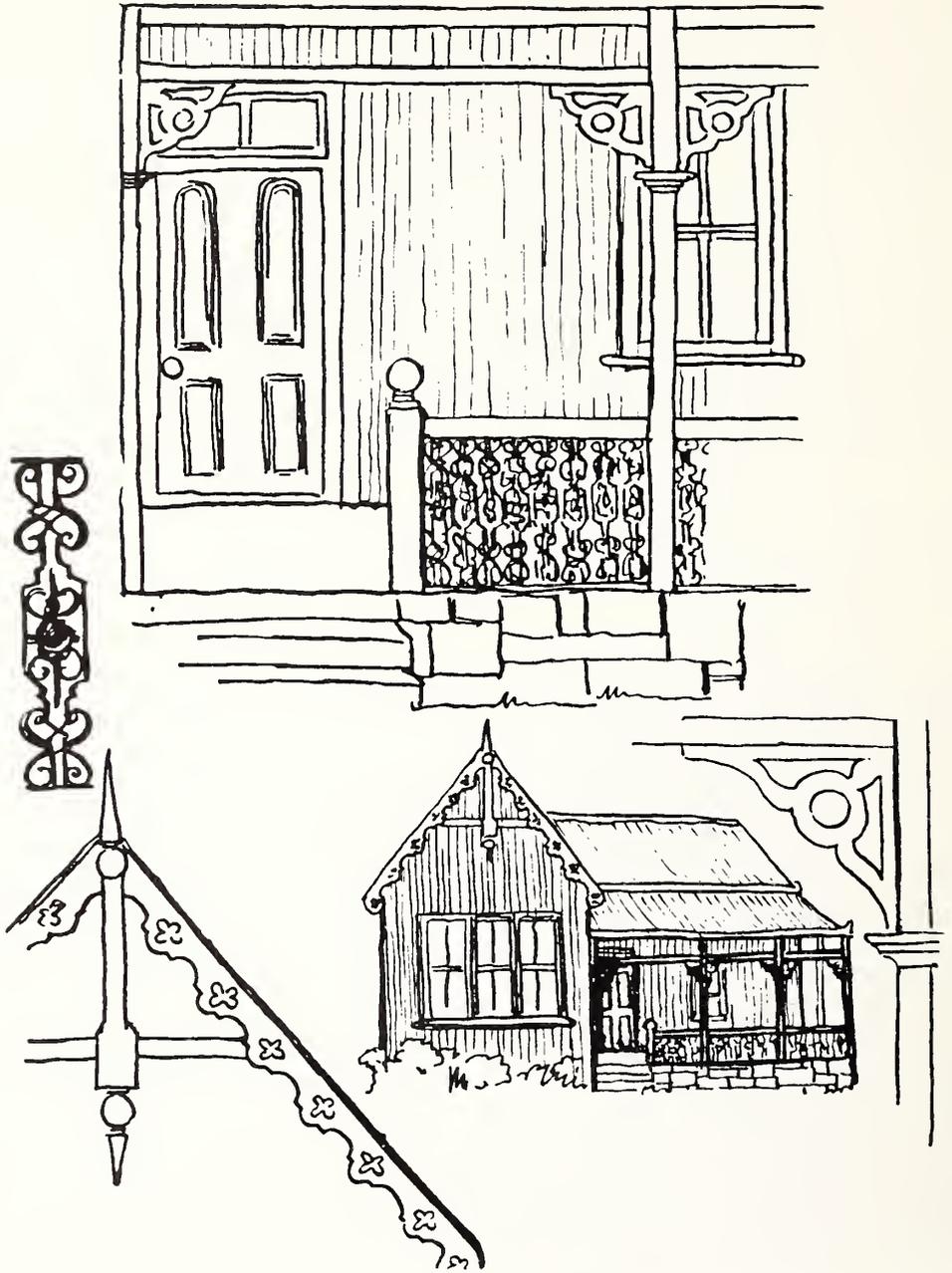


Fig. 21. Wood and iron house which was on the corner of Hill and Cambridge Streets. Now demolished.
Drawn by Miss A. F. Dodd.

The 'Mobile Home' is South Africa's present day equivalent of the wood and iron cottage as it has the same qualities of being temporary, transportable and relatively inexpensive.

The wood and iron houses have played an important part in the history of housing and, as they are a type of vernacular architecture in East London as well as South Africa as a whole, steps should be taken to preserve some wood and iron buildings for posterity (Fig. 21).

DETAILED STUDY OF SELECTED HOUSES

5 and 7 Smith Street West Bank

A Survey to illustrate Style A. Figs 22, 23, 24 and 25.

Lot 31 East London West.

Smith Street is one of the two oldest streets in East London and was named for Sir Harry Smith who founded the port in 1848. The ground on which this house is built was originally granted on 15 March 1852 to J. C. Perks. In May of the same year it was sold to T. E. Perks and in 1867 J. C. Perks appears on the title deeds as the owner. In 1871 it was sold to Josias Howard and Thomas Robertson but it is not clear if they ever lived there. It is not possible to date the construction of the house from the early deeds as no mention was made of any structures on any of the early title deeds.

The size and position of the house corresponds with a house marked on an 1880 map.²¹

The present owner is Mrs J. van Wyk. She and her late husband purchased the property in 1952 and she has been able to detail the changes which have been made to it.



Fig. 22. 5 and 7 Smith Street, West Bank.

The plan is basically rectangular. The house is sub-divided into two living sections each with a separate front door and a short passage leading into a back room. No. 5 consists of 3 bedrooms, a living room, a kitchen and a bathroom and No. 7 consists of one bedroom, a living room, a kitchen and a bathroom. The double pitched roof has a width of 3,86 m and covers one range of rooms.

The front veranda originally had wooden posts with a slatted wooden balustrade. In front of No. 5 the original balustrade has been replaced with brick and cement but the wooden posts are original. Parts of the balustrade form a front gate. In the 1950's a room was enclosed in the centre front and the side walls extended. The lean-to covers 2 bedrooms and the living room in No. 5 and the living room in No. 7. The centre portion of the veranda section at the back was enclosed to form a kitchen for each part.

The original brick oven and chimney were removed in the 1950's and the kitchen extended but Mrs Van Wyk indicated that the original position and the stone foundation, which supported the brick oven, is still present. Mrs Van Wyk referred to it as a 'kaggel' which indicates that cooking would have been done on an open fire and this was not an embrasure. The original oven was wide enough to serve both parts of the house but there was a single chimney. In No. 7 the whole of the rear veranda section formed the kitchen with a door on the back wall. In the 1950's the back was extended and a small section enclosed to form a bathroom. In No. 5, the kitchen door opened onto the back veranda. The owners before Mrs Van Wyk enclosed the veranda to form a porch and the Van Wyks partitioned a section off to form a bathroom in the 1950's.

Two plans of this house have been drawn. Fig. 23 illustrates the house as it is and Fig. 24 illustrates the house as it was in its original condition as far as is known.

The foundation is of sneezewood posts with a stone section at the back which supported the brick oven. The structural framework, internal partitions, floor beams and roof trusses are of wood. The roofing material was originally galvanized corrugated iron but was replaced with IBR (this is a recognized trade term for iron sheeting with an Inverted Box Rib profile). A single slope is given to the front roof by raising the front supporting wall slightly.

The external walls were all originally sheathed with corrugated iron sheets. The side walls and the front of No. 5 were plastered over in the 1960's. Original corrugated iron sheets remain in the front and side of No. 7 and at the back. The sheets vary in length but are all the same width 660 mm (2'2"). They are bolted to the frame with galvanized iron bolts. There are no ventilators.

None of the gutters is original and it is not clear if there were any gutters on the original house.

The internal walls are of tongued and grooved Baltic deal, grooved down the centre, 155 mm (6") wide, nailed to the frame. The completed wall is 127 mm (5") thick. There are 76 mm (3") high skirting boards in the passages and bedrooms. The ceilings, 2 743 mm (9') above floor level are of the same Baltic deal boards as the walls. There are simply moulded cornices in each room. The flooring in the front bedrooms and passages of both sections is made of yellowwood boards, 280 mm (11") in width. The floor boards in the living rooms and one bedroom have been replaced. Mrs Van Wyk said that in the bedroom the boards had been narrower and were broken. In the living room the boards had varied in width. Whereas the narrower boards had been eaten by insects the wide ones were intact. The veranda floor was originally of wood and was cemented in the 1950's. The floor levels are different in each room and in the passages.

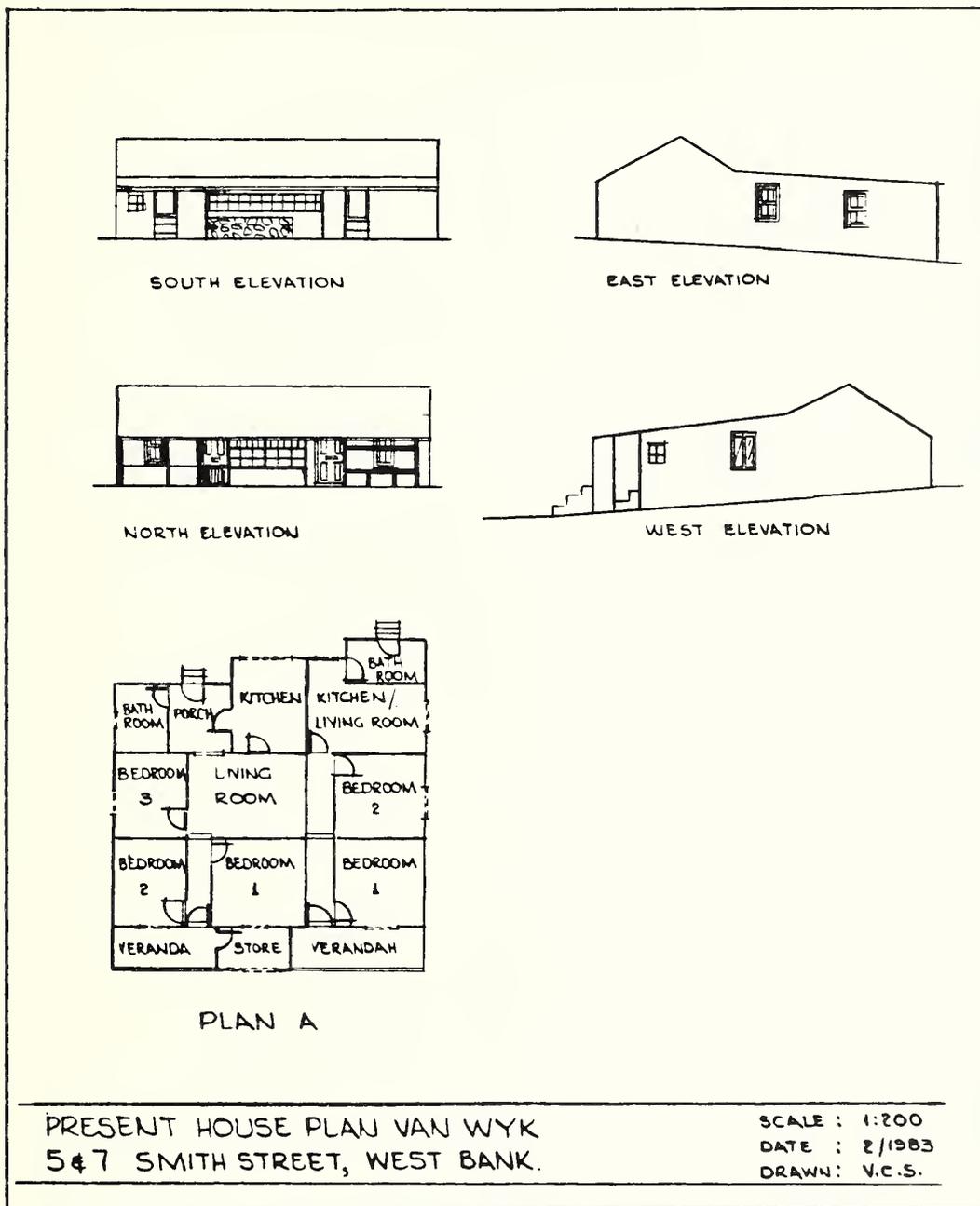


Fig. 23. Plan of 5 and 7 Smith Street in its present form with additions. Drawn by V. C. Smithies.

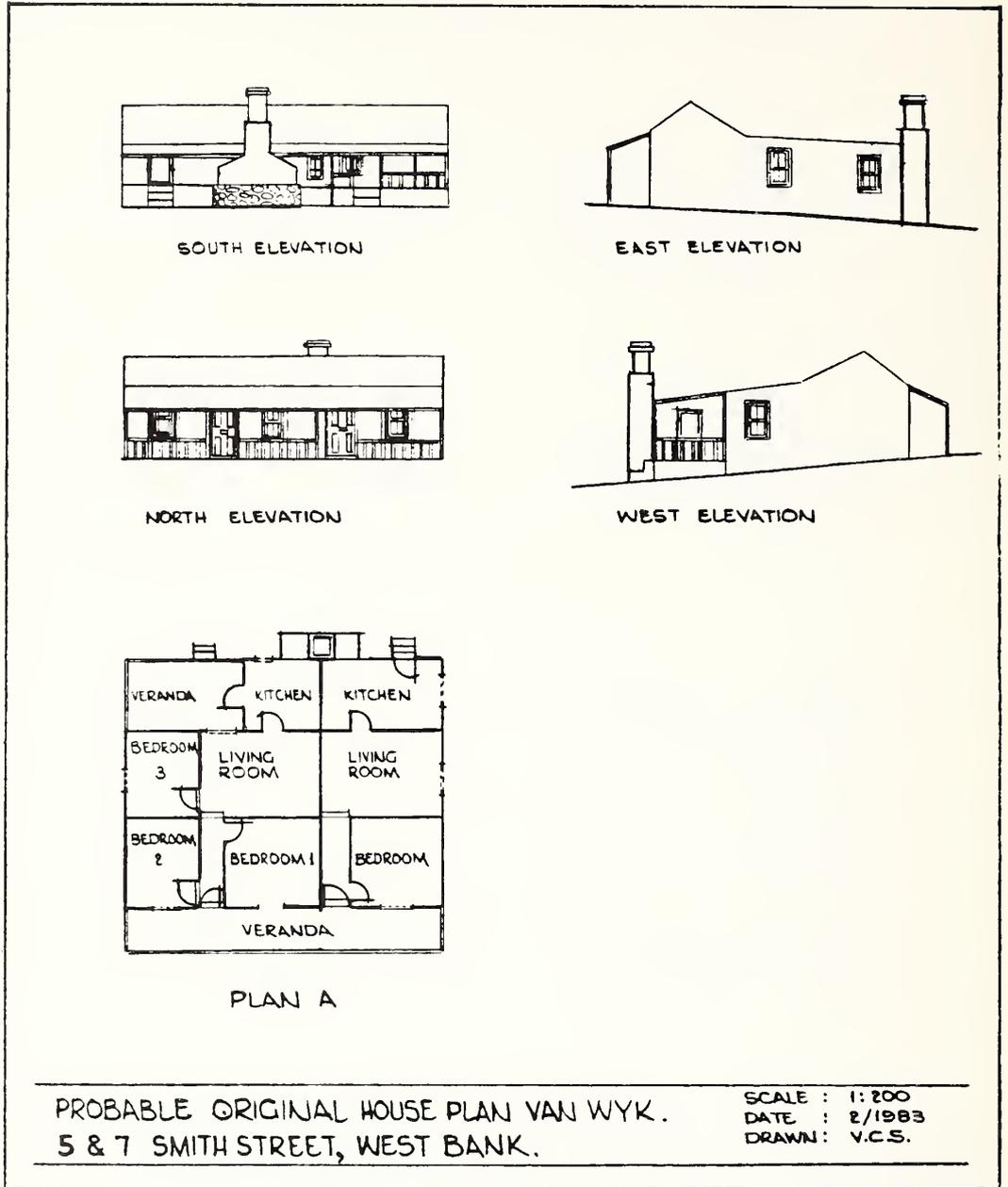


Fig. 24. Plan of 5 and 7 Smith Street as it probably would have been when originally constructed.
Drawn by V. C. Smithies.

The front door of No. 5 measures 2 032 × 813 mm (6'8" × 2'8") with four recessed panels. The upper longer ones were arched but the owners replaced the panels with dark mirrors and straightened them. The front door of No. 7 is the same as that of No. 5 except that the upper panels are still arched. There are cast iron decorative letter slots inserted into both of the doors. The inside doors all have 4 recessed panels, a plain round brass handle and are the same size as the front doors. (Fig. 25). All are surrounded by 102 mm (4") architraves.

There are double hung sash windows, 1 702 × 864 mm (5'7" × 2'10"), with two window panes measuring 381 × 762 mm (1'3" × 2'6") in each sash. The side bedroom sash window was removed and has been replaced by a casement. The sash window opening from the living room onto the back veranda, now enclosed, measures 1 372 × 864 mm (4'6" × 2'10"). The window was removed. There are 102 mm (4") architraves around the windows and door.

There was no bathroom in the original design.

The two kitchens occupied the central space in the lean-to at the rear and the remainder of the back veranda was open. In No. 5 the end section was boarded up to form a bathroom and the outer wall of the veranda built up to enclose a small scullery. A copper wood-fired boiler was purchased in the 1950's and is still in use. In No. 7 the kitchen was enlarged to include the whole of the back veranda space and a portion of that was subdivided to form the bathroom.

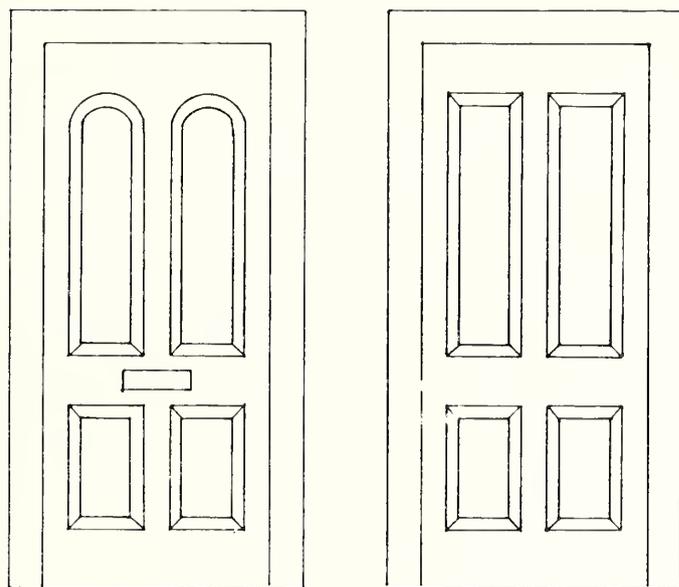


Fig. 25. Front door (left) and inside doors (right), 5 and 7 Smith Street.



Fig. 26. 13 White Avenue, Abbotsford.

13 White Avenue Abbotsford

A survey to illustrate Style B. Figs 26, 27 and 28.

Erf 5363 1 157 square metres. Farm 86 Block D Lot 8 Division B.

Farm 86 of 1 537 acres, was originally granted to Walter Ogilvy on perpetual quit rent. The Deed of Grant is dated 5 August 1863. Walter Ogilvy is known as the first civilian resident of East London.

On 1 September 1898 Robert Anderson Wyse purchased a portion of the original farm. He sub-divided the ground and the present erf was purchased by S. E. Bower in 1903. The house was probably built at this time of sub-division and according to older residents Mr Bower built the house.

The present owner is Dr W. M. Pitt-Fennell.

The present tenant is Mrs B. Charlton.

This is basically a square plan, incorporating a living-room, two bedrooms, pantry, kitchen, front veranda and back veranda, part of which forms the bathroom. There is a brick outer foundation and the central part of the house is supported on sneezewood posts. The ground slopes and whereas the back veranda is at ground level, the front veranda is 1 295 mm (4'3") above ground level in the front and has a cellar underneath.

The structural framework, internal partitions, floor beams and roof trusses are of wood. The main part of the roof is hipped with extensions over the front and back verandas. The corrugated iron on the main roof and back veranda was removed in 1975 and replaced with IBR

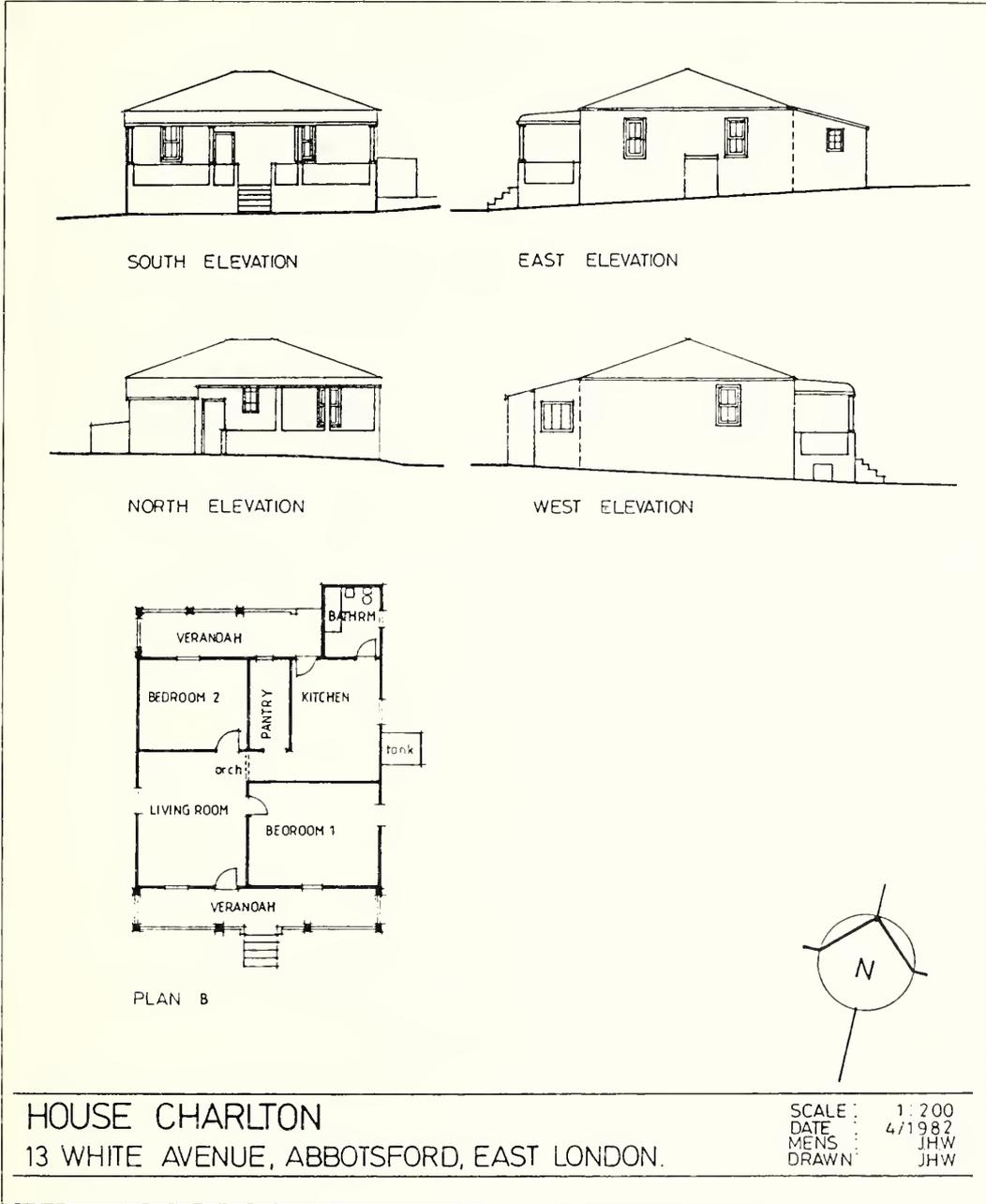


Fig. 27. Plan of 13 White Avenue. Drawn by J. H. Watson.

(Inverted Box Rib) corrugated iron sheets. The back veranda is supported by plastered brick pillars and a balustrade closed at one end by a brick wall with an inset window. Originally there were wooden posts and it was narrower than at present. The front veranda has a convex roof which consists of the original corrugated iron sheets each 660 mm (2'2") wide. It has rusted and is leaking in parts. It is supported by cement cylindrical pillars with a plastered brick balustrade. Most of the original guttering has been replaced with a plastic guttering. The supporting posts and balustrade were originally of wood but were replaced in the 1920's.

The external walls are sheathed with corrugated iron sheets 660 mm (2'2") in width and of varying lengths. There is a little rust where the sheets reach the ground on both sides of the house. They are fastened to the frame with galvanized iron washers and bolts. The external walls of the bathroom are plastered brick. The roof and walls have always been painted. Early residents remember the wall colour and woodwork as cream and the roof as green. The last repainting was done in 1981. On the external wall of the kitchen at floor level there is a ventilator which opens into the wall cavity and below the floor. It is cast iron with a diamond pattern. There are two cast iron ventilators with a square pattern in the bathroom.

The only external ornamentation is a contrasting design of smooth and rough cast plaster on the veranda balustrade. There is no trace of any veranda fascia board.

The internal walls are of tongued and grooved Baltic deal, grooved down the centre, 153 mm (6") wide, nailed to the frame with oval-headed nails. The completed wall is 102 mm thick. There is a 153 mm (6") wide moulded deal skirting board in the living room and bedrooms and plain ones of the same height in the kitchen and pantry. Originally they were all stained a dark colour. There is a 51 mm (2") wide moulded picture rail in the living room and bedrooms at a

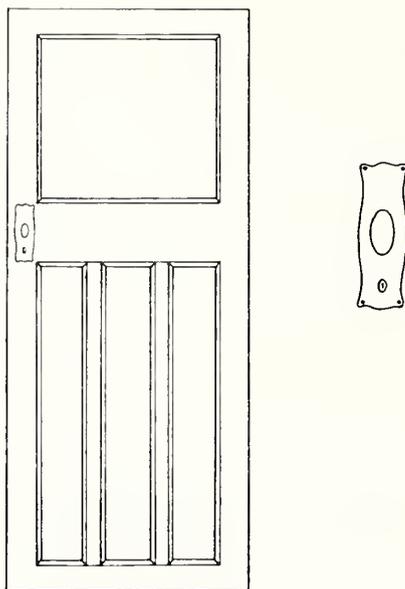


Fig. 28. Front and inside doors (left) and handle plate (right), 13 White Avenue.

height of 2 134 mm (7') above the floor, level with the top of the doors, and a plain wooden dado 1 448 mm (4'4") above the floor in the kitchen. There are moulded wooden cornices in each room. The ceilings are of thin hardboard with cover fillets, 279 mm (9'2") from the floor. The walls and ceilings have all been painted.

The 153 mm (6") wide floor boards are of pine and nailed to the floor beams with round-headed nails. There is a dark stain around the edge of all the rooms with the central area untreated and unpolished. It probably was covered originally with linoleum. The front and back verandas and bathroom have cement floors but the back veranda originally had an earthen floor.

The front door and bedroom doors are all of the same type with two recessed panels, the upper one being the smaller (Fig. 28). All the doors were 1 981 × 813 mm (6'6" × 2'8") in size originally but the sides of some have been cut away as the house warped. The oval door knobs and plates are blackened iron work.

There are 102 mm (4") wide moulded architraves on both sides of all the doorways with the exception of the outside of the back door and the bathroom door. An archway leads from the lounge into a small passage. The inner section is 102 mm (4") wide and the bow was made by joining small pieces of wood. It is framed with moulded picture rail. The section around the bow is made up of small pieces cut to fit, some being tapered.

The living-room and the main bedroom each have two double-hung sash windows and the second bedroom and kitchen each have one. Each sash is 834 × 864 mm (2'9" × 2'10") and has two panes 381 × 762 mm (1'3" × 2'6"). They all have brass closing devices and handles. The sash windows all have moulded architraves, 102 mm (4") wide, identical to those around the doorways, inside and outside, with the exception that the bedroom window which opens onto the back veranda has none outside. The window aperture measures 1 575 × 813 mm (5'2" × 2'8"). There are wooden pelmets, one ornamented with beading. According to a previous owner these were added in the 1930's. Before that there were draped valances held by a rod. A second rod was provided for the curtains. There are narrow wooden windowsills, inside and out. Above the windows on the outside the iron has been bent outwards to form a throat. There is a small six-paned casement window in the bathroom, 457 × 813 mm (1'6" × 2'8") in size with each pane measuring 177,8 × 203 mm (7" × 8").

The pantry also has a six-paned casement window 1 067 × 610 mm (3'6" × 2') with each pane measuring 254 × 304,8 mm (10" × 12"). These have brass fittings but no architraves.

The main alteration which has been made was the addition of a bathroom at the back on the site of the original brick oven embrasure and chimney. Originally the back veranda, narrower than at present, was sub-divided with brick walls which enclosed the embrasure for the oven which had an external chimney on the back wall. There was a small window on the veranda side of the wall to illuminate the stove top. In the late 1940's this area was extended slightly and converted into a bathroom. There are burn marks on the floor of the kitchen nearest to the bathroom.

A photograph taken in 1947 shows a water tank standing on a cement base at the side of the house. There were originally two such tanks one on each side of the house and the cement bases still remain. One of these is hollow and served as a wood-store.

The electrical conduit piping is all external.

There was originally a brick outside toilet roofed with corrugated iron which has recently been demolished.

The outbuilding, also demolished recently, consisted of a wood and iron structure divided



Fig. 29. 4 Lake Street, Vincent.

into four sections and with the roof supported by wooden pillars. One end-section was a servant's room and the other an implement store. Between these was a wagon shelter and a tack room which was enclosed but did not extend the full width of the building.

4 Lake Street Vincent

A survey to illustrate Style E Figs. 29, 30, 31 and 32.

Lot 11 division 2 Block H Cambridge.

Originally granted to Carl Gottlieb Wilhelm Prüfer (German Settler). No. 11, 10 acres. Deed of grant dated 15 November 1865.

It was transferred to C. J. Neale on 18 January 1904. The property was then sub-divided and the smaller erf was sold to Elsie Murdoch in 1905. The house is likely to have been built at the time of the sub-division.

The present owner is Mrs P. Scott.

The plan is basically square with two gabled extensions linked by a right-angled veranda completing the square. There are four bedrooms and a living room with a central passage. The bathroom toilet and kitchen are at the rear of the house.

The foundations are not visible at all but the owner thinks that they are all of wood. The structural framework, internal partitions, floor beams and roof trusses are of wood.

There is a hipped roof with two gabled extensions with pitched roofs. The right-angled veranda has a concave-convex roof. The roofing material is galvanized corrugated iron, each



Fig. 30. Wooden veranda fascia on 4 Lake Street.

sheet 660 mm (2'2") wide, fixed with galvanized iron roofing bolts and painted red. The only original guttering which remains is on a small corner section of the outbuilding. It has a decorative trim on the corner.

The side veranda roof is supported by square sectioned wooden posts with chamfered edges and incomplete crossbeams of what was once a wooden balustrade. Some of the decorative fascia and junction ornaments remain but they are in a state of disrepair (Fig. 30). According to the owner the balustrade originally had wooden cross-beams but most have now gone. On the front part of the veranda the original wooden supports were removed in the 1950's and replaced by brick pillars and a brick balustrade. There is a wooden finial on each of the gables and the barge-board has a cut-out trefoil design at the lowest point of each gable. There is a large louvred wooden ventilator in the front gable. The only other ventilators are two in the external wall of the toilet which is a later addition.

The external walls are sheathed with corrugated iron sheets, 660 mm (2'2") in width, which appear to be original. They are fastened to the frame with galvanized iron bolts and washers. They are rusting in parts where the lower edge meets the ground. They have all been painted. White is the only colour which can be seen. The internal walls are of tongued and grooved Baltic deal, 153 mm (6") in width, nailed to the frame. The completed wall is 153 mm (6") thick. There are 203 mm (8") wide moulded wooden skirting boards stained a very dark colour in the bedrooms and living room. There is a 153 mm (6") wide painted skirting board in the kitchen. There are moulded wooden 51 mm (2") wide picture rails in the passage, bedrooms and living room, 508 mm (1'8") above the tops of the doors.

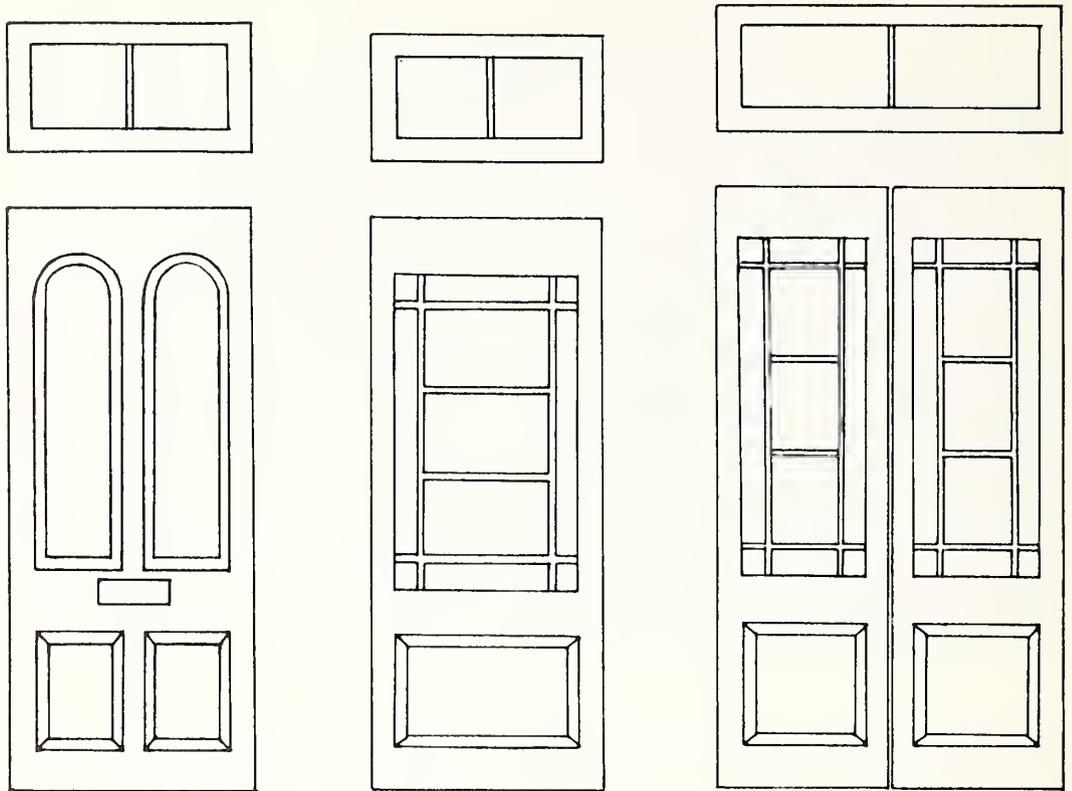


Fig. 31. Front door (left), passage-kitchen door (middle) and French casement door (right), 4 Lake Street.

The ceilings, 3 200 mm (10'6") above floor level are of tongued and grooved Baltic deal, 153 mm (6") in width, nailed to the roof trusses. There are moulded cornices in each room. The walls and ceilings were originally covered with wallpaper. This was removed by the present owner and they were then painted with the exception of one ceiling in a bedroom.

The floor boards are of 153 mm (6") wide pine nailed to the joists. They are stained a dark colour at the edges. There is linoleum in the living room underneath the carpet and also in the kitchen covering the whole wooden floor under the present tiles. The cement floors of the bathroom and small passage are also covered edge to edge with an old linoleum under a newer flooring. There is a cement floor in the toilet and on the veranda.

There is a decorative cast iron fireplace with a built-in grate in the lounge. It has a decorative wooden surround and mantelpiece. The chimney wall and external chimney are of plastered brick and there is a cement hearth. The original brick oven was on the kitchen wall backing onto the fireplace and the same chimney was used for the fireplace and the oven.

The front door is 2 083 × 864 mm (6'10" × 2'10") in size with two arched glazed panels in the upper part and two recessed wooden panels in the lower part. It has a decorative cast iron

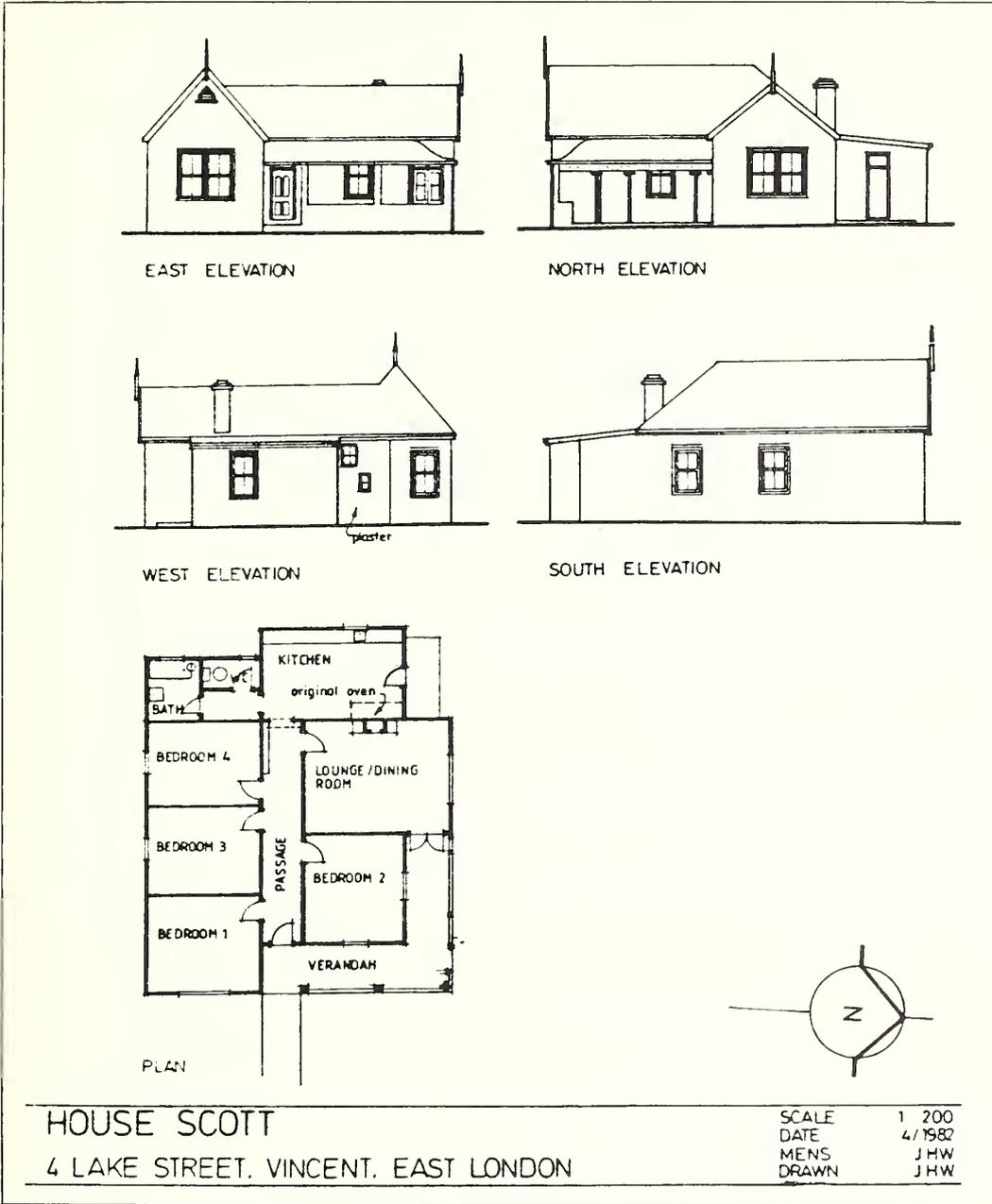


Fig. 32. Plan of 4 Lake Street. Drawn by J. H. Watson.

letter slot inset in the door. There is a 457×864 mm ($1'6'' \times 2'10''$) double pane fanlight. The glass is not original. The door from the living room onto the veranda is a French casement type with glazed panels in the upper section and a double-pane fanlight. The panes are of plain glass. Each door measures ($7' \times 2'$) 2134×610 mm (Fig. 31). There is an identical door in the same position in 10 Bucholtz Street which also has plain glass. These external doors were more exposed than similar interior doors which have stained glass in the smaller surrounding panels. There is therefore a strong possibility that these exterior doors also originally had coloured panes and that these had been broken and replaced. In addition in 10 Bucholtz Street there is a door which leads from the passage to the kitchen which has the same type of glass panels. This has four turquoise outer panels and four red corner ones. The lower pane is original and has a design of alternate opaque and clear patterns. The corresponding door in 4 Lake Street has obviously been broken and the glass replaced in a different way. It also has a fanlight. It measures 2032×813 mm ($6'8'' \times 2'8''$) (Fig. 31).

The inside doors of the bedrooms, bathroom and living room have four recessed panels and round brass knobs. They measure 2032×813 mm ($6'8'' \times 2'8''$) and are the same as 5 and 7 Smith Street (Fig. 25). The outside kitchen door is similar to the doors of 13 White Avenue (Fig. 28) but there is a single pane fanlight above it. There are 102 mm (4") moulded architraves around each of the doorways except the outside kitchen door.

The double-hung sash windows measure 1829×1067 mm ($6' \times 3'6''$) and each sash has four panes each 813×406 mm ($2'8'' \times 1'7''$). The windows all have 102 mm (4") moulded architraves with narrow wooden windowsills inside and outside. There are plain wooden pelmets on the windows in the bedrooms and living room. They all have brass fittings. On the outside, a sheet of corrugated iron has been bent outwards to form a throat. The front bedroom and living room have two windows set side by side.

The bathroom has an old style bath on claw feet and a copper boiler which is no longer in use.

Alterations have been made at the back. A toilet was added next to the bathroom by using kitchen space.

There is a wood and iron outbuilding which is at present in a very dilapidated condition. It was divided into two rooms, one of which was a toilet. There was a lean-to adjoining it.

10 Bucholtz Street, one block away, is almost identical to 4 Lake Street and it has been useful to compare the two. The only differences are that there is no fireplace in the living-room and there are cement pillars and a brick balustrade on the veranda. The front door is of a different style but the same size. The house retains the original brick oven which is on an exterior wall of the kitchen.

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Miss Alison Dodd, curator of the Ann Bryant Art Gallery, had the foresight to execute several sketches of old East London houses, many of which have since been demolished. She is thanked for allowing the author to include three of her drawings in the present publication.

REFERENCES

Published references

1. NOBLE, J. (Editor) 1886. *The Cape of Good Hope Official Handbook*. Cape Town: Saul Solomon & Co., p. 181.
2. HERBERT, G. 1978. *Pioneers of Prefabrication*. Baltimore and London: John Hopkins University Press, pp. 30–39.
3. JOHNSTON, E. 1981. The Tin Tradition. *Journal of the Royal Institute of British Architects* **88**(5).
4. MAYORS' MINUTES, 1881–1950. East London Municipality.
5. CALLOWAY, G. 1912. *A Shepherd of the Veld*. London: Wells Gardner Damon & Co., p. 17.
6. RADFORD, D. 1982. The South African Cottage in the 19th Century. *Lantern* **31**(3): 58–65.
7. MACMILLAN and FERGUSON (Compilers) 1906. *The Eastern Districts of the Cape Colony*. Port Elizabeth and Cape Town, p. 12.
8. PRICHARD, H. 1880. *Friends and Foes in the Transkei*. London: Sampson Low & Co., p. 21.
9. THE EAST LONDON DISPATCH AND SHIPPING AND MERCANTILE GAZETTE. Sample copies with specific references in 15 October 1892, 27 October 1874, 6 November 1876.
10. ROACH, W. M. 1878. *The King William's Town and East London Directory for 1878*. King William's Town: A. J. Fuller.
11. THE EAST LONDON DISPATCH AND FRONTIER ADVERTISER. Sample copies from 27 September 1879 to 13 November 1918.
12. EAST LONDON AND FRONTIER REDBOOKS, 1906–1948. East London: The Standard Printing Co.
13. CAPE OF GOOD HOPE OFFICIAL GAZETTE No. 8512, 23 January 1903.
14. CAPE OF GOOD HOPE OFFICIAL GAZETTE No. 16, 15 August 1941.
15. CAPE OF GOOD HOPE OFFICIAL GAZETTE No. 62, 9 June 1944.
16. CAPE OF GOOD HOPE OFFICIAL GAZETTE No. —, 4 June 1948.
17. CAPE OF GOOD HOPE OFFICIAL GAZETTE No. 507, 17 August 1950.
18. GREY, J. 1982. Tin Roof Revival. *Architectural Review* [London] **171**(No. 1024): 36–40.

Unpublished references

19. REPORT of a tour by the Border Historical Society of the North End on 1 October 1973 which was led by Mrs J. S. Bennie (then Historian at the East London Museum) and Mr Chetty. Border Historical Society Records in the East London Museum.
20. POMEROY COLLEY, G. 16 May 1857. Photoprints of original layout of East London and Cambridge.
21. MURRAY, A. E. 4 June 1880. General plan of East London West. Original in the Survey Office of the East London Municipality.
22. BUILDING RULES AND REGULATIONS. 23 January 1903. Municipality of East London, Town Planning Department.
23. BUILDING RULES AND REGULATIONS. 15 April 1926. Municipality of Cambridge. (Reg. No. 16 Government Notice 1378 of 29 December 1904 amended). Municipality of East London, Town Planning Department.

Additional references not cited in text

- KEARNEY, B. 1973. *Architecture in Natal 1824–1893*. Cape Town: Balkema.
- KELSALL and SILVA 1899. *General Directory of East London 1898–99*. East London: Alfred Webb.
- PICTON SEYMOUR, D. 1977. *Victorian Buildings in South Africa*. Cape Town: Balkema.
- ROACH, W. M. 1879. *The Frontier Directory and Diary, 1879*. King William's Town: A. J. Fuller.

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Excavations at Rooikrans and Rhenosterkloof, Late Iron Age sites in the Rooiberg area of the Transvaal

by

S. L. HALL

(Albany Museum, Grahamstown)

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INTRODUCTION

The excavations and material described in this paper form part of a larger research project on which was based a thesis approved by the University of the Witwatersrand for a Masters Degree (Hall 1981). The main aim of the research was to construct a sequence for the Iron Age around Rooiberg, Transvaal and to compare units within the sequence as well as tentatively compare the sequence with those from other areas. This work constitutes the first systematic Iron Age research in the area, although the unique prehistoric tin mines found in the vicinity of the present mining towns of Rooiberg and Leeupoort have attracted intermittent attention since the beginning of this century (i.e. Baumann 1919).

The construction of this Iron Age sequence is based upon the analysis of ceramics using multidimensional criteria. From this a series of Rooiberg Units (RU), have been defined and although only those units belonging to the Late Iron Age have been dated, the remainder of the sequence has been ordered with some degree of confidence, through comparison with dated assemblages from elsewhere. The sites reported on here are the youngest in this se-

quence and, apart from distinctive pottery styles, are further distinguished by the presence of stone walls. Late Iron Age sites with stone walls from the Transvaal and the Orange Free State have been described (Mason 1968; Derricourt and Evers 1973; Maggs 1976; Taylor 1979; Collett 1982), and the chronology of this phase is well secured. Dates from the stone walled sites excavated in the present project further confirm their 16th to 19th century age. This Late Iron Age stone wall phase in the present project has been designated RU-4.

The bulk of this project concentrated upon the excavations of the two RU-4 sites, Rooikrans and Rhenosterkloof. However, surface collections of pottery were also made in the course of survey work from sites which clearly belong to other units. As a result, two phases of the Early Iron Age (EIA) were recognized and these designated RU-1 and RU-2. A rough indication of the age of RU-1 depends upon comparison with dated assemblages from the Eastern Transvaal. This Unit is most similar to pottery from Klingbeil (Evers 1980) which is dated to about AD 885 (Evers and Vogel 1980), and RU-1 can be considered another second phase facies of the EIA. There is little doubt that RU-2 assemblages are most comparable with the "middle" assemblages excavated by Evers at Eiland (Evers 1975), and dated from Silver Leaves to about AD 1100 (Klapwijk 1973). The third unit, RU-3 belongs in the Late Iron Age (LIA), and one date of AD 1470 was obtained from a RU-3 site. This places it within the time range of Masons "middle" Iron Age in the Magaliesberg Valley, (Mason 1971, 1973 and 1974). An assemblage from Icon in the Northern Transvaal, described by Hanisch (1979), and dated to the 14th century has closest affinities with the RU-3 ceramics. The distribution of the sites of all four units is shown in Fig. 1 and listed in Table 1. The details of the first three units in the Rooiberg sequence will form the basis of another paper.

The research area was roughly defined by the 28° E parallel in the east, the town of Thabazimbi in the west, the western extension of the Waterberg Plateau in the north and the edge of the Boschoffsberg in the south (Fig. 1).

Geologically the area divides into the northern Waterberg System composed of reddish sandstones, siltstones and conglomerates and the southern granitic system of the Bushveld Igneous Complex. Sandwiched between these two systems lie the quartzites, shales and dolomites of the Transvaal System (Geological 1:250,000 series, 2426 Thabazimbi 1974).

Relief is largely determined by the geology. The Waterberg plateau in the north, reaching heights of 2 100 m, dominates the area. This plateau is sharply truncated in the west and south by sweeping escarpments which fall to flats which stretch away to the Limpopo River further to the west. The resistant quartzites and softer shales of the Transvaal System have differentially eroded into Bankenveld scenery, comprising long low ridges and valleys ranging between 1 500 and 900 m above sea level (King 1951).

Within these ridges extensive banded ironstone formations are found just south of Thabazimbi. Tin deposits occur within the sediments and volcanics of the Pretoria Series of the Transvaal System. The modern mining of tin at Rooiberg and Leeupoort is a continuation of the prehistoric industry (Steward 1979; Fig. 1 nos. 37 and 58). Copper is found on the farms Blaaubank 515 KQ and Blokdrift 512 KQ, immediately to the east of Rooiberg. Prehistoric copper workings are known on Welgedacht 514 KQ at the eastern end of the Elandsberg and at Kopperfontein 551 KQ just to the south of Leeupoort tin mine (Hammerbeck *et al.* 1976).

Drainage of the area is generally towards the west by the Sand River into the Crocodile. An average rainy season allows the Sand River to flow for most of the year, while the Sundays

HALL: EXCAVATIONS AT ROOIKRANS AND RHENOSTERKLOOF

River which drains the southern portion of the Waterberg plateau will flow all the year round. Over 650 mm of rain can fall on the higher ground but rainfall generally varies between 350 and 650 mm.

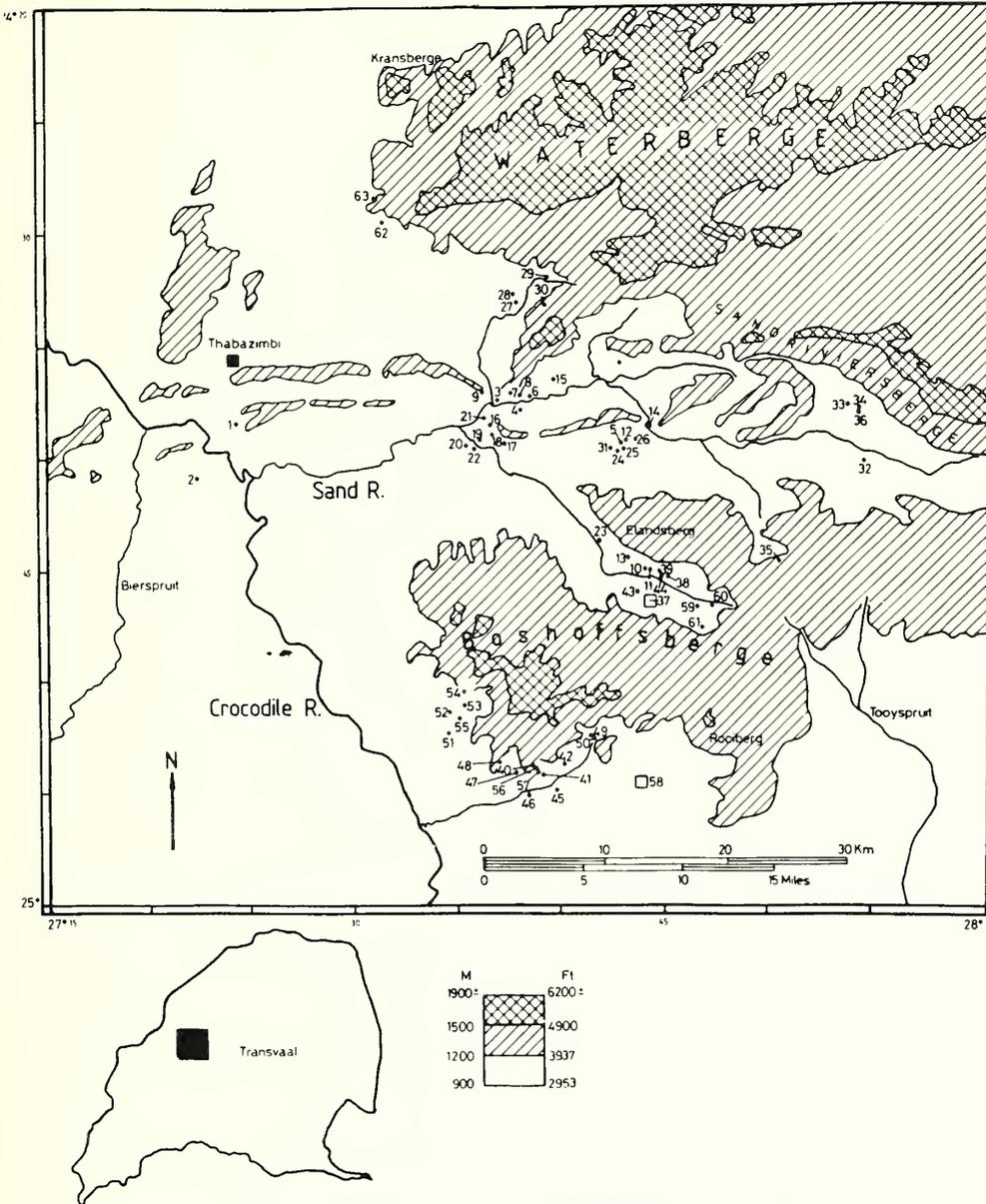


Fig. 1. Iron Age sites in the Rooiberg, Thabazimbi area, Transvaal.

TABLE 1. List of sites found in Rooiberg, Thabazimbi Area.

- x = Excavated or tested
 + = Positive assignment
 - = Positive assignment but only a few fragments
 ? = Possible identity
 ?Bu = Isolated burial
 Sn = Tin mine
 Pb = Graphite mine
 C = Cave

No. on Fig. 1	1:50 000 Number	A.R.U. Acc. No.	UNITS				
			1	2	3	4	Mines
1	2427:CB: 1	137/78				+	
2	2427:CB: 2	138/78				+	
3	2427:DA: 1	8/78	+	?	+	-	
4	2427:DA: 2	103/78			?		
5x	2427:DA: 3	101/78				+	
6	2427:DA: 4	104/78			?		
7	2427:DA: 5	105/78				+	
8	2427:DA: 6	106/78				-	
9	2427:DA: 7	107/78			+	+	
10	2427:DA: 8	108/78	-		+		
11	2427:DA: 9	109/78			-	+	
12x	2427:DA:10	102/78	?	+	+		
13	2427:DA:11	110/78				+	
14	2427:DA:12	111/78				?Bu	
15c	2427:DA:13	112/78				+	
16	2427:DA:14	113/78				+	
17	2427:DA:15	114/78				+	
18	2427:DA:16	115/78	?	?	?		
19	2427:DA:17	116/78			?		
20	2427:DA:18	117/78			?		
21	2427:DA:19	118/78				?	
22	2427:DA:20	119/78				+	
23	2427:DA:21	140/78			-	+	
24	2427:DA:22	11/79	-	?			
25	2427:DA:23	43/79			-		
26	2427:DA:24	44/79		?	?		
27	2427:DA:25	45/79				+	
28	2427:DA:26	46/79			?		
29	2427:DA:27	47/79			?		
30	2427:DA:28	48/79					Pb
31	2427:DA:29	12/79				+	
32	2427:DB:1	120/78				+	
33	2427:DB:2	121/78				?	
34	2427:DB:3	122/78				+	
35	2427:DB:4	49/79	-	-			

HALL: EXCAVATIONS AT ROOIKRANS AND RHENOSTERKLOOF

TABLE 1 continued

No. on Fig. 1	1:50 000 Number	A.R.U. Acc. No.	UNITS				
			1	2	3	4	Mines
36	2427:DB:5	5/79				+	
37	2427:DC:1	127/78					Sn
37	2427:DC:2	128/78					Sn
38x	2427:DC:3	129/78				+	
39	2427:DC:4	130/78				+	
40	2427:DC:5	131/78				+	
41	2427:DC:6	132/78	+	+	+		
42	2427:DC:7	133/78	-	?	-		
43	2427:DC:8	134/78				+	
44	2427:DC:9	135/78		?	?		
45	2427:DC:10	136/78			?	?	
46	2427:DC:11	50/79				?	
47	2427:DC:12	84/79				?	
48c	2427:DC:13	85/79				-	
49x	2427:DC:14	4/79	-	-	+		
50	2427:DC:15	4/79	-	-	+		
51	2427:DC:16	6/79				+	
52	2427:DC:17	7/79			?	+	
53	2427:DC:18	8/79				+	
54	2427:DC:19	9/79				+	
55	2427:DC:20	10/79				+	
56x	2427:DC:21	2/79				+	
57x	2427:DC:22	3/79				+	
58	2427:DC:23	86/79					Sn
59x	2427:DD:1	7/78			+		
60	2427:DD:4	124/78			?		
61	2427:DD:5	126/78			?		
62	2427:BC:1	150/79	+				
63	2427:DA:30	151/79	-				

The area as a whole is now thickly vegetated by thorny scrub but a much more open grassland seems likely to have existed only a short while ago, especially on the Springbok Flats to the south (Acocks 1952; Beukes pers. comm). Vegetation varies from Sourish Mixed Bushveld to Sour Bushveld on the higher ground of the Waterberg plateau. On the lower ground *Acacia caffra* is the dominant tree and *Cymbopogon plurinadis*, *Themeda triandra*, *Elionuris argenteus* and *Hyparrhenia* spp. are prominent among the grasses. On higher ground *Faurea saligna* is a common tree. Soils are generally sandy, rubbly, poor and sour. Richer pockets of red and grey loams do occur.

Attempts to use aerial photography to locate stone wall sites proved unsuccessful, primarily because of the dense bush cover, and all sites were located on foot. No strict regional sampling strategy was used but attempts to sample all major ecological zones were made.

Unit 4 sites were found at the valley floor level and also on top of hills. Although the sample was small, it was felt that two distinct plans were present. The layout of stone walls at

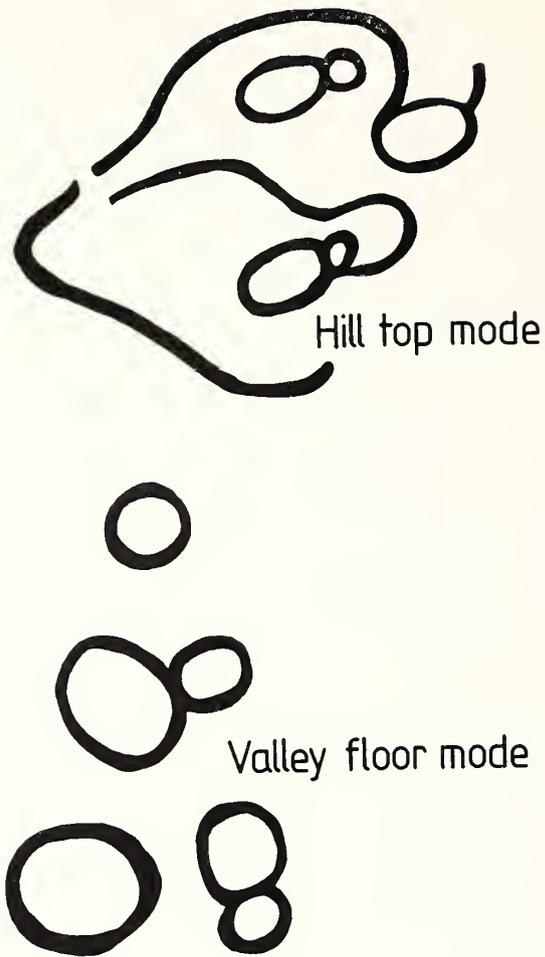


Fig. 2. Plan layouts of stone walls at the hill top mode and at the valley floor mode.

the valley floor sites consisted of isolated enclosures and occasionally two of these could be joined together. Layouts at the hill top sites were similar but clusters of primary enclosures could be surrounded by a wall (Fig. 2). Excavation concentrated on Unit 4 sites specifically to gauge any differences between the two locational modes.

For the hilltop mode Rooikrans sites 131/78 and 3/79 were chosen for excavation and for the valley floor mode Rhenosterkloof site 101/78 was chosen (Fig. 1).

The pottery analysis used multidimensional criteria. Within the dimension of shape, profile modes were distinguished (Fig. 3). In the decoration dimension each motif in the assemblage was listed by decoration position (Fig. 3) and combinations of decoration positions

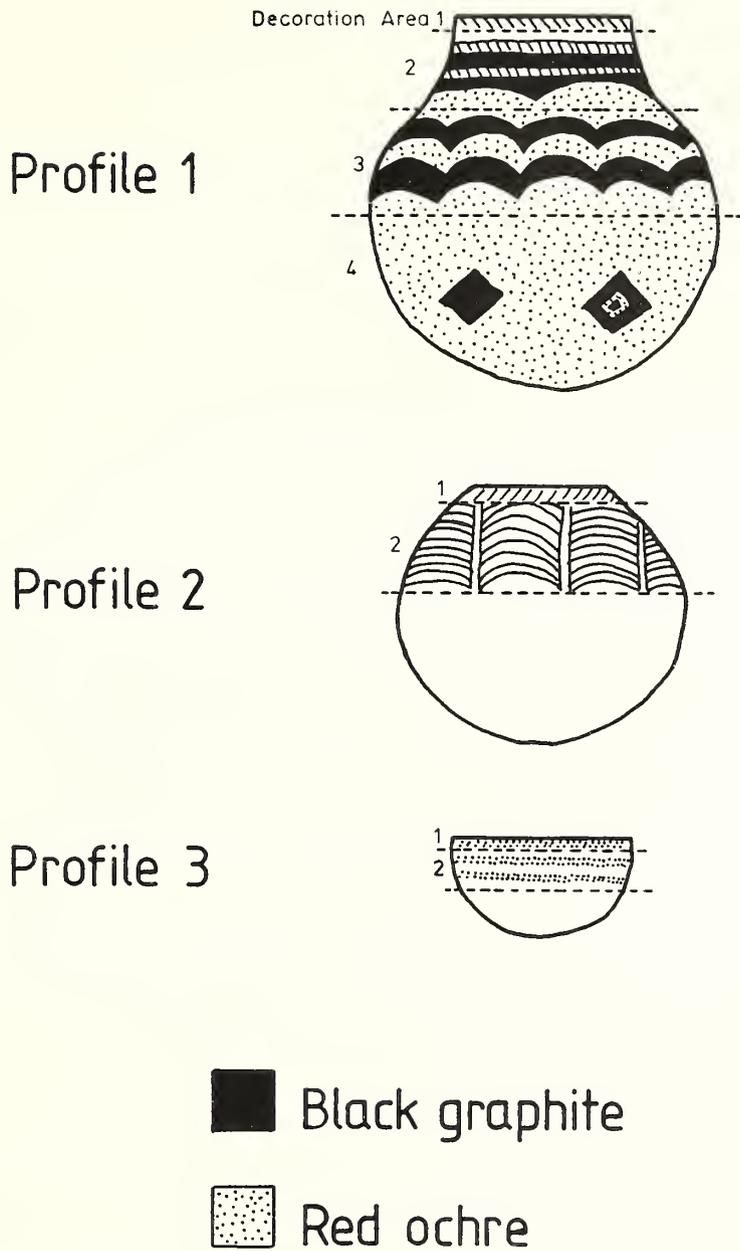


Fig. 3. Pottery profiles and decoration areas used in the analysis of the Rooiberg assemblages.

formed decoration layout modes. Final stylistic classes were derived from the intersection of layout modes and profile modes (Huffman 1980).

EXCAVATIONS AT ROOIKRANS HILL-TOP SITE 131/78

DESCRIPTION OF SITE

The site is on a hill-top in the foothills of the Boschoffsberg, 10 kms to the west of the pre-historic and modern tin mines at Leeupoort (24° 53' S, 27° 39' E, Fig. 1 no. 40). It lies between 1 200 and 1 250 m above sea level and about 350 m above the valley floor, which stretches away to the east, south and west as the Springbok Flats. The final 30 m on the southern side of the hill is a red granite cliff (Fig. 4) from which the farm Rooikrans takes its name. Ten kilometres to the south-west the Crocodile river flows towards Thabazimbi.



Fig. 4. Rooikrans Hill from the south. Site 131/78 is spread over the top of the hill above the cliff. Site 2/79 clusters around the rock seen protruding above the trees one third of the way down the right hand skyline. Site 3/79 is situated on the same skyline but below 2/79.

There are two distinct areas within the site. The first is the final 30 m koppie summit of the hill (Fig. 5). No stone walls were built here because of the uneven and steep terrain. This space was utilized to build hut platforms and hut spaces and it is where most of the ash heaps have formed. Retaining walls are often built and keyed in to natural features in order to provide flat surfaces. Over 60 platforms and hut spaces were counted in this area.

The second area is situated below the first upon the northern and western shoulders of the hill (Fig. 5). It is here that the stone walls have been built. The walls range in an arc just below and around the northern side of the summit koppie for about 350 m and are 50 to 100 m wide.

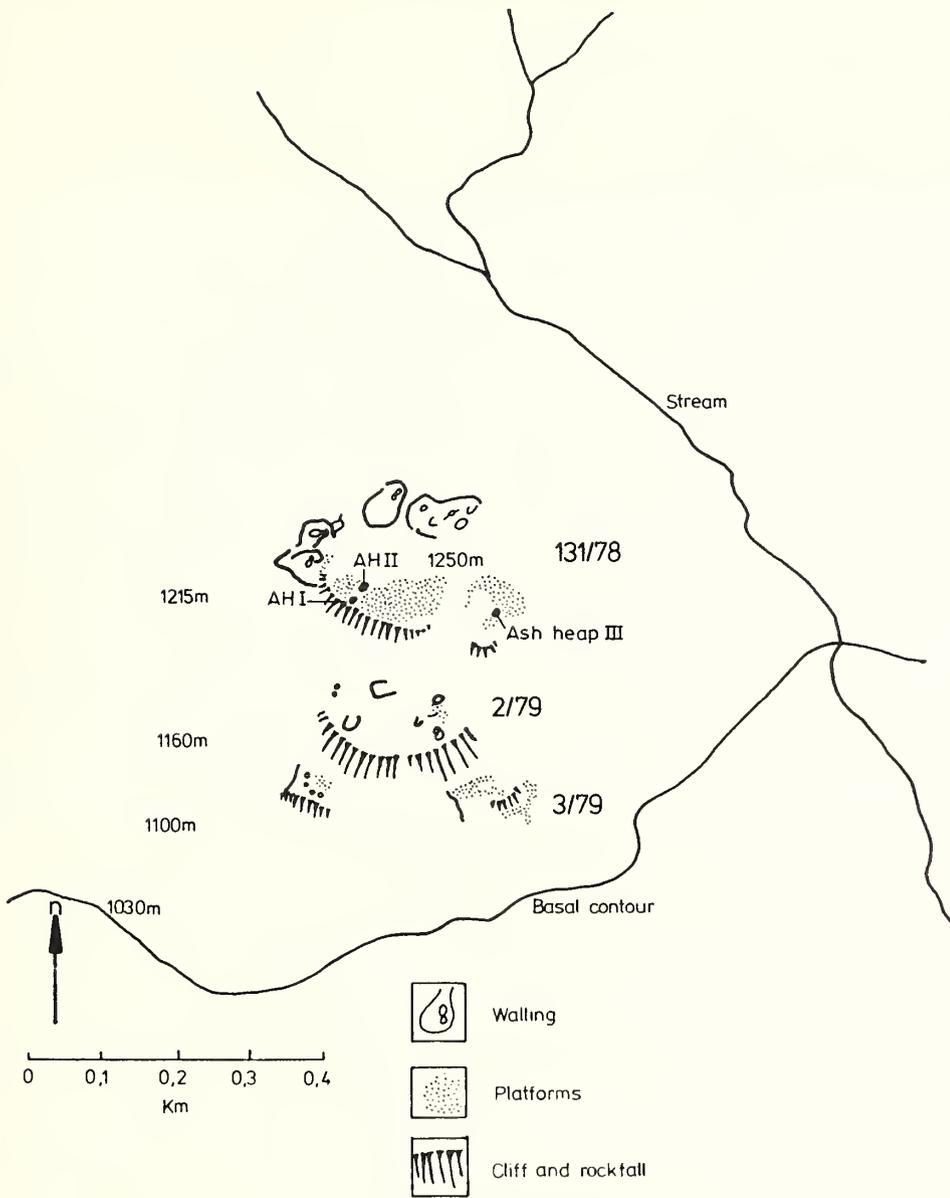


Fig. 5. Plan of sites on Rooikrans Hill.

Below the walls to the north there is a small raised valley, through which flows a stream fed by kloofs from higher up in the Boschoffsberg to the north. The walls are crudely built from

rough granite blocks and on average are no more than 0,75 m high (Fig. 6). In plan, the walls consist of isolated or joined primary enclosures. Walls, which sometimes surround the enclosures, have been built to utilize natural features on the hill. Two small ash heaps were found within enclosures but there was nothing to show that huts had been built in the vicinity of the walls.



Fig. 6. Stone walling at 131/78. The walling utilizes the boulder on the left.

EXCAVATION PROCEDURE

Three ash heaps were sampled by excavation in 10 cm spits, controlled by a 1 m grid. Seven hut platforms and spaces were cleared and all contents found on their surfaces plotted. All excavated soil and ash was passed through a 1 cm² sieve and the volume of deposit excavated was recorded. All plain sherds were counted on site and then discarded.

STRATIGRAPHY

On the summit koppie of the hill the natural surface layer comprised a dark grey humic soil. Below this lay pockets of red soil, rubble and bedrock. The area around and within most of the stone walls was exposed and only rubble and red soil pockets were found there. The composite stratigraphy of the hill was composed of three components.

1. Grey humus soil
2. Stone walls, hut platforms, ash heaps
3. Red soil pockets, rubble and bedrock.

Middle Stone Age flakes, made of felsite, were common in the red soil pockets.

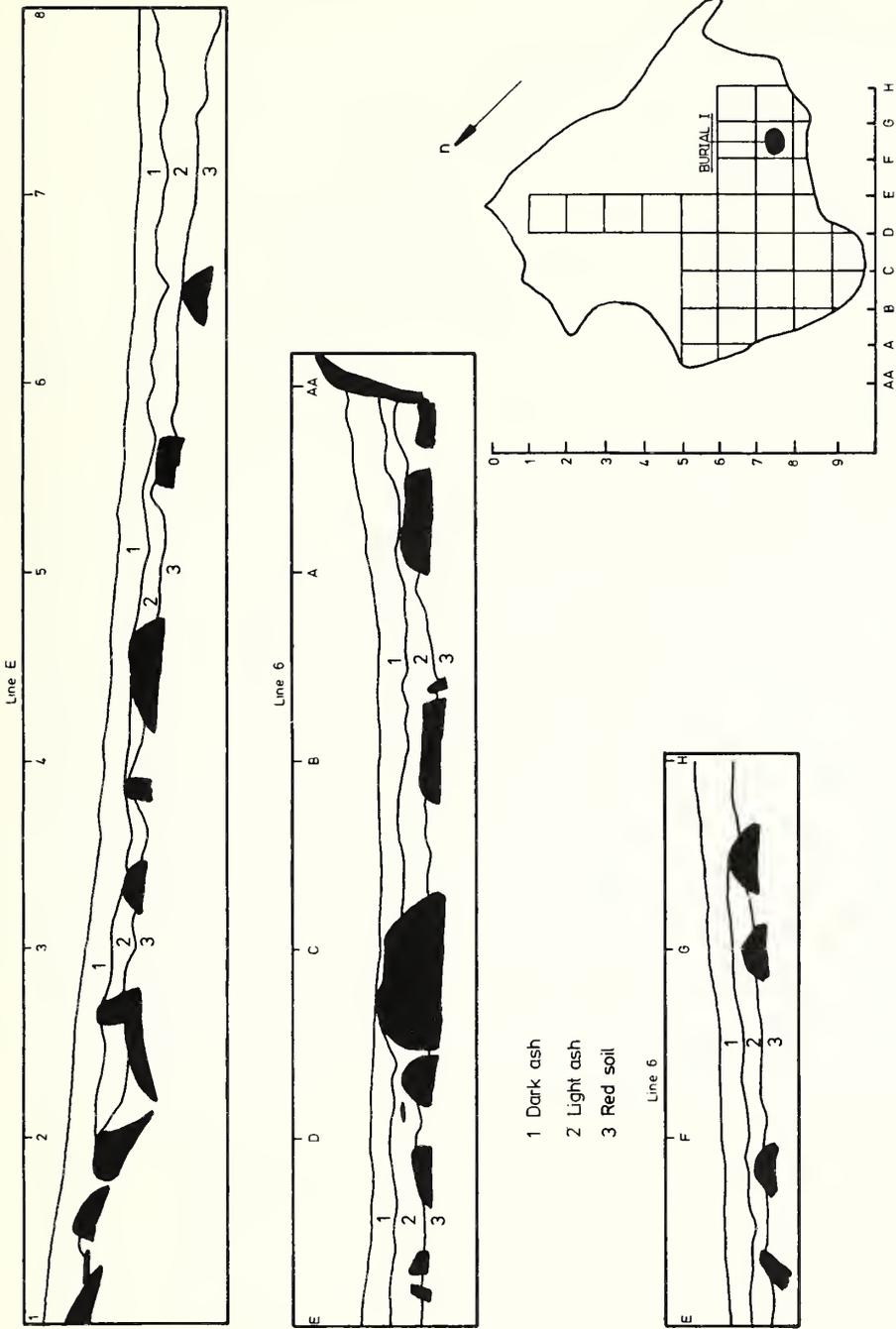


Fig. 7. Plan and section of ash heap I at 131/78.

FEATURES

Ash heap I (Figs 5 and 7) had been deposited on the southern edge of the site, immediately above the cliff. The ash heap measured 10 m by 8 m and had been deposited within a basin in the rocks. Several boulders had been rolled to the southern perimeter of the deposit and this may indicate that the space was used as a kraal. The ash heap was deepest around the southern perimeter at just over 0,5 m. Stratigraphy was simple:

1. A dark grey humus influenced soil of variable depth between 0 and 15 cm.
2. A light grey main ash body variable in depth between 15 and 50 cm.
3. Pockets of red soil with Middle Stone Age flakes and bedrock.

Burial I was found in F7 within layer 2. The burial was that of a slightly built 165 cm tall negro male, between the ages of 35 and 45 years at the time of death, showing signs of malnutrition (de Villiers 1979) (Fig. 8). No burial pit was visible in the ash but several rocks placed level with the skull, between 0,25 and 0,50 m to the north of the burial may have been intended as a marker. The skull was found at a depth of 30 cm below the surface but it appeared to have subsided and moved forwards, as several vertebrae protruded behind it to the east.



Fig. 8. Burial I from 131/78. Note the fresh water mussel to the left of the bowl and the felsite slab to the side of the cranium.

The general position is tightly flexed but both knees have collapsed to the north-east of the skull. The burial faces to the west. The top of the skull and the left humerus are ochre stained. Immediately to the north of the skull, next to the right orbit lay a 12 cm by 5 cm slab of smoothed felsite. A small decorated bowl lay above the right wrist but had probably been

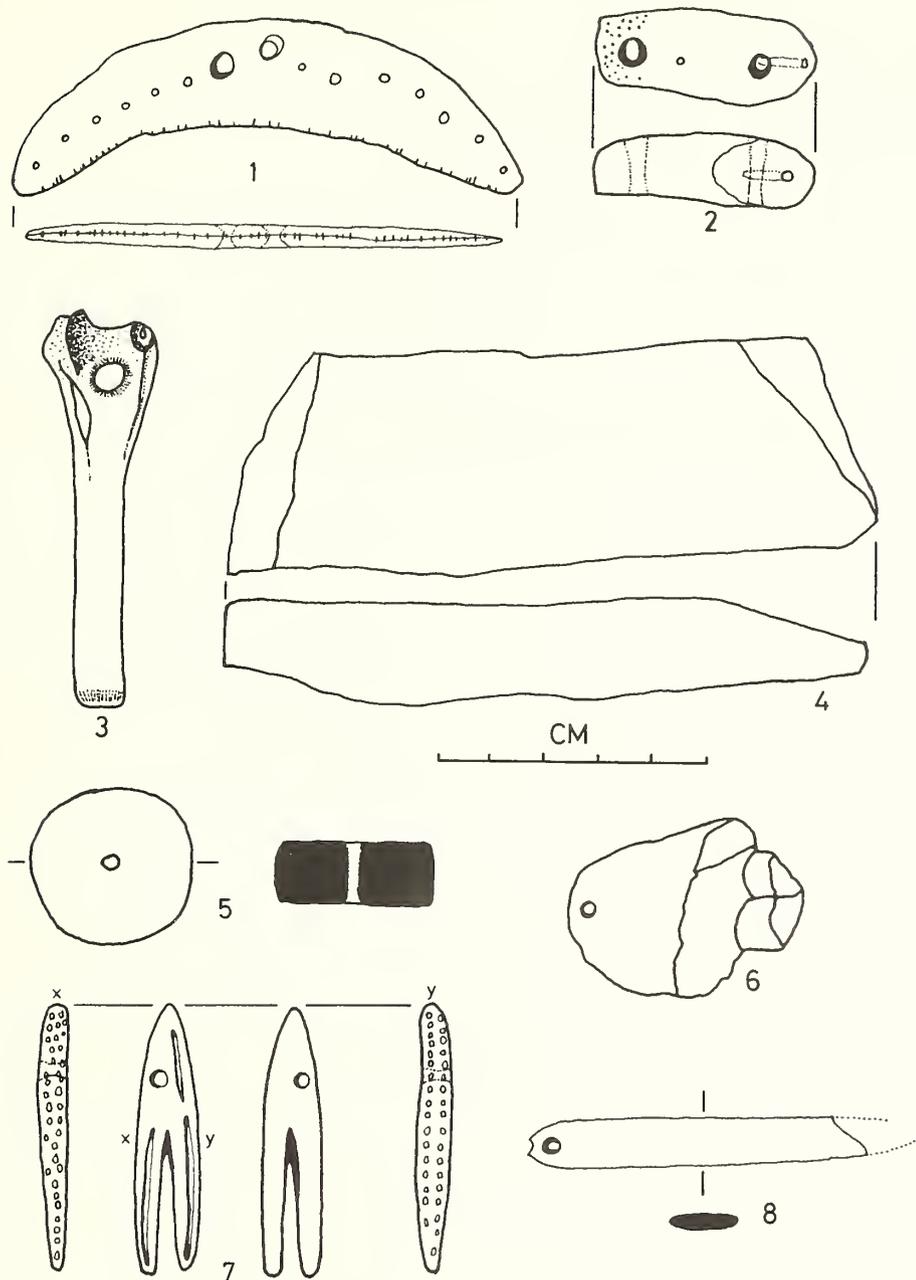


Fig. 9. Ornaments from Burials I and II and ash heaps I and II at 131/78.

moved by the collapsing knees. Five centimetres to the south of the bowl lay one complete valve of a fresh water mussel. This mussel was probably not a fortuitous inclusion in the pit fill, as other fresh water mussels found in the excavation were highly fragmented. Specularite occurred all over the burial but tended to concentrate at the mouth of the bowl and at the base of the neck. Below the proximal end of the right humerus a cluster of three ornaments was found. Two were made of bone and one of wood (Fig. 9, nos. 1, 2 and 3). One of the bone ornaments was made from the distal end and shaft of a humerus of a small carnivore. The shaft had been snapped and smoothed around the break. The second ornament was made from a smoothed and rounded mass of bone of indeterminate nature. It had been pierced twice across the width and once from an end. One small pit also marked the surface. The wooden ornament was probably made of *Acacia* sp. (Friede pers. comm.). The wood had been shaped and highly polished into a 94 mm long crescent, 20 mm wide in the centre and on average 5 mm thick (Fig. 9, no. 1). The centre of the crescent had been pierced twice and 13 surface punctates lie in an arc on both sides of the holes. The concave edge of the crescent had been nicked with a sharp implement.

Charcoal from spit level 20–30 cm in sq. A6 was dated to AD 1670 \pm 50 (Pta-2845). When calibrated the date could fall between AD 1510 and AD 1630 (Vogel, 1971).

Ash heap II was deposited into a roughly elliptical 12.5 m by 8 m natural basin 16 m north-east of ash heap I and had probably been used as a kraal (Fig. 10). The surface of the ash was colonized by a dense stand of *Cenchrus ciliaris* (see Denbow 1979). The deposit had been disturbed in several places. In one pit a child burial and several pieces of iron were found (du Plessis pers. comm.). The stratigraphy in ash heap II was identical to that in ash heap I, except that the main ash body reached a depth of 70 cm in the north and under 20 cm in the south (Figs 11 and 12). A light grey, burnt clay crust was found straddling A2, A3, B2 and B3 at a depth of 45 cm (Fig. 11).

Burial II was first found in the section along line C but had been interred mostly in C6. The burial was that of an adult negro male, approximately 35 years old at death and 158 cm tall (de Villiers 1979, Fig. 13). The body had been interred in a tightly flexed position facing the west. The skull had subsided forwards onto the knee. No pit was distinguished in the ash but the lower portion of the body lay in a pit dug into a pocket of layer 3 soil. The top of the knees and the skull were charred black. The only item of grave goods associated with burial II was a ground and pierced pottery pendant found on the sternum (Fig. 9, no. 5).

Ash heap III was located 200 m to the east of I and II (Fig. 5). The ash had accumulated within a natural depression and measured approximately 9 m by 12 m. Within the excavated portion, light grey ash with a darker capping reached an average depth of 40 cm, below which the sterile red soil and rubble was found (Fig. 14).

Burial III, that of an adult negro female, aged between 44 and 54 years at death and 162 cm tall, was found in L35 (de Villiers 1979, Fig. 15). The body was flexed but on its left hand side, with the knees slanted towards the south. This burial also faced the west. Two undecorated profile 1 pots were associated with the burial on its northern side, one pot placed on each side of the pelvis. Within one of these pots had been placed a small plain bowl which contained fragments of unground ochre (Fig. 16).

Over 60 hut platforms and hut spaces were counted on the koppie summit section of site 131/78, of which seven were cleared, two in the vicinity of ash heaps I and II (I P1 and P2, Fig. 10) and five in the vicinity of ash heap III (III P1, 2, 3, 11 and 12, Figs 17 and 18). On none of

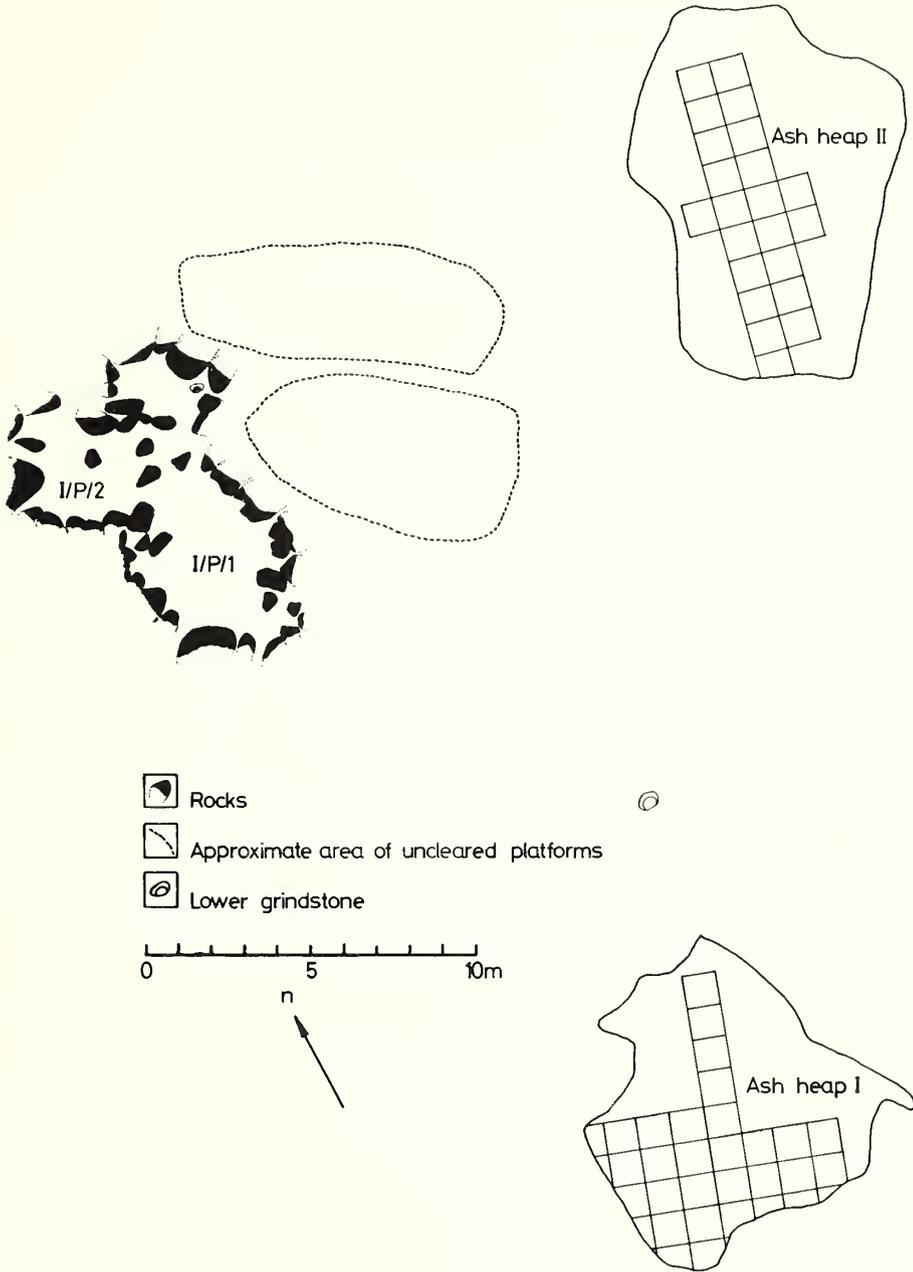


Fig. 10. Plan of ash heaps I and II and spaces I/P/1 and I/P/2 at 131/78.

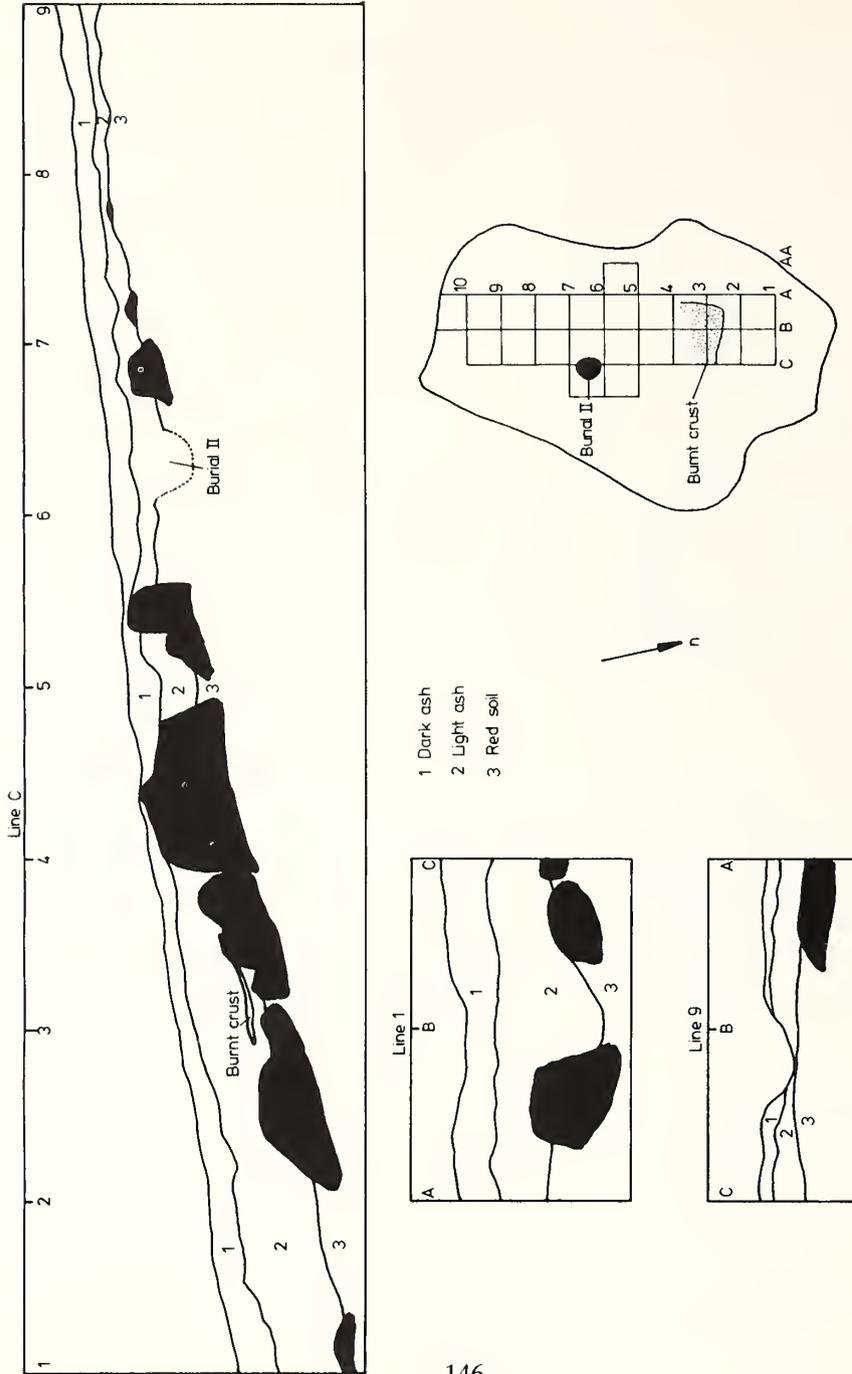


Fig. 11. Plan and section of ash heap II at 131/78.



Fig. 12. Ash heap II at 131/78. Burial II came from the pit seen half way along the right hand section. The grass growing on the surface of the ash is *Cenchrus ciliaris*.

the cleared spaces was original hut floor but all spaces had many lumps of pole and reed impressed daga, plus pottery, bone fragments, iron, ore and grindstones.

Space I P1 was an elliptical area, 7 m long and 3 m wide, defined by a naturally outcropping ring of boulders (Fig. 10). The north west of P1 jointed I P2, another naturally defined area 2 m in diameter (Fig. 10).

Hut platforms III P1, 2 and 3 formed a cluster 16 m north-west of ash heap III (Fig. 17). The north-eastern wall of III P1 had been built up and the area behind banked up with soil. Immediately above III P1 lay III P2, a naturally enclosed space, roughly circular, with a



Fig. 13. Burial II from 131/78. Note the charred skull, distal femurs and proximal tibias.

diameter of 4 m. Below III P1 and III P2 in the north and east lay III P3. The southern boundary of III P3 was the built wall and was shared with III P1.

Fifteen metres to the east lay III P11, a large space bounded on the eastern edge by a large rock (Fig. 18). Immediately to the east and 3 m below this rock lay III P12, a small naturally defined space.

FINDS

Pottery

The pottery from 131/78 was generally well made, well fired and decorated. The thickness varied between 5 and 15 cm.

Pottery excavated from the ash heaps gave a minimum count of 306 vessels and 275 were found on the cleared spaces and collected from the surface. Of the total, 435 vessels were plain, with 39 rims too small to include in the minimum count. Just under 20% of the sample was decorated. Jars dominated the assemblage (73%), with bowls and constricted pots making up the rest (24 and 3% respectively). When only decorated vessels are considered, jars accounted for 61%, bowls 38% and constricted pots 1%.

The decoration technique was predominantly comb-stamping (44% of the total), followed by incision (25%), then rim nicking (17%), punctates (7%), slash (3%), comb-stamping with

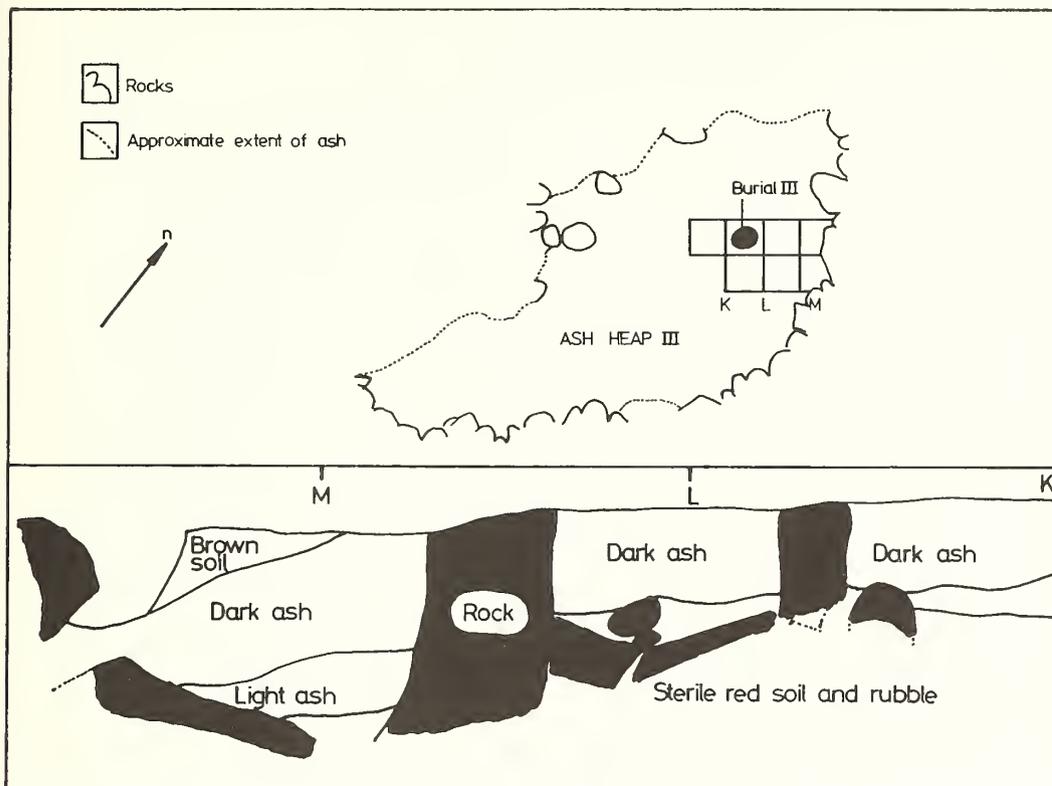


Fig. 14. Plan and section of ash heap III at 131/78.

incision (2%), slash with incision (1%) and coloured bands by themselves (1%). Rims were mostly simple and rounded (84%), followed by squared (13%) and then beaded (3%). Beaded rims tended to be more common on constricted pots.

Seventy-two motifs were identified (Fig. 19). The motif list has been subdivided according to decoration area (Table 2 and Fig. 3).

Layouts were defined by combinations of decoration areas and four modes were distinguished.

- Layout 1—Decoration Area 1
- Layout 2—Decoration Area 2
- Layout 3—Decoration Areas 1 and 2
- Layout 4—Decoration Areas, 1, 2, 3 and 4.

Within the dimension of shape, three profile modes were used (Fig. 3). The intersection of profile and layout modes produced eight classes (Table 3). A further 172 fragments are included in Tables 3 and 4 and are placed within possible classes. Their size disallowed absolute placement within a class.

HALL: EXCAVATIONS AT ROOIKRANS AND RHENOSTERKLOOF

TABLE 4. Distribution of classes at 131/78

° and x = same vessel
() = indeterminate sherds

	CLASSES										? CLASSES						TOTAL SHERDS		
	1	2	3	4	5	6	7	8			TOTAL	1?	2?	3?	7?	1,3,5?		2,3?	
								1	2	3									
0-10	1	1°					1	18		4	25		3	2	4		3	12	682
10-20	3	°	°	°	°		4	42	1	4	54	x	6	1	9°	°	3	19	1 490
20-30	6	3°	°	°	°		3x	37	1	4	54	1°	2	1	5	3°	2	14	1 067
30-40	2	2°	°	°	°		2°	22	2	6	36	x	2		4x	°	2	8	619
40-50			°	°	°		1x	12		1	14	°	1	1	2		1	5	270
50-60			°	°	°		1	3		4	8				1			1	44
0-10			°	°	°			26	1	5	32		1		8			9	684
10-20	4		°	°	°		°	28	1	6	39				3		2	5	803
20-30	1							13			14			1	2	1		4	511
30-40	1							12		1	14				3	2		5	275
40-50								3		3	6		1	1	2	1		5	200
50-60							°	1			1				1			1	49
0-10															1			2	49
10-20	1							3		1	5				1	1		3	95
20-30	1							2			3								38
III P 1					1			3 (4)	1	2 (1)	7 (5)				1		1	2	378
III P 2		3						4 (1)		3	10 (1)			2	1		2	5	231
III P 3								5 (3)	1	5	12 (3)		1		3	1	1	6	348
III P 11	1	1					6	11 (17)	5	10	34 (17)			3	2			5	795
III P 12	1						1	7		4	13						3	3	250
IP 1			1				1	8 (9)	1	6	17 (9)		2		8		2	12	346
IP 2	3	1	1				1	9 (1)		4 (1)	19 (2)				3			3	215
SURFACE	13	6	4	1		1	13	60 (2)	2	24	124 (2)		5	4	15	4	15	43	
TOTAL	38	17	9	1	1	2	39	329 (37)	16	90 (2)	542 (39)	3	24	16	82	14	39	178	9 423



Fig. 15. Burial III from 131/78.

Class 1. Total 38 (Fig. 20).

Necked vessels with a single band of decoration immediately below the lip or on the lip. Rim nicked vessels are placed in this class. Motifs 3 and 8 to 14 prominent.

Class 2. Total 17 (Fig. 21. nos. 2, 3, 4, 6, 8).

Necked vessels with a wide band of horizontal comb-stamping or incision on the neck and shoulder. There is no separate band on the rim. Decoration area 2, motifs 6 to 10 prominent.

Class 3. Total 9 (Fig. 21. nos. 1, 5, 7, 9).

Necked vessels with a band of horizontal comb-stamping or oblique comb-stamping on the rim. On the shoulder comb-stamped arcades and chevrons occur, some filled with comb-stamping, others coloured black or red. Bodies may be coloured red and internally graphited to mid-way down the shoulder. Decoration area 2, motifs 15 to 22 prominent.

Class 4. Total 1 (Fig. 22. no. 3).

A fragment of a constricted pot with an obliquely comb-stamped band on the rim, with horizontal lines of comb-stamping below.

Class 5. Total 1 (Fig. 23).

The neck and shoulder of the vessel are decorated by obliquely incised bands, separated from the shoulder body junction by a single incised arcade. The neck and shoulder are graph-

ited. The body/shoulder junction is decorated with three arcades, filled with alternating black and red colour. The body has two diamond motifs, one fully blacked out, the other with smaller diamonds within, alternating in colour. The body is coloured red.

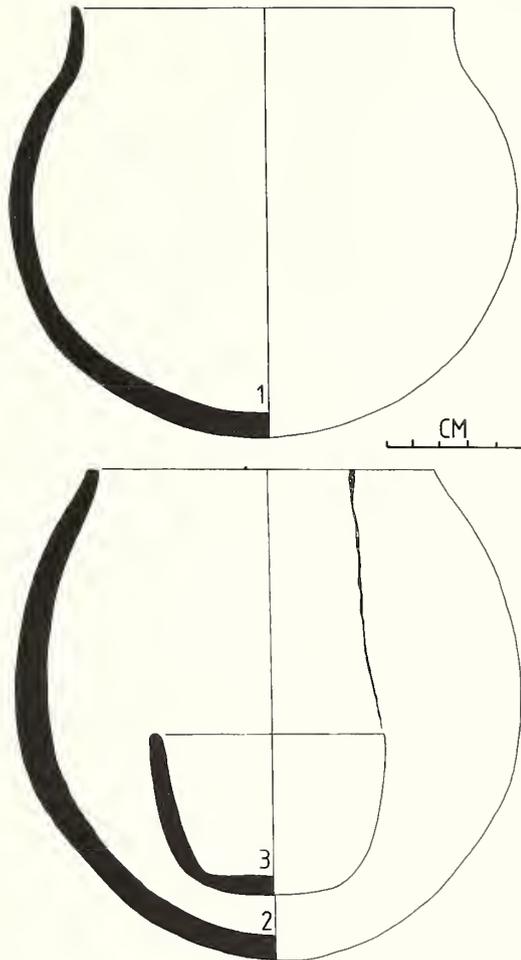


Fig. 16. Pottery associated with Burial III at 131/78.

Class 6. Total 2 (Fig. 24 no 1).

Bowls with either oblique comb-stamping or incision on top of the lip.

Class 7. Total (Fig. 24 nos. 2 and 3, and Fig. 25).

Bowls with multiple bands of oblique comb-stamping or incision, alternating with black and red coloured bands. Comb-stamped chevrons or incised arcades are sometimes found below the first band. All bowl bodies are red and internally black or red.

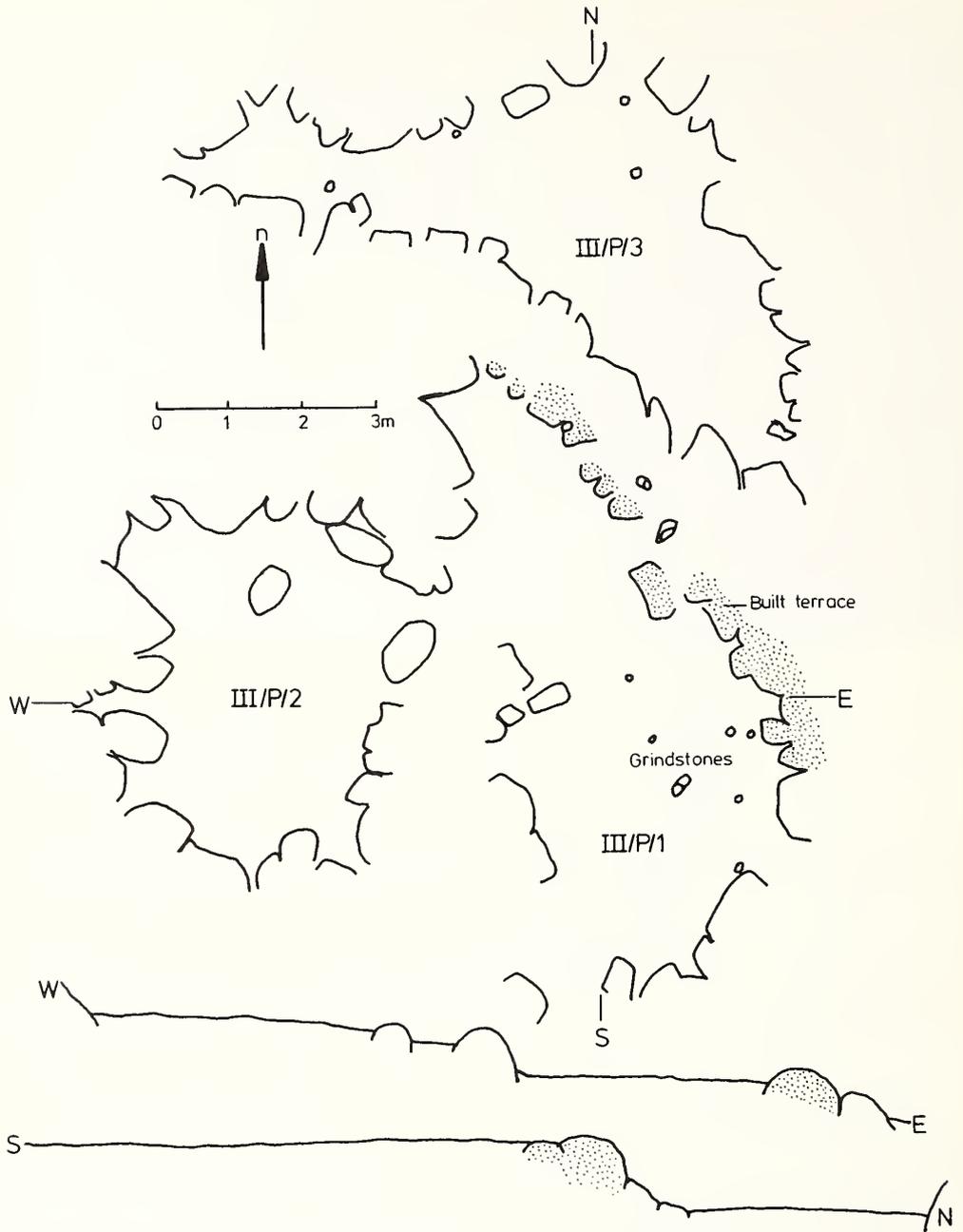


Fig. 17. Plan and profile of III/P/1, III/P/2 and III/P/3 at 131/78.

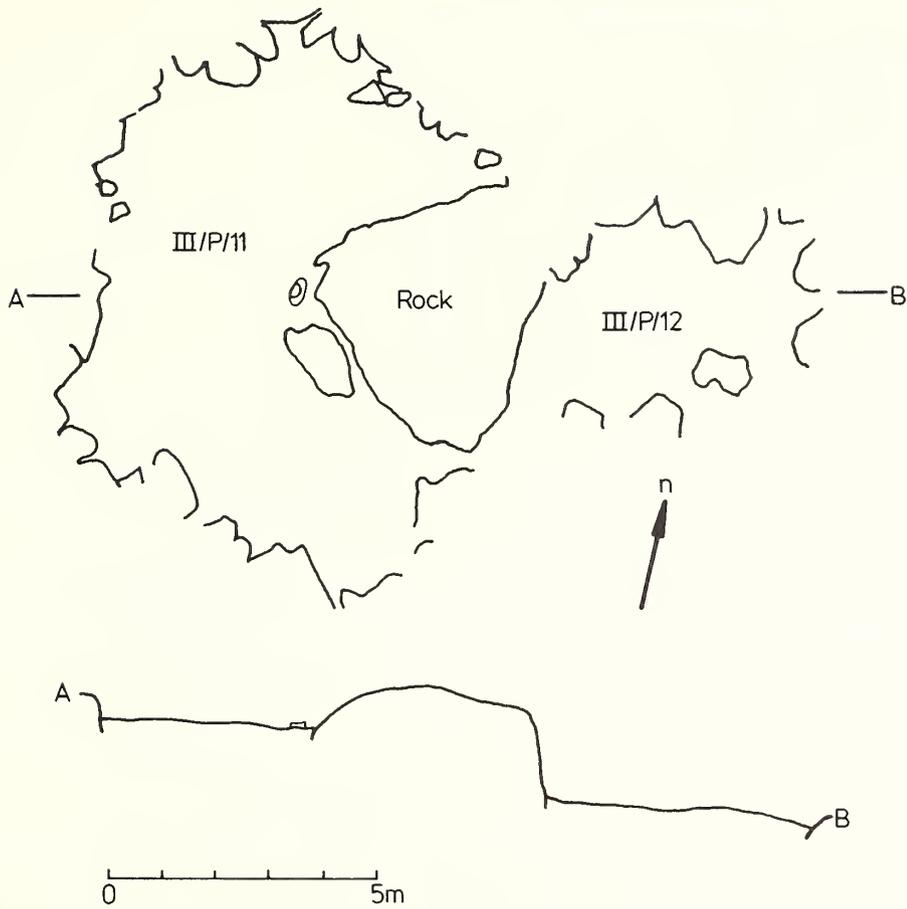


Fig. 18. Plan and profile at III/P/11 and III/P/12 at 131/78.

Class 8. Plain vessels

Profile 1, jars or necked bowls (Fig. 3).

Profile 2, constricted pots (Fig. 22 nos. 1, 2 and 4).

Profile 3, hemispherical bowls (Fig. 3).

The stylistic classes crosscut vessel size as represented by mouth diameter. The analysis shows that the excavated and surface samples belong in the same assemblage. The distribution of the classes is given in Table 4.

Other clay artefacts

Five complete and seven broken gourd stoppers made from potsherds were found throughout the site (Table 5). They were evenly ground into smooth discs (Fig. 26 nos. 10 and 11).

TABLE 5. Provenance, no. and size of gourd stoppers at 131/78.

Provenance	No.	Size (Diameter)
I/C7/20-30	1	41 mm
I/E7/20-30	1	—
I/F6/20-30	1	38 mm
II/A3/30-40	1	—
II/B3/30-40	2	38,50 mm
III/B35/40-50	1	—
III P1	2	39 mm
III P11	1	—
Surface	2	—
TOTAL	12	

Fourteen potsherd scrapers were recovered and unlike the gourd stoppers were abraded over a flat, smooth arc, the rest of the potsherd remaining unworked (Table 6). Similar abraded potsherds as well as abraded stone flakes were first recorded at Olifantspoort in firm association with Iron Age deposits (Mason, 1969).

A broken fired clay bead was recovered from I/F8/50-60 (Fig. 26 no. 9). An indeterminate broken tube of fired clay (12 mm diameter) from II/A1/10-20 may have been part of a figurine. From I/B6/30-40, 5 fragments of white-washed plaster were found. Pole and reed impressed daga lumps were found on all the cleared spaces.

TABLE 6. Provenance and no. of potsherd scrapers at 131/78.

Provenance	No.
I	4
II	2
III	1
I P2	1
III P3	2
III P11	1
III P12	2
Surface	1
TOTAL	14

Ostrich egg shell and slate beads

A total of 14 beads was found, seven made of ostrich egg shell and seven made of slate. The slate beads tended to be larger than the eggshell beads (Table 7, Fig. 26 nos. 7 and 8). A single fragment of unworked ostrich eggshell was found on the surface.

HALL: EXCAVATIONS AT ROOIKRANS AND RHENOSTERKLOOF

TABLE 7. Provenance, material and size of beads at 131/78.

Provenance	Material	Size (Diameter)
I/A6/20-30	Ostrich eggshell (OES)	9,5 mm
I/A6/20-30	OES	9,0 mm
I/B9/20-30	OES	—
I/D7/20-30	OES	10 mm
I/E7/10-20	slate	13 mm
I/E7/10-20	slate	14 mm
I/E7/20-30	OES	13 mm
I/F6/30-40	OES	14 mm
II/AA5/20-30	slate	14 mm
II/A3/10-20	slate	11 mm
II/A3/10-20	slate	11 mm
II/A3/40-50	slate	12 mm
II/B3/30-40	slate	13 mm
III/M35/30-40	OES	9,5 mm

Metal artefacts and evidence of metal working

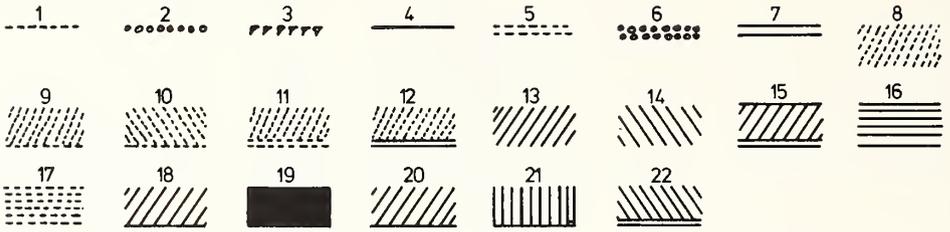
Slag, tuyère fragments and iron ore were recorded from all features examined on the site and were common on the surface (Table 8).

No furnaces or furnace daga was found and no area could be specifically isolated as a smelting site. The presence of iron and copper ores indicate that both were smelted on the site, however, no reactions for iron and copper could be obtained using an acid/ammonia test on slags. Both crushing and visual examination of further, randomly selected slag samples from ash heap I and III P 11, provided small prills of smelted copper. The copper ore was malachite

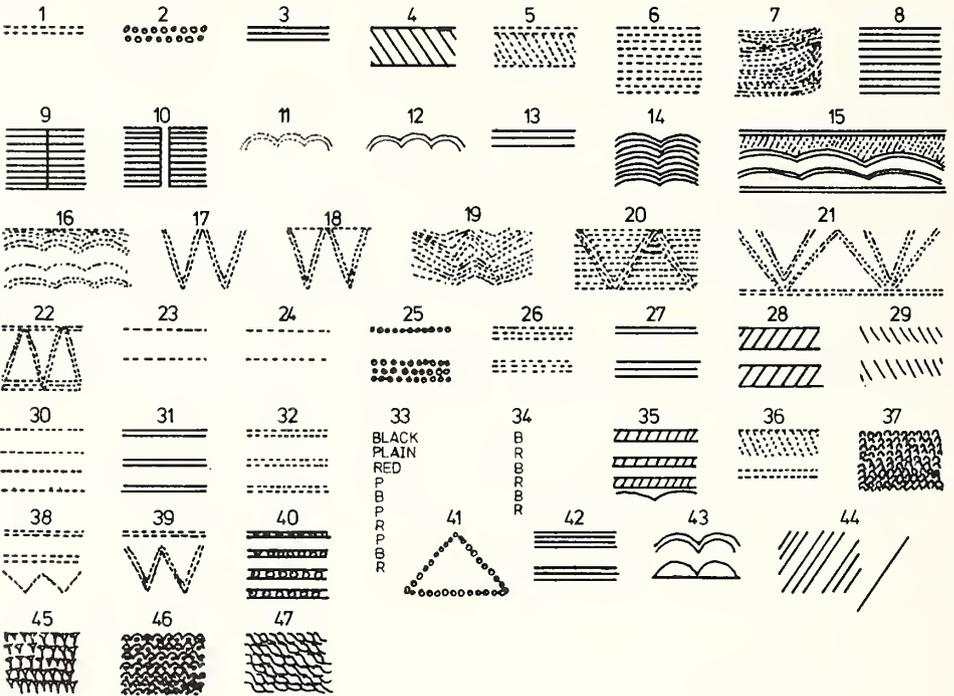
TABLE 8. Melting and smelting debris from 131/78.

Provenance	Fe ore	slag/tuyère	Cu ore	Crucibles	Thatch slag
A.H. I	495 g	1 498 g	—	6	10 g
II	24	2 308	—	2	21
III	—	66	—	—	—
I P 1	235	145	—	—	7
I P 2	2	169	—	—	—
III P 1	498	68	—	—	—
III P 2	27	132	—	1	—
III P 3	84	78	—	—	—
III P 11	1 193	243	—	—	5
III P 12	83	19	11	—	—
Surface	not collected	not collected	—	—	—
TOTAL	2 640 g	4 726 g	17,5 g	11	43 g

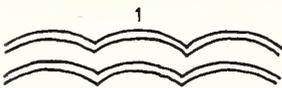
DECORATION AREA 1



DECORATION AREA 2



DECORATION AREA 3



DECORATION AREA 4

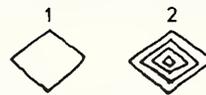


Fig. 19. RU-4 motifs from 131/78.

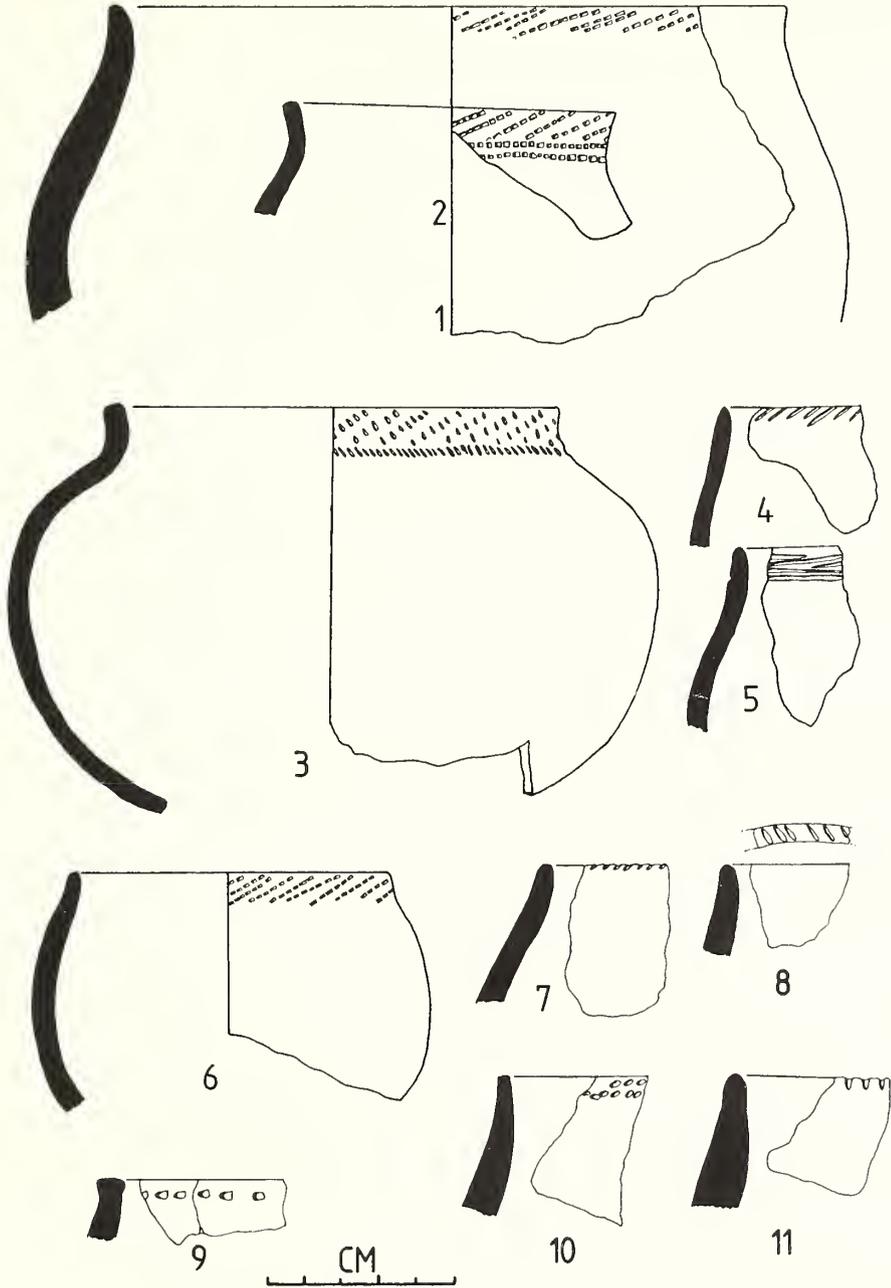


Fig. 20. Class 1 pottery from 131/78.

and the iron ore came predominantly in the form of water worn haematite pebbles. The presence of some angular haematite blocks with unweathered box structures indicates that some of the iron ore was mined (Hawthorn, pers. comm.). Eleven slag encrusted and vitrified potsherds were found and are probably the remains of pottery crucibles for remelting and pouring either copper or tin. Several lumps of light, porous, glassy slag almost certainly resulted from smouldering cattle dung.

The iron found at 131/78 was poorly preserved. In all, 60 pieces were found including 11 lumps of highly magnetic unforged iron which weighed 110,5 g. Three pieces of copper were recovered (Table 9).

The commonest iron items found were 17 rods or awls (Fig. 27 nos. 1 to 10). These varied in length from 7 to 15 cm, but the shorter rods may have been broken. Sections were generally square, although round sections were found. One awl from III P 1 was well squared at one end. The best preserved spear was a surface find. The blade must originally have been about 10 cm long and 2,5 cm wide. There is a strong mid rib on one side and the tang is broken (Fig. 27 no. 21). Smaller spears or razors with broken blades were found at I/C7/10-20 and II/AA5/0-10 (Fig. 27 nos. 11 and 12). One 5 cm long, round sectioned and tapered iron point was recovered from II/A5/10-20 and another from II/B4/0-10. Both may have been adzes (Fig. 27 nos. 17 and 19). Several badly rusted bangle fragments were found, the best of which came from I/E8/20-30 (Fig. 27 no. 27). Two flat but fragmentary sheets of iron may be the tips of hoe blades (Fig. 27 nos. 24 and 25). An ingot-like slab of iron weighing 51,5 g was found on I P2. The rounded end has been forged but its function remains unknown (Fig. 27 no. 26). One 17 cm long tapering length of copper wire was found in I/C9/20-30. Its decreasing diameter combined with the presence of grooves along its entire length, indicates that it was in the process of being pulled (Fig. 27 no. 14). A casually coiled piece of copper wire with even thickness was excavated from I/C7/20-30 (Fig. 27 no. 15). A bent scrap of copper sheet was found on III P1.

Stone artefacts

Upper grindstones were found on all but one of the cleared spaces but not in the ash heaps (Table 10). They were discoid, hand sized granite rocks, smoothed on one and no more than two surfaces. A larger smoothed block from I P 2 suggests that objects were rubbed upon it, rather than being held in the hand. Four smaller smoothed, three- to four-faceted bur-nishers were found in the ash heaps and one on III P 3. All were made of grey to black diabase. Only four lower grindstones, made of granite, were found on the cleared spaces, though more littered the site and three were found on the surface of ash heap I.

A slate pendant was recovered from II/A1/20-30 (Fig. 9 no. 7). The upper half of the pendant had been pierced, while the lower section had been shaped into two separate arms. One surface had been channelled and both edges had been decorated with small gouges.

Middle Stone Age flakes, made of felsite, were found on the surface of the site and in layer 3 of ash heap I in particular.

Faunal remains

The faunal remains were examined by I. Plug at the Transvaal Museum and part of her comprehensive report plus tables are included as Appendix 1. Domesticated cattle, sheep/goat and wild bovids were present, the latter reflecting both the hilly terrain immediately around the site, as well as the flatter ground to the south. The main point of interest to emerge from

HALL: EXCAVATIONS AT ROOIKRANS AND RHENOSTERKLOOF

TABLE 9. Provenance of metal artefacts at 131/78.

	Fe Rod/Awl	Fe Spear	Fe Point	Fe Adze	Fe Hoe	Fe Bangle	Fe Indeterminate	Fe Unforged	Cu	Total
I/AA6/20-30							1			1 •
I/A5/10-20	1			1						2
I/A8/10-20						(1)				1
I/B8/20-30							3			3
I/C5/10-20					1					1
I/C7/10-20		1								1
I/C7/20-30							1		1	2
I/C8/40-50								1		1
I/C9/20-30								1	1	2
I/D6/10-20							3			3
I/D7/20-30							1			1
I/D7/40-50						(1)				1
I/D8/0-10	1									1
I/D8/40-50	1									1
I/E7/20-30								1		1
I/E7/30-40								1		1
I/E8/20-30						(1)				1
I/G6/10-20							1			1
II/AA5/10-20		1								1
II/AA6/20-30							2			2
II/A1/40-50								1		1
II/A2/0-10							1			1
II/A3/20-30							1			1
II/A8/10-20							1			1
II/A9/0-10	1									1
II/A10/0-10							1	1		2
II/B1/30-40								1		1
II/B4/0-10				1						1
II/B5/20-30								1		1
II/B6/10-20							1			1
II/B8/10-20			1							1
II/C6/0-10								1		1
I P 1	1	2								3
I P 2								1		1
III P 1	2								1	3
III P 2	2							1		3
III P 3	4									4
III P 11	1	1								2
III P 12	1	1								2
SURFACE	2	1			1					4
TOTAL	17	7	1	2	2	(3)	17	11	3	63

TABLE 10. Provenience of grindstones at 131/78. (Numbers in brackets indicate fragments).

Provenience	Upper grindstones	Lower grindstone	Burnishers
A.H. 1	—	—	3
II	—	—	1
III	—	—	—
I P 1	2 (2)	1	—
I P 2	4	—	—
III P 1	5 (4)	2	—
III P 2	—	—	—
III P 3	6	—	1
III P 11	3 (3)	1	—
III P 12	3 (2)	—	—
TOTAL	19 (11)	4	5

the faunal analysis is the relatively low numbers of domesticates compared to the higher numbers of wild species.

Worked bone was examined by the writer and therefore does not appear in the report by I. Plug. Forty-three abraded bone fragments were found, 42 from ash heap I and one from ash heap II. Most of the fragments were bovid ribs of no standardized length and sometimes utilized at both ends. Ribs tended to be abraded in a smooth arc over the ends of the bone (Fig. 26 nos. 1 to 40). Flakes from long bones were also abraded but these tended to be more pointed.

A bone point, 63 mm long, was recovered from I/G6/30-40. The point was multi-sided, having been carved rather than smoothed. Another carved but broken length of bone came from I/D7/20-30 (Fig. 26 nos. 5 and 6).

Two bone pendants were excavated from ash heap II. One was a flat, edge smoothed and tapered, 61 mm long rib which was found in B3/30-40. One end of the rib was pierced. The other pendant came from B3/20-30 and had been made from a maxillary fragment of a Brown Hyaena, *Hyaena brunnea*. The edges of the pendant were smoothed with a hole pierced through the bone (Fig. 9 nos. 6 and 8).

EXCAVATIONS AT ROOIKRANS HILL-TOP SITE 3/79

DESCRIPTION OF SITE

Site 3/79 is situated 100 m vertically below 131/78 around a southern shoulder of the same hill (Figs 4 and 5). On the upslope side, the site is bounded by a rockfall, and on the western side by an 80 m wall which runs for the length of the site straight down the slope. The only enclosures found were three, 4 to 5 m in diameter, kraals situated just below the rockfall. Over 20 platforms were identified clustered around the koppie. Intermediate between 3/79 and 131/78 and situated above the rockfall, lay site 2/79 (Fig. 5). The prominent features at 2/79 were stone kraals rather than hut platforms. The emphasis on walling at 2/79 and on platforms at 3/79 suggests that they were reciprocal units of a single site. Very little pottery was noted at 2/79.

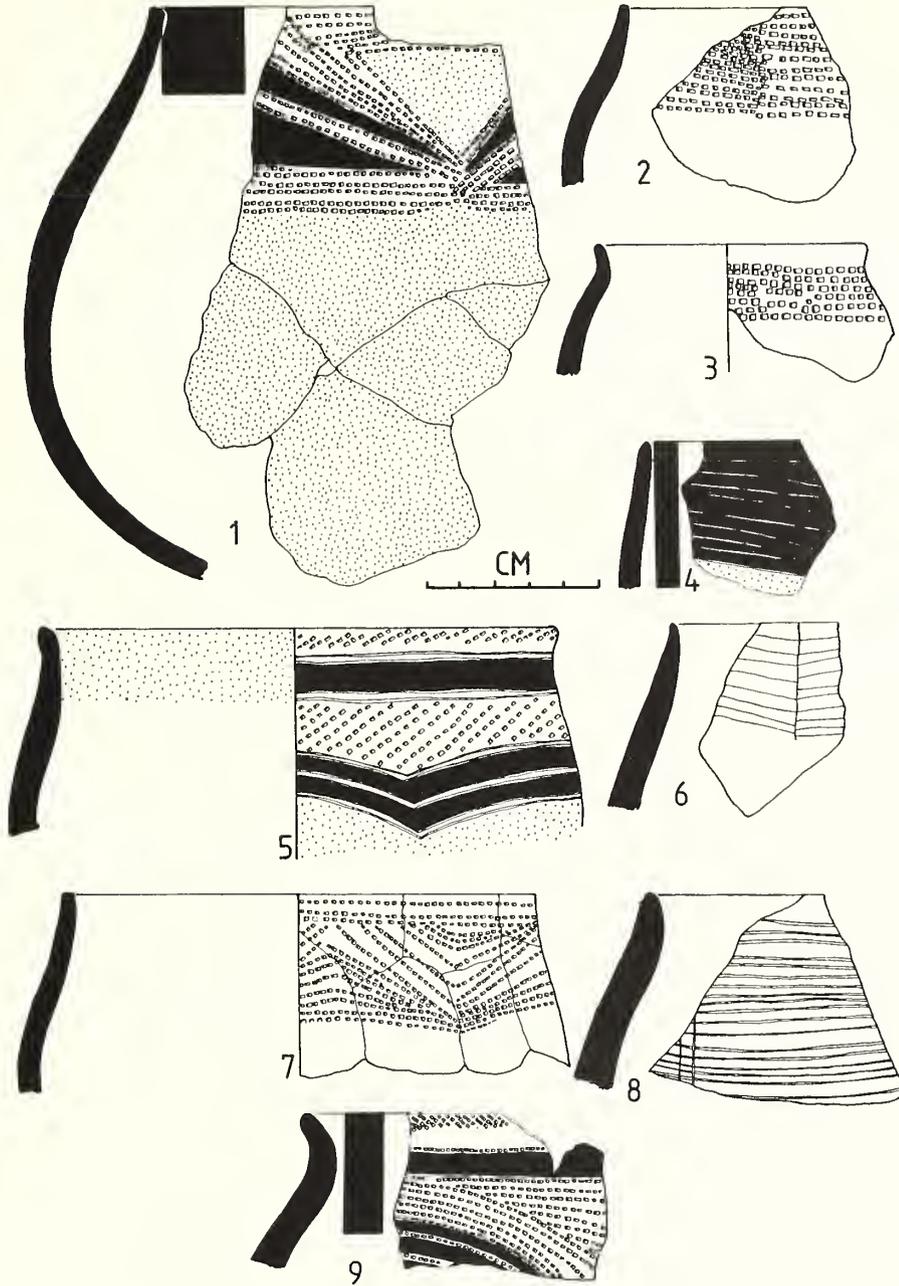


Fig. 21. Class 2 and 3 vessels from 131/78.

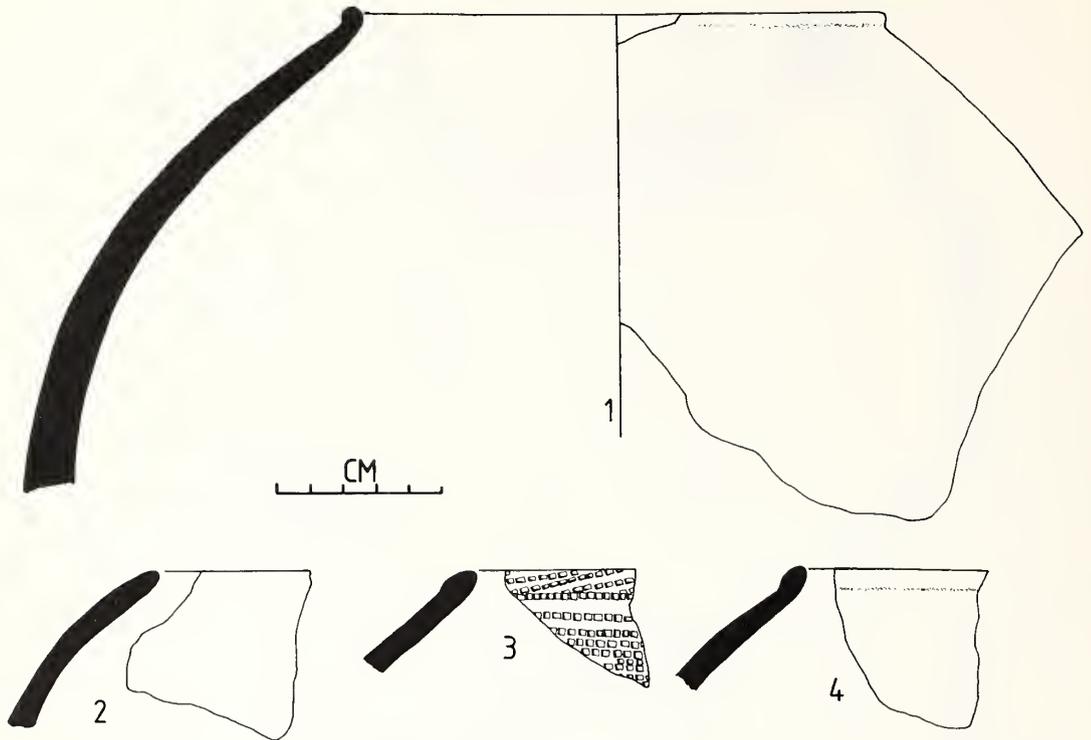


Fig. 22. Class 4 and 8 vessels from 131/78.

EXCAVATION PROCEDURE

One fragment of hut was cleared and mapped. Uncontrolled pottery collections were made from the surface.

STRATIGRAPHY

No intact deposits had survived on the steep hillslope but soil still retained an ashy character. The general stratigraphy was similar to that of 131/78 and was composed of three components:

1. Dark grey humifield soil
2. Hut floor, ash and walls
3. Rubble, red soil and bedrock.

FEATURES

One fragment of hut floor was located and excavated. This fragment was 30 cm across and 80 cm long. Most of the floor had been eroded in the south (Fig. 28). Large lumps of pole and reed impressed daga were found down the slope. The floor lay below 10 cm of dark grey soil but between this layer and the floor itself lay wall rubble and white ash and within this two bowls, two jars, a gourd stopper and an awl were found. There were also a few fragments of

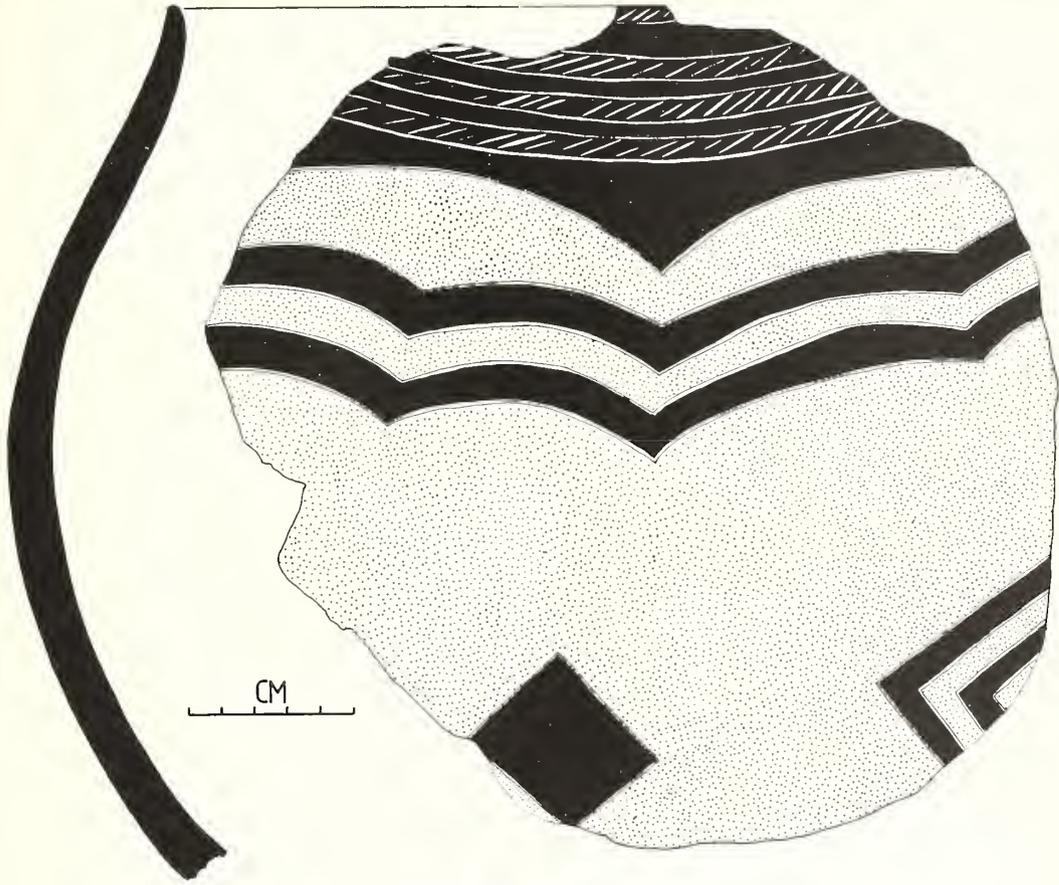


Fig. 23. Class 5 vessel from 131/78.

charred bone lacking diagnostic features. In the centre of the floor fragment was a well moulded hole, 10 cm across at the mouth and 15 cm deep.

Fifteen metres downslope to the south of the floor lay a portion of crucible furnace. A fragment of the back wall and bowl had survived. Tuyère fragments, but no slag, were found in the vicinity of the furnace. Large calcite blocks were found several metres away from the furnace. When a portion of furnace wall was crushed and examined large copper pellets were noted. The base of the furnace was just over 2 cm thick and was made from clay which had been moulded into a small pit dug into the hillside.

Within a crack in the rocks of the koppie a large hoard of iron ore was found. The ore was in the form of fractured blocks of angular haematite, the largest pieces of which weighed several kilograms.

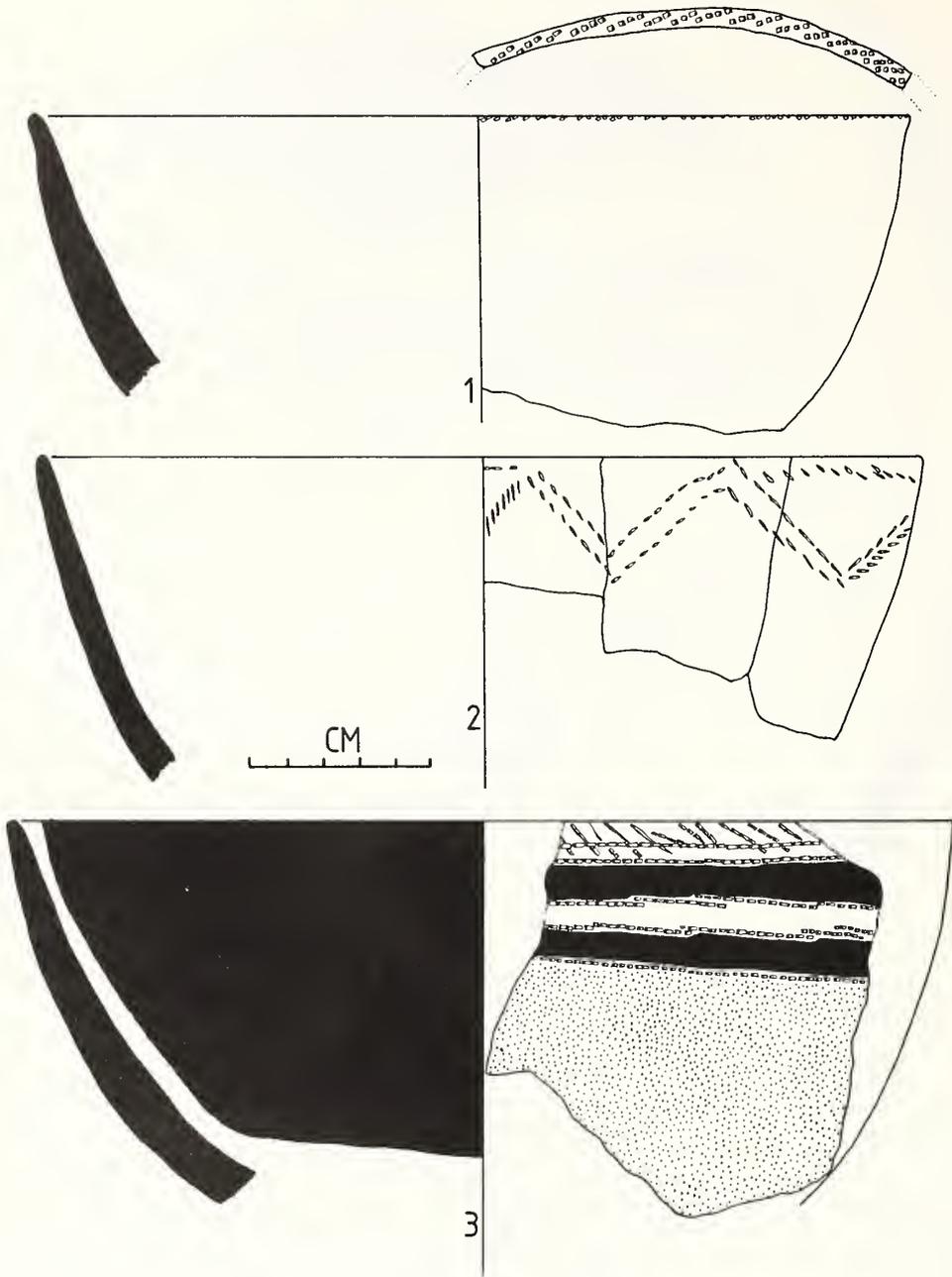


Fig. 24. Class 6 and 7 vessels from 131/78.

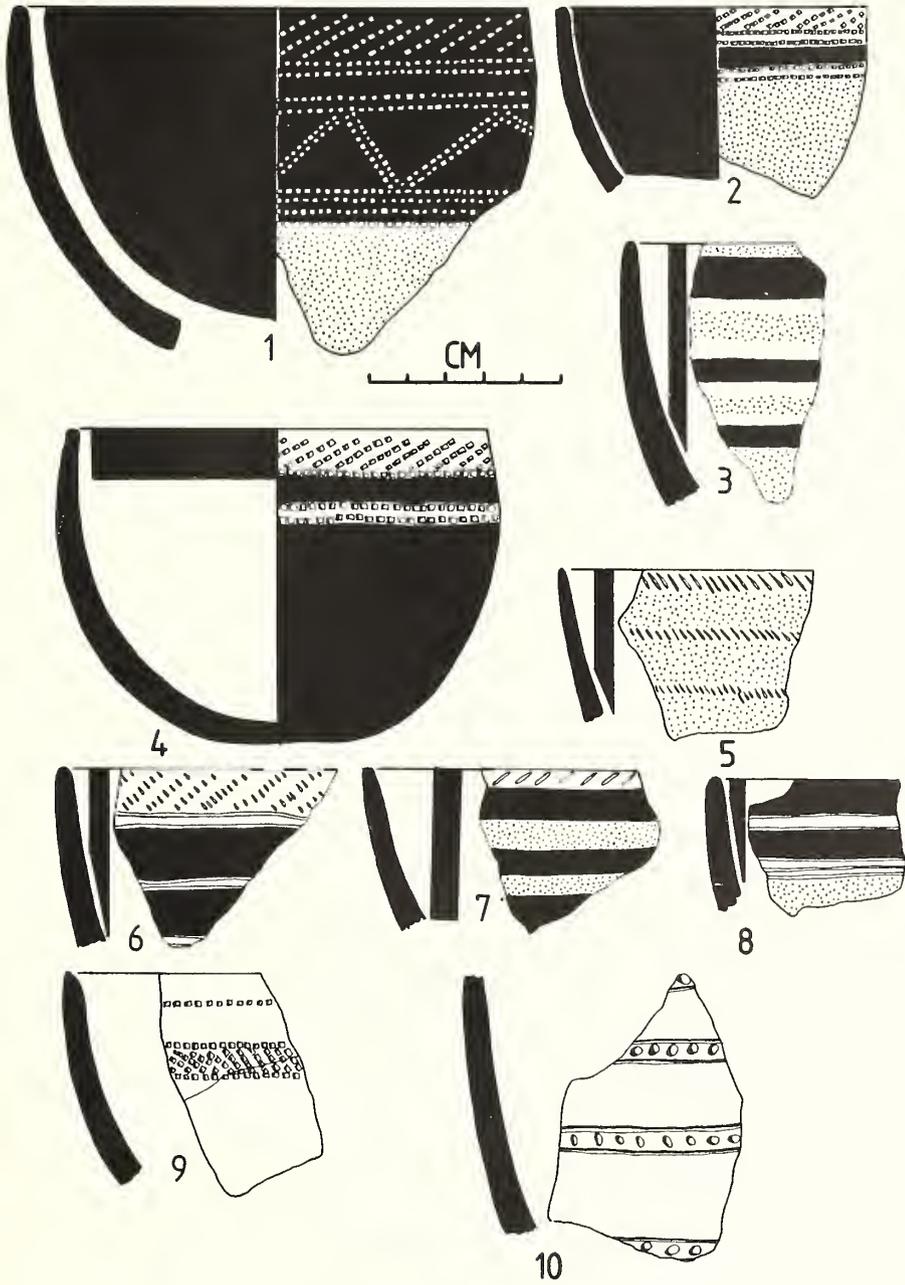


Fig. 25. Class 7 vessels from 131/78.

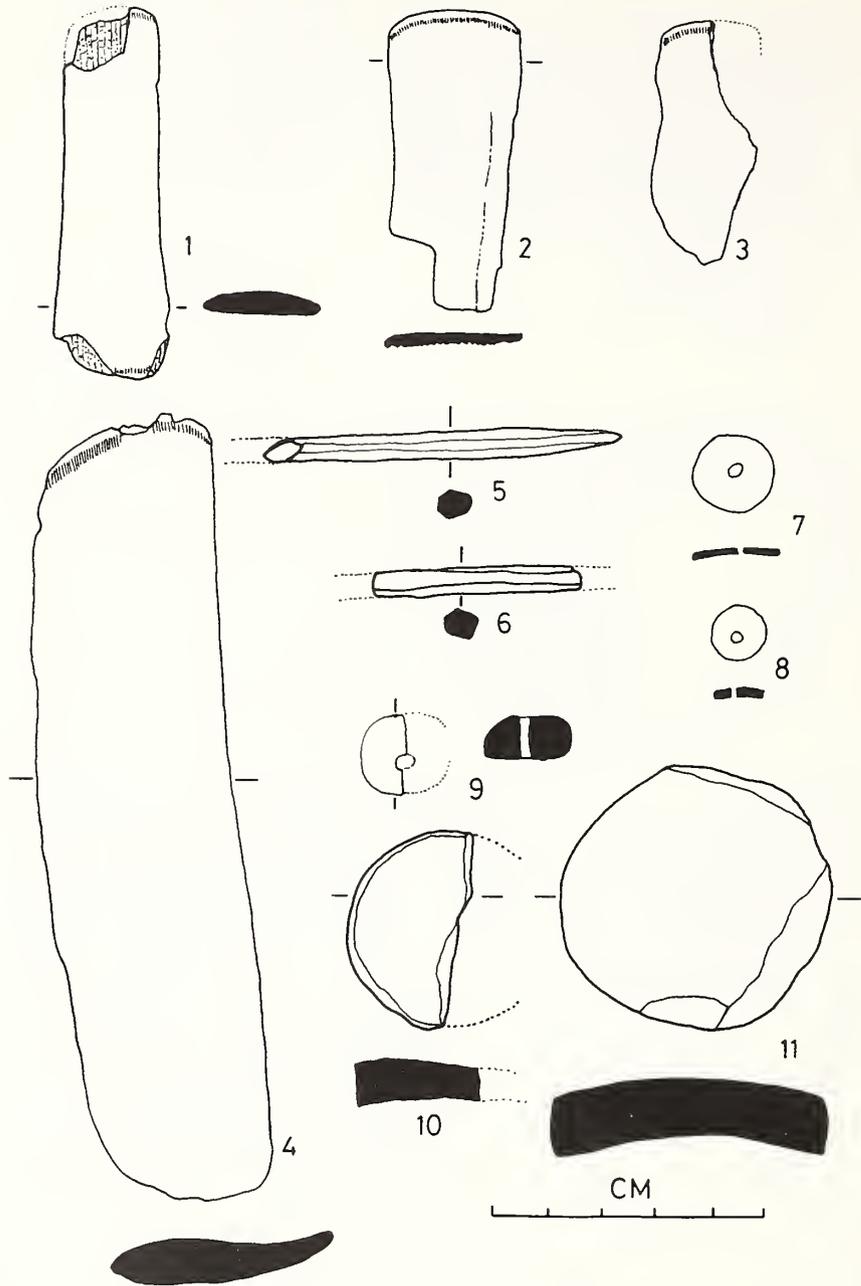


Fig. 26. Worked bone, gourd stoppers and beads from 131/78.

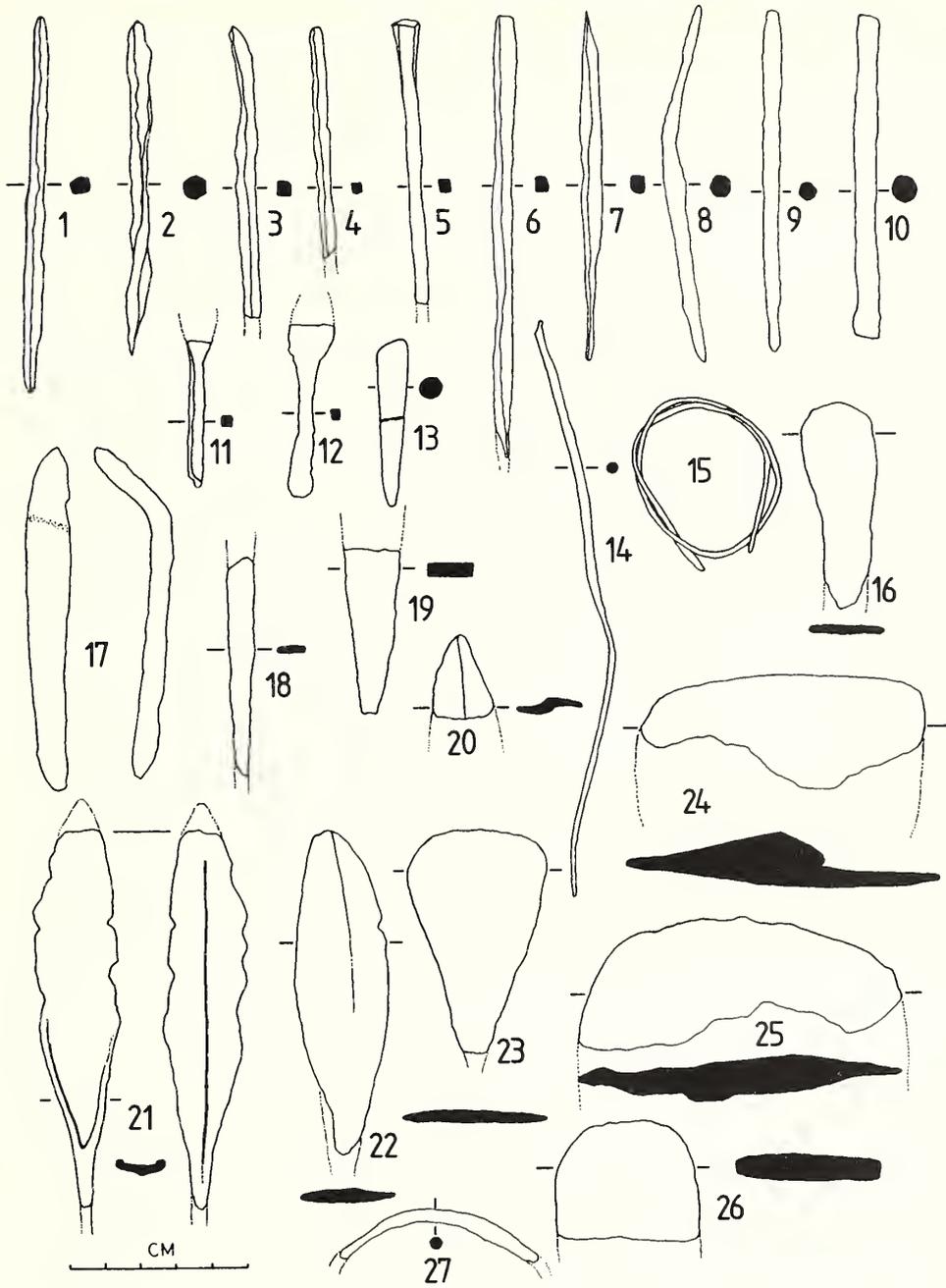


Fig. 27. Metal artefacts from 131/78.

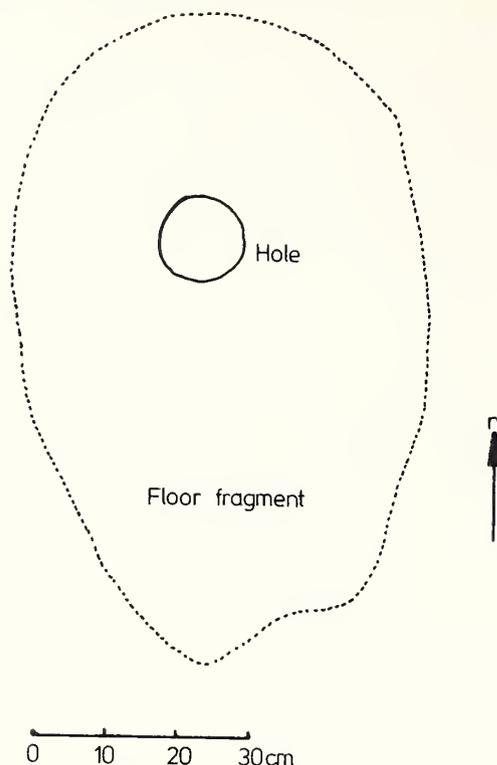


Fig. 28. Hut floor at 3/79.

FINDS

Pottery

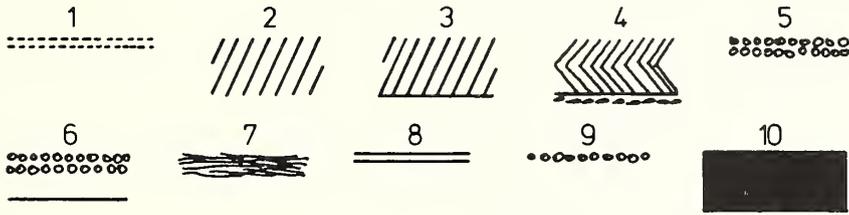
The sample from 3/79 was well made, fired and decorated. The assemblage comprised 210 vessels of which 181 could be allocated specifically to a stylistic class, the remaining 29 being allocated to probable classes. Even though the site was eroded the pottery was well preserved and most pieces represented complete profiles.

Decoration technique was dominated by comb-stamping (55,7%), followed by incision (22,7%), then punctates (8,2%), comb-stamping combined with incision (5,2%), slash (2,1%), rim-nicking (2,1%), punctates with incision (1,0%) and rim-nicking with incision (1,0%). In all, 34,8% of the assemblage was decorated.

Forty-nine motifs were recorded (Fig. 29), 14 occurring in decoration area 1 and 35 in decoration area 2 (Fig. 3). Combinations of decoration areas resulted in three layouts:

- Layout 1—Decoration area 1
- Layout 2—Decoration area 2
- Layout 3—Decoration areas 1 and 2.

DECORATION AREA 1



DECORATION AREA 2

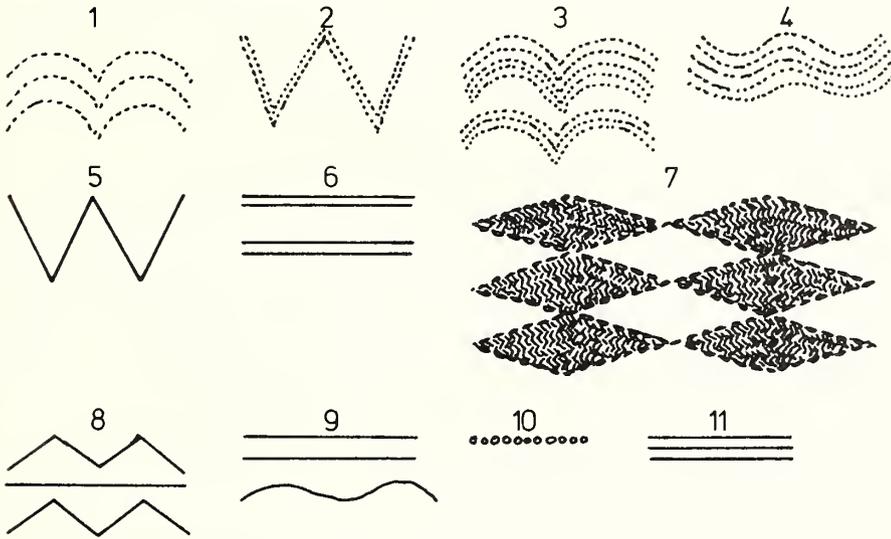


Fig. 29. RU-4 motifs at 3/79.

Within the dimension of shape three profiles were used. Necked vessels totalled 59,7% of the assemblage, bowls 35,9% and constricted pots 4,4%. Seven stylistic classes were established through the intersection of layouts and profiles (Table 11). Classes identical to those at 131/78 are given the same class number.

Class 1. Total 5 (Fig. 30 nos. 1, 2, 3 and 4).

Necked vessels with a single band of oblique comb-stamping or incision below the rim. Rim nicked vessels are placed in this class.

Class 2. Total 16 (Fig. 30 nos. 5, 6, 7 and 8, and Fig. 31 no. 1).

Necked vessels with a single wide band of horizontal comb-stamping or incision on the neck and shoulder. A vessel with two applique studs on the shoulder is placed in this class.

Class 3. Total 9 (Fig. 30 nos. 9, 10 and 11, and Fig 31 no. 2).

Necked vessels with a band of oblique comb-stamping or incision below the rim followed by multi-comb-stamped or incised arcades and chevrons combined with colour.

Class 4. Total 1 (Fig. 31 no. 3).

A constricted pot with a band of oblique slash below the rim, followed by multiple incised arcades, vertically split by incised lines.

Class 6. Total 2 (Fig. 32 nos. 6 and 7).

Bowls with a single band below the rim. Bodies externally red or black and internally black.

Class 7. Total 32 (Fig. 32 nos. 2, 3, 4, 5, 8, 9 and 10).

Bowls with multiple bands of oblique or horizontal comb-stamping, incision or punctates, separated by bands of colour. Chevrons can occur in the lower position. Most bodies coloured red and all internally black.

Class 8. Plain vessels

Profile 1, total 78 (Fig. 33).

Profile 2, total 7 (Fig. 3).

Profile 3, total 33 (Fig. 32 no. 1).

Twenty-nine fragments are allocated to probable classes (Table 11). The stylistic classes crosscut the size of the vessel as represented by mouth diameter. Apart from one class 7 and three class 8 vessels found on the hut floor, the rest of the assemblages came from the surface. The analysis, however, shows that there is stylistic unity within the whole assemblage.

Other clay artefacts

One gourd stopper with a 50 mm diameter was located on the hut floor.

Metal artefacts and evidence of metal working

Slag and tuyère fragments were scattered throughout the site but, apart from the crucible furnace, no smelting area was located. A dump of 30–40 cm long tuyère pieces was found in the rockfall. Most of the ore was haematite in the form of smoothed pebbles, within addition mined, angular haematite. A few pieces of malachite were noted on the surface and immediately to the east of the hut floor four large lumps of tin ore were found.

The few pieces of iron found on the site were well preserved. The awl found on the hut floor was 87 cm long, with a square section and one pointed end (Fig. 34 no. 4). Another 5 cm long round sectioned, chisel like rod was found on the surface (Fig. 34 no. 3). A tapered, square sectioned bar of iron may have been an adze and a flat sheet of metal may have been the blade of a hoe (Fig. 34 nos. 2 and 5).

An iron forging hammer was also found on the surface (Fig. 34 no. 1). In its present condition the hammer head is 96 mm long. However, both ends have seen a lot of use with the result that they are splayed and flattened back towards the centre of the hammer. The hammer is 32 mm wide and 22 mm thick. The hole for the handle is about 12 mm wide and is positioned slightly off centre. Metallographic analysis of a fragment of the hammer shows that the whole was made by forging together smaller pieces of iron (Mavrocordatus, 1981).

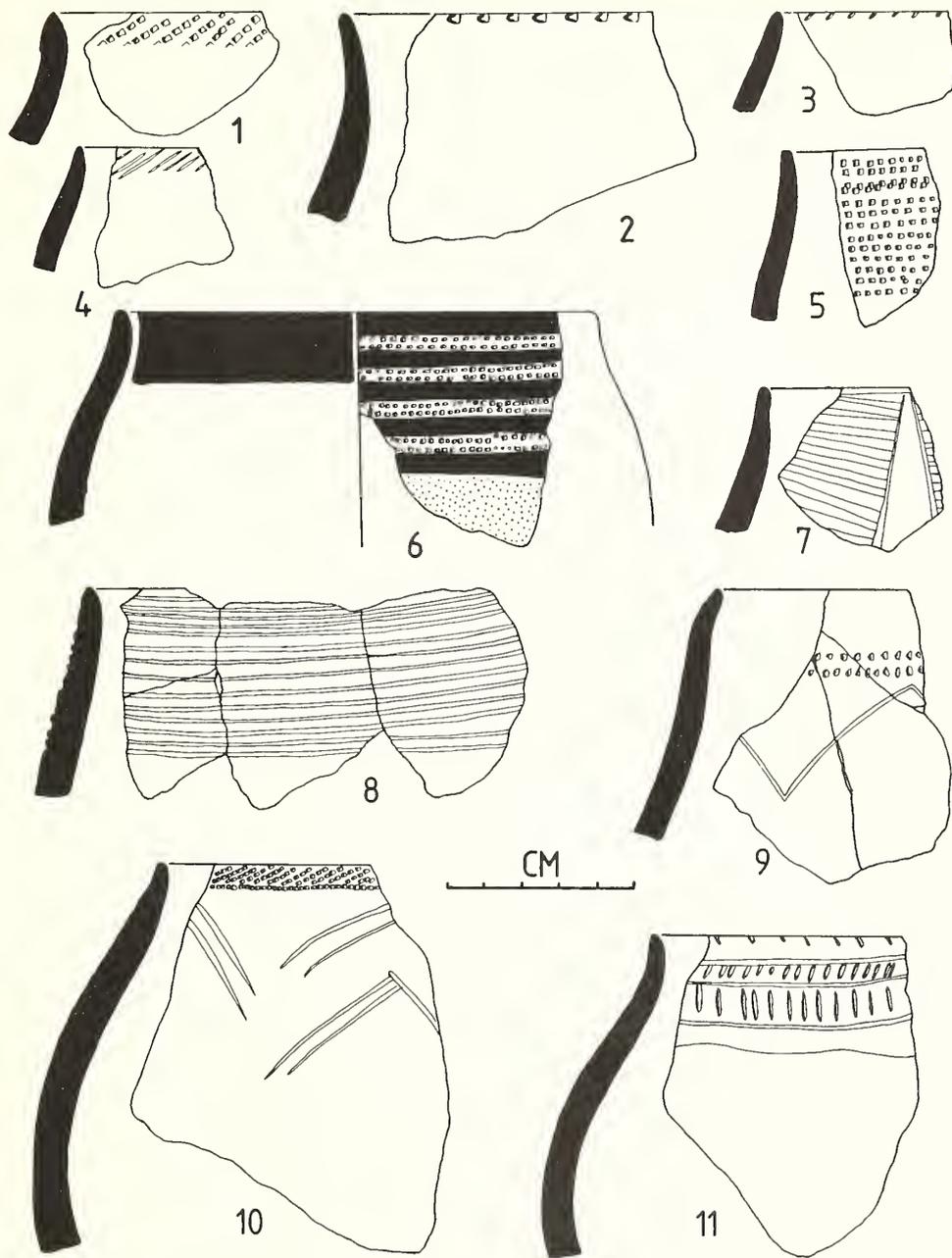


Fig. 30. Class 1, 2 and 3 vessels from 3/79.

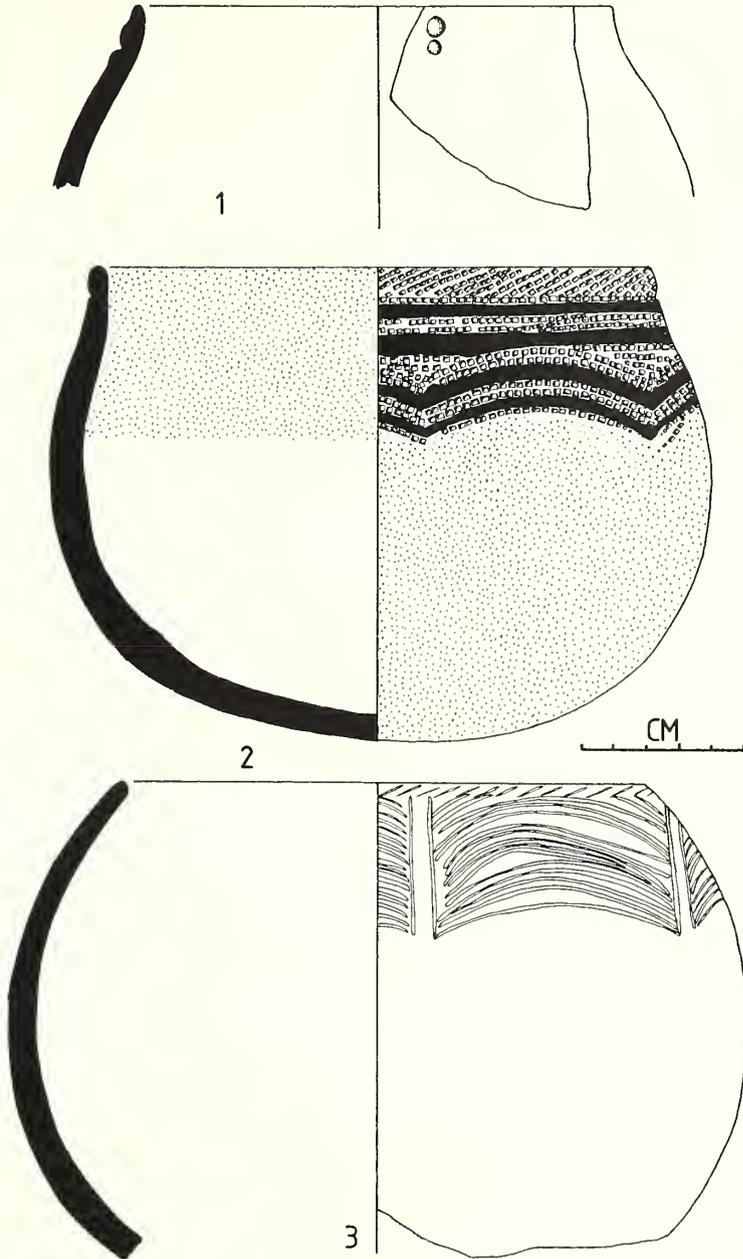


Fig. 31. Class 2, 3 and 4 vessels from 3/79.

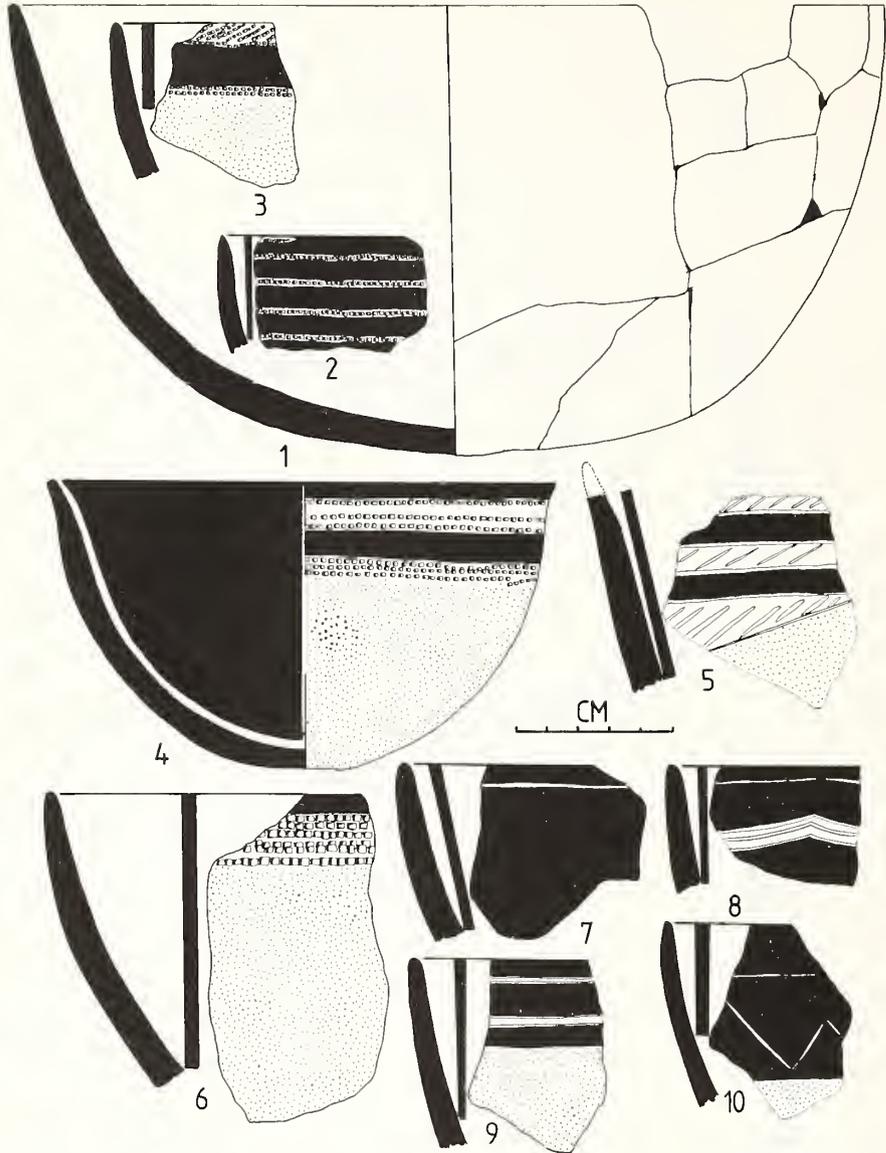


Fig. 32. Class 6, 7 and 8 vessels from 3/79.

Shell

Fragments of fresh water mussel were noted on the surface and one cowrie shell was found on the site.

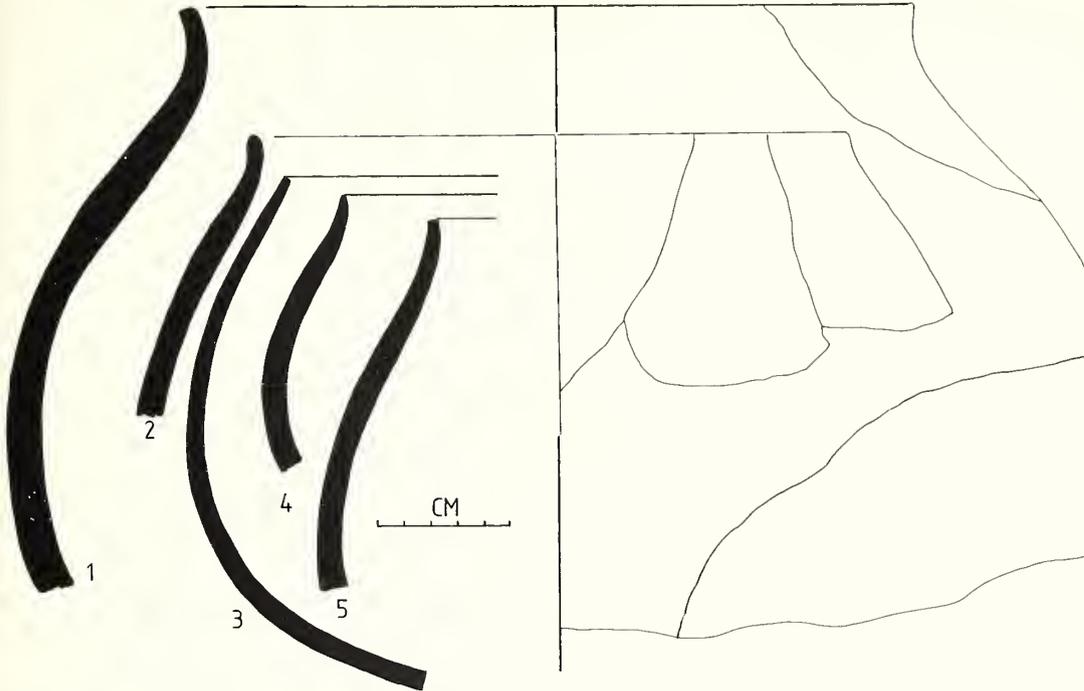


Fig. 33. Class 8 vessels from 3/79.

EXCAVATIONS AT RHENOSTERKLOOF VALLEY FLOOR SITE 101/78

DESCRIPTION OF SITE

Site 101/78 (24° 39' S, 27° 43' E) was built straddling the basal contour around the eastern tip of a 6 km long ridge. (Figs 1 and 35). The basal contour lies at 1 100 m above sea level and the highest point on the ridge above the site is about 1 175 m. The Sand River cuts through a major ridge 2,5 km to the east on its way to join the Crocodile River in the west.

The stone walls are built intermittently in a 1 km arc around the base of the hill. The site is built upon the quartzites and shales of the Transvaal System and the former rock makes up the primary building material. Walls are poorly built and badly preserved and stand no higher than 0,6 m. The dominant structures on the site are isolated enclosures strung out parallel to the hill contours. Occasionally two may be joined together. The enclosures, situated at the foot of a rubbly scree slope, tend to be the highest features on the hill. Ash heaps are preserved on flatter ground below.

EXCAVATION PROCEDURE

No hut floors were preserved at the site, so excavation concentrated on two ash heaps, one banked against a wall and the other isolated (Fig. 35). Excavation was by 5 cm spits and controlled by 1 m² grids. One small test pit was dug within a kraal.

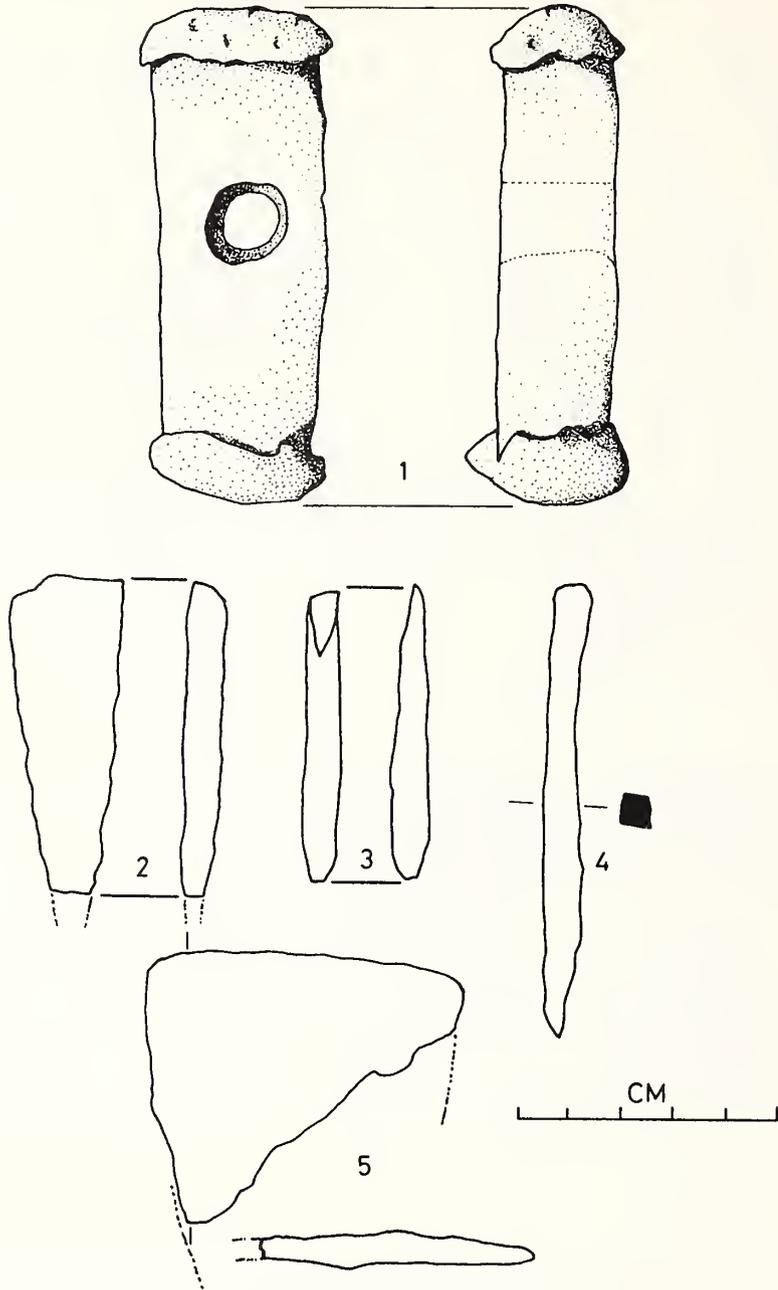


Fig. 34. Iron artefacts from 3/79.

STRATIGRAPHY

Three components were visible in the general stratigraphy:

1. The surface soil of the site which was light brown and sandy but became darker beneath vegetated areas.
2. Ash heaps and stone walls.
3. The rubbly scree slope, sterile soil and bedrock.

FEATURES

Ash heap I was specifically chosen for excavation because it banked against a stone wall on the upslope, northern and western sides. (Figs 35 and 36). A dense copse of *Acacia* sp. was growing on the deposit and the ash was riddled with roots. Excavation to the base of D3 and D4 showed that the ash and the wall shared the same floor. In all, 10m² of deposit was removed to an average depth of 35 cm. Stratigraphy was simple and was composed of three layers:

1. A dark grey humus ash.
2. A light grey, rubbly main ash body.
3. Rubble, sterile red soil and bedrock.

Ash heap II lay to the east of ash heap I on flat open ground (Figs 35 and 37). The deposit was marked by a slight mound, the lateral extent of which, however, remained unknown. A total of 12 m² was excavated to an average depth of 35 cm. Four layers were recognized:

1. A compacted rubble and near sterile reddish ash.
2. Discontinuous light grey ash pockets.
3. Discontinuous darker and coarser ash.
4. Rubble, bedrock and sterile red soil.

A charcoal sample from C3/25-30 was dated to AD 1640 ± 40 (Pta-2847). When calibrated the date could fall between AD 1490 and 1620 (Vogel, 1971).

Only 2 m² was excavated to a depth of 30 cm in the kraal excavation. Stratigraphy consisted of a sterile light grey ash lying on bedrock.

A paved area with a 1,5 m diameter, 10 m to the north of ash heap II, may have been a grain bin base.

FINDS

Pottery

The quality of the pottery was poor, both in terms of manufacture and decoration and most vessels were crumbly.

The assemblage comprises a minimum of 140 vessels. Of these 66,2% are necked vessels, 29,3% are bowls and 4,5% are constricted pots. Twenty one motifs were counted, 10 found in decoration area 1, and 11 in decoration area 2, one of which was continuous onto the body (Figs 3 and 38). Most of the decoration was incised (60%), followed by comb-stamping (23,3%). Then punctates (13,3%) and lastly punctates with incision (3,3%). Fifteen percent of the assemblage is decorated. Rims were predominantly round (67,9%), followed by square (23,1%), then cut away internally (6,0%) and lastly externally thickened (3,0%).

Combinations of decoration areas produced two layouts.

Layout 1—Decoration area 1.

Layout 2—Decoration areas 1 and 2.

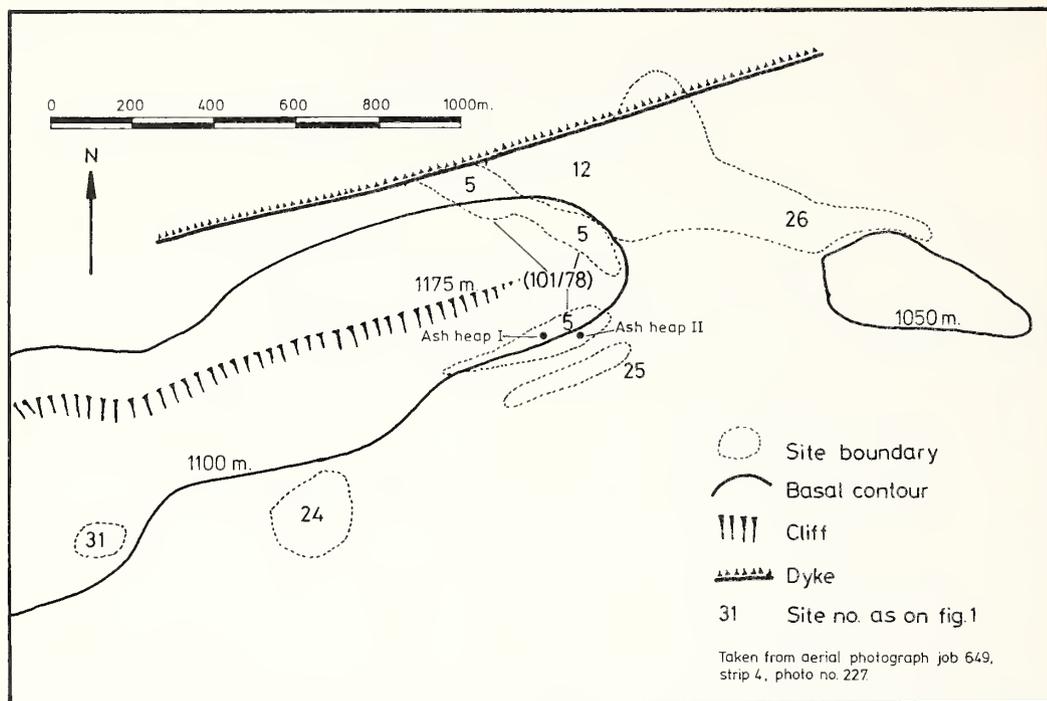


Fig. 35. Plan of site 101/78 and surroundings.

Necked, constricted, and hemispherical profiles were present in the assemblage and the intersection of these with layouts produced six classes (Table 12). One hundred and thirty-one vessels could be placed within a class, the remaining nine vessels could only be placed in probable classes. Classes identical to those previously established at 131/78 and 3/79 are given the same class number.

Class 1. Total 1 (Fig. 39 nos. 4 and 9).

A jar with oblique incision on the rim.

Class 3. Total 4 (Fig. 39 nos. 1, 6 and 8).

Necked vessels with a band of horizontal comb-stamping below the rim followed by comb-stamped arcades on the neck and shoulder. The arcades may alternate with colour. Bodies coloured red and all internally black.

Class 4. Total 2 (Fig. 39 no. 7, Fig. 40 no. 5).

Constricted pots with either an obliquely incised band with a chevron below or black colour externally. Number 3 in Fig. 41 may belong to this class but the sherd is too small for accurate classification. If, however, the single band of decoration is all it had, it belongs to a new class.

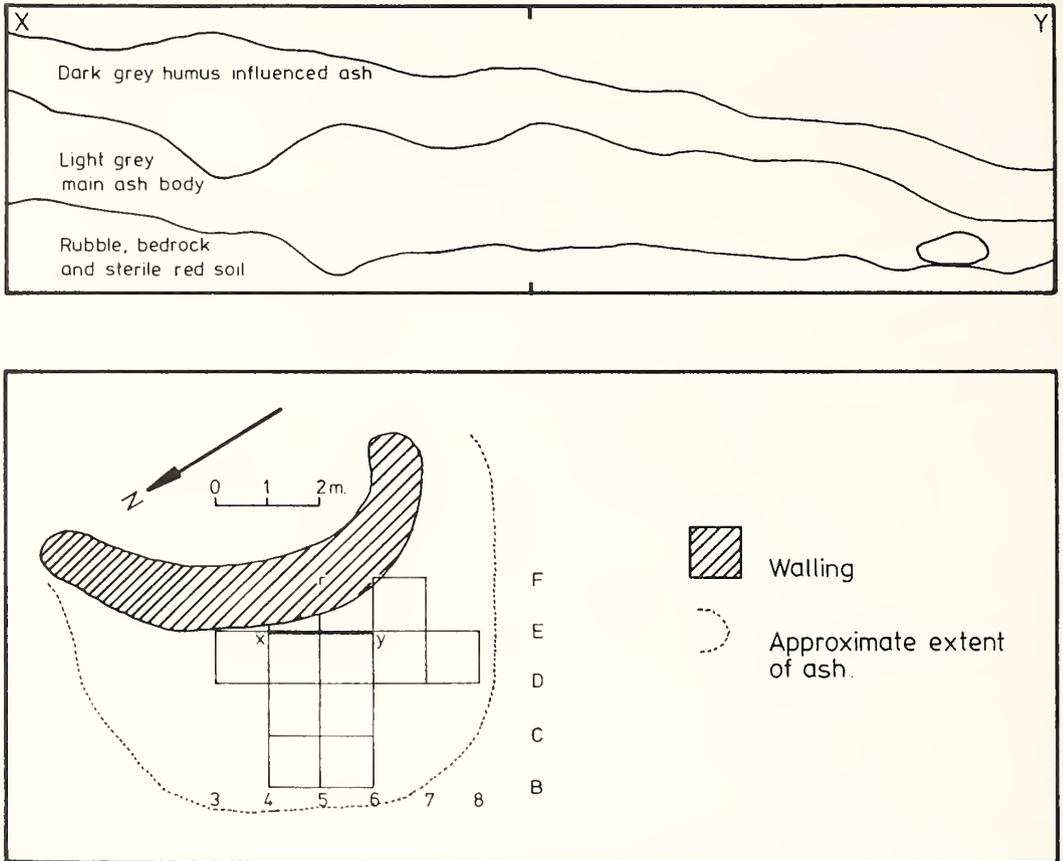


Fig. 36. Plan and section of ash heap I at 101/78.

Class 7. Total 3 (Fig. 41 nos. 4 and 5).

Bowls with bands of punctate, incision or colour.

Class 8. Plain vessels.

Profile 1, total 81 (Fig. 40)

Profile 2, total 6

Profile 3, total 35 (Fig. 41 no 6).

Other than the jar from II/A2/20-25 (Fig. 41 no. 7) which appears to be a RU-2 vessel, the sample is homogenous.

Other clay artefacts

All three gourd stoppers found came from ash heap I (Table 13). They are well made discs with diameters of 22,5; 3,5 and 5 cm.

HALL: EXCAVATIONS AT ROOIKRANS AND RHENOSTERKLOOF

TABLE 13. Provenience of other clay objects from 101/78.

x = fragment. () = minimum number.

	GOURD STOPPERS	ABRADED POTSDHERDS	TOY-POTS	CATTLE FIGURINES	PIPES	INDETERMINATE
I/A4/20-25	1					
I/B2/0-5		1				
I/B4/5-10				x		
I/C4/0-5			x			
I/C4/5-10			x			
I/C4/10-15	1		x	x		
I/C5/10-15			x			x
I/C5/15-20			x	x		
I/D3/0-5				x		
I/D3/10-15				x		
I/D3/15-20				x		
I/D4/0-5				x		
I/D4/5-10		1		x		
I/D4/20-25				x		
I/D5/15-20				x	x	
I/D6/5-10					x	
I/D7/10-15			x			
I/E6/10-15	1	1				
I/E6/20-25			x			
II/A1/0-5		1				
II/A2/5-10		1				
II/A2/20-25		2				
II/A3/5-10		1				
II/A3/10-15		1			x	
II/A4/15-20		1				
II/B1/25-30			x			
II/B2/0-5						x
II/B2/5-10		1		x		
II/B2/10-15				x		x
II/B2/15-20						x
II/B2/30-35		1				
II/B3/15-20		1				x
II/B4/25-30				x		
II/C1/15-20		1				
II/C2/20-25		1				
II/C4/20-25		1				
TOTAL	3	16	(5)	(7)	(3)	(4)

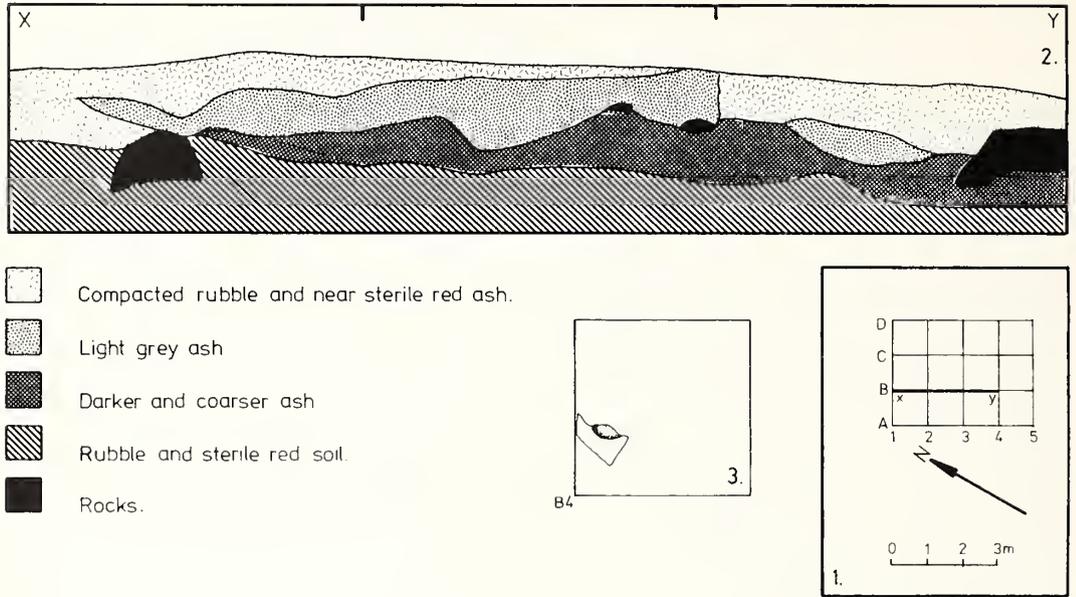


Fig. 37. Plan and section of ash heap II at 101/78.

A total of 16 abraded potsherds was recovered, three from ash heap I and 13 from ash heap II (Table 13). Usually only one arced edge has been abraded and the potsherds are small. There is one large oval shaped potsherd measuring 10,5 cm by 6,5 cm from II/A3/10-15, which was abraded around most of its edge and could be held comfortably in the hand.

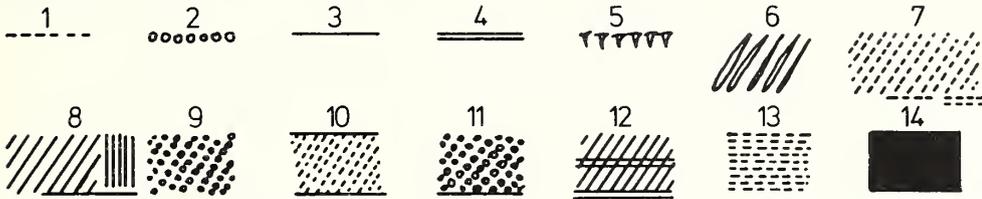
Small, crudely made and poorly fired pots were represented by 23 fragments (Table 13, Fig. 42 no. 7). These vessels have been called 'toy pots' and are possibly the play objects or introductory attempts at potting by young children. The fragments give a minimum count of five vessels. Most of the pots are small, with mouth diameters of no more than 10 cm. The surface finish is lumpy and often finger impressions are visible. All vessels are equivalent to profile 3 and none is decorated.

Clay animal figurines, probably all depicting cattle are represented by 18 fragments in ash heap I, which gave a minimum count of six individuals. Four fragments in ash heap II came from a single figurine (Table 13, Fig. 42 nos. 1, 2 and 3). Most fragments recovered were either horns or legs. The quality of the figurines ranged from poorly made and fired animals to well made and well fired.

From ash heap I, two pieces of clay pipe bowl were found, which belonged to two separate pipes (Table 13, Fig. 42 nos. 5 and 6). The mouth diameter of one measured 15 mm. The pipes were unfired and crumbly. A single pipe fragment came from A3/10-15 in ash heap II.

An indeterminate round cake of thumb impressed clay came from II/B2/10-15 (Table 13, Fig. 42 no. 4). Two pieces of fired and curved clay with a 1 cm width from II/B2/0-5 may have been a handle. Another tube of fired clay was found in I/C5/10-15.

DECORATION AREA 1



DECORATION AREA 2

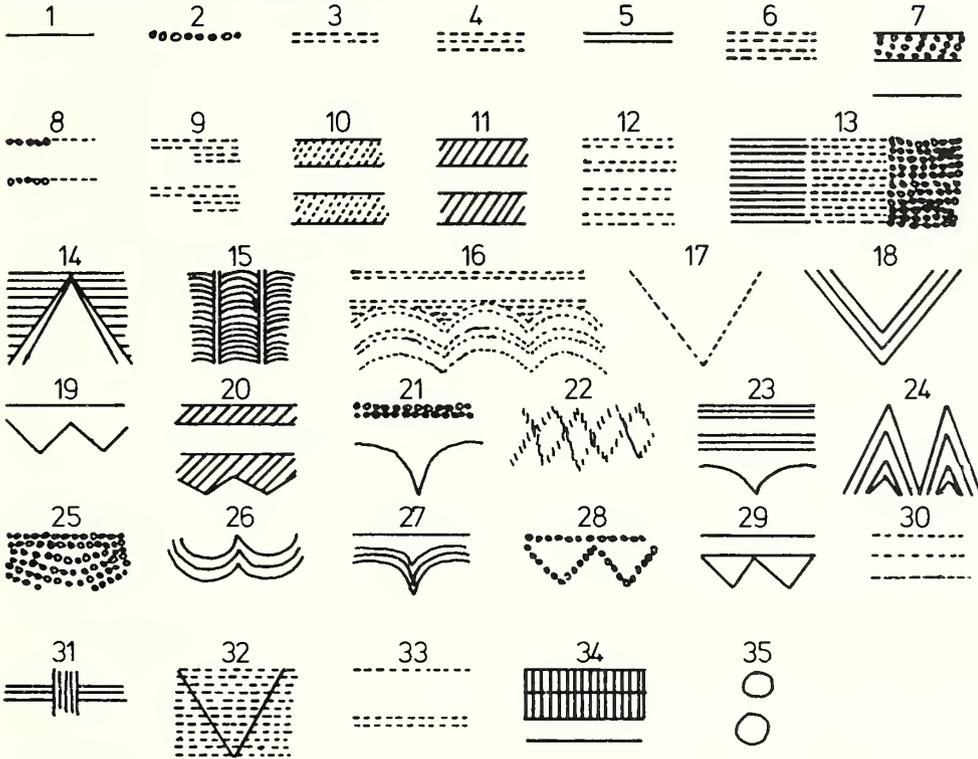


Fig. 38. RU-4 motifs from 101/78.

Ostrich egg shell and slate beads

A total of 384 beads was recovered. Four were made of slate and the rest of ostrich eggshell (Table 16). Beads with ochre on one or two sides were common. The sizes of beads ranged from 4–15 mm across but the most frequent sizes were 6–10 mm. Three pieces of un-worked ostrich eggshell were found, two from ash heap I and one from the surface. Another piece may have been a roughout bead.

TABLE 14. Abraded bone from 101/78.

Type	Ash heap I	Ash heap II
rib abraded one end	18	41
rib abraded both ends	3	15
shaft abraded one end	43	32
shaft abraded both ends	17	6
Abraded scapula	6	5
Abraded mandible		1
Abraded skull frags		1
TOTAL	87	101

TABLE 15. Provenance and length of bone beads from 101/78.

Provenance	No	Length
I/C4/15-20	1	15 mm
I/C5/15-20	1	35
I/D3/5-10; 15-20	1	20
I/D4/15-20	1	30
I/D5/20-25	1	17
II/A4/15-20	1	roughout
II/B2/5-10	2	15 and 28 mm
II/B2/15-20	1	20 mm
TOTAL	9	

TABLE 16. Beads from 101/78.

Type	Ash heap I	Ash heap II
Ochred on 1 side	118	16
Ochred on 2 sides	57	17
uncoloured	92	15
charred	21	16
Broken	24	6
Slate beads	4	
TOTAL	316	70

Metal artefacts and evidence of metal working

Slag and tuyère fragments were scattered throughout the site but were concentrated in two places, one being 50 m north of ash heap II, and the other immediately upslope from ash heap I. Both dumps were situated close to stone walls and although no intact furnaces were found, there were large lumps of slag encrusted furnace daga lying around. Iron ore was found everywhere and was mostly in the form of haematite pebbles, though ferricrete was present as well.

Seventeen pieces of iron and one piece of copper were recovered (Table 17). Most of the awls were broken. The best example, from II/A3/20-28, was 10,5 cm long, tapered, with the thickest end slightly bossed and square in section (Fig. 44 no. 5). Another broken awl with a well made boss was found in II/A3/5-10. (Fig. 44 no. 7). The other rods and awls were badly corroded but were generally square in section (Fig. 44 no. 3). Two bangles were found in ash heap II. Both bangles were open with strongly bossed ends. The circlet of that from II/C5/0-5 was made from two separate strands of twisted iron (Fig. 44 nos. 4 and 6). A fragment of curved iron from I/D6/0-5 was also probably from a bangle. Two blades were found, one being a badly corroded bell-shaped blade with a short tang, from II/C5/0-5, which may be a razor. The other is a razor, which had the end of the tang bent over and was found in I/D4/20-25 (Fig. 44 nos. 1 and 2). The only piece of copper came in the form of a short, tightly coiled length of fine wire and is possibly the remains of a bound grass bangle.

Stone artefacts

Upper and lower grindstones excavated from the ash heaps were fragmentary and made of quartzite (Table 18). Several complete lower grindstones were scattered on the surface in the vicinity of ash heap II and lower grindstones were found all over the site. Two burnishers found in the excavations, both made from diabase, were small and highly polished. One from I/D3/0-5 had six smoothed sides.

A fragment of smoothed stone of indeterminate material from II/B2/5-10 may be a fragment from a pipe bowl. Two pieces of banded ironstone were utilized and the one from II/B4/25-30 had been struck and abraded around an edge. A small 3 cm long quartzite pebble was smoothed at both ends and the point of a quartz crystal may have been utilized. A soft, friable ferricrete was common in all levels of both ash heaps, as were pieces of poor quality graphite. A prehistoric graphite mine is known from the western flanks of Kwa-Maletse 12 km to the north-west (Fig. 1 no. 30).

Faunal remains

The faunal remains, except for the modified bone such as the abraded bone, bone beads and the ivory bracelet, were examined by I. Plug of the Transvaal Museum (see Appendix 1). The most notable feature of the assemblage is the high number of domesticated animals.

Abraded bones were common, 87 being found in ash heap I, and 101 in ash heap II (Fig. 43 nos. 1, 2, 3, 4 and 5, Table 14). There appears to be no absolute preference for either ribs or long bone flakes. The maximum length of abraded ribs was about 20 cm and generally abraded flakes were much smaller. Ribs were abraded in a flat arc across the end of the bone while bone flakes tended to be more pointed. The skull and mandible fragments may have been broken ornaments.

A minimum of nine bone beads was counted from 10 pieces (Fig. 43 nos. 7, 8, 9 and 10, Table 15). As far as could be determined most bone beads were made from meta-carpal or

TABLE 17. Provenance of metal artefacts from 101/78.

Provenance	Awl/Rod	Bangle	Razor	Copper	Indeterminate
I/A3/10-15					1
I/C4/10-15	1				
I/C4/15-20	1				
I/D4/20-25			1	1	
I/D6/0-5		1			
I/D5/15-20					2
I/E6/5-10	1				1
II/A2/5-10		x			
II/A3/5-10	2				
II/A3/20-25	1				
II/B2/5-10	1				1
II/C2/0-5		x			
II/C5/0-5		1	1		
TOTAL	7	3	2	1	5

x = fragments

TABLE 18. Modified stone from 101/78. (Brackets indicate a fragment).

Provenance	Up.Grindst.	Low.Grindst.	Burnishers	Misc.
I/B4/0-5				utilized slate
I/D3/0-5			1	utilized quartz crystals
I/D6/0-5				utilized quartz crystals
I/E6/5-10	(1)			
II/A2/5-10				smoothed qtz. pebble
II/A3/25-30	1		1	
II/B1/25-30	(1)			
II/B2/5-10				pipe bowl
II/B4/20-25	(1)	(1)		
II/B4/25-30				abraded banded iron stone
II/C2/10-15	(1)			
II/C4/0-5				utilized banded iron stone
II/C4/25-30	(1)	(1)		
TOTAL	1 (4)	(2)	2	

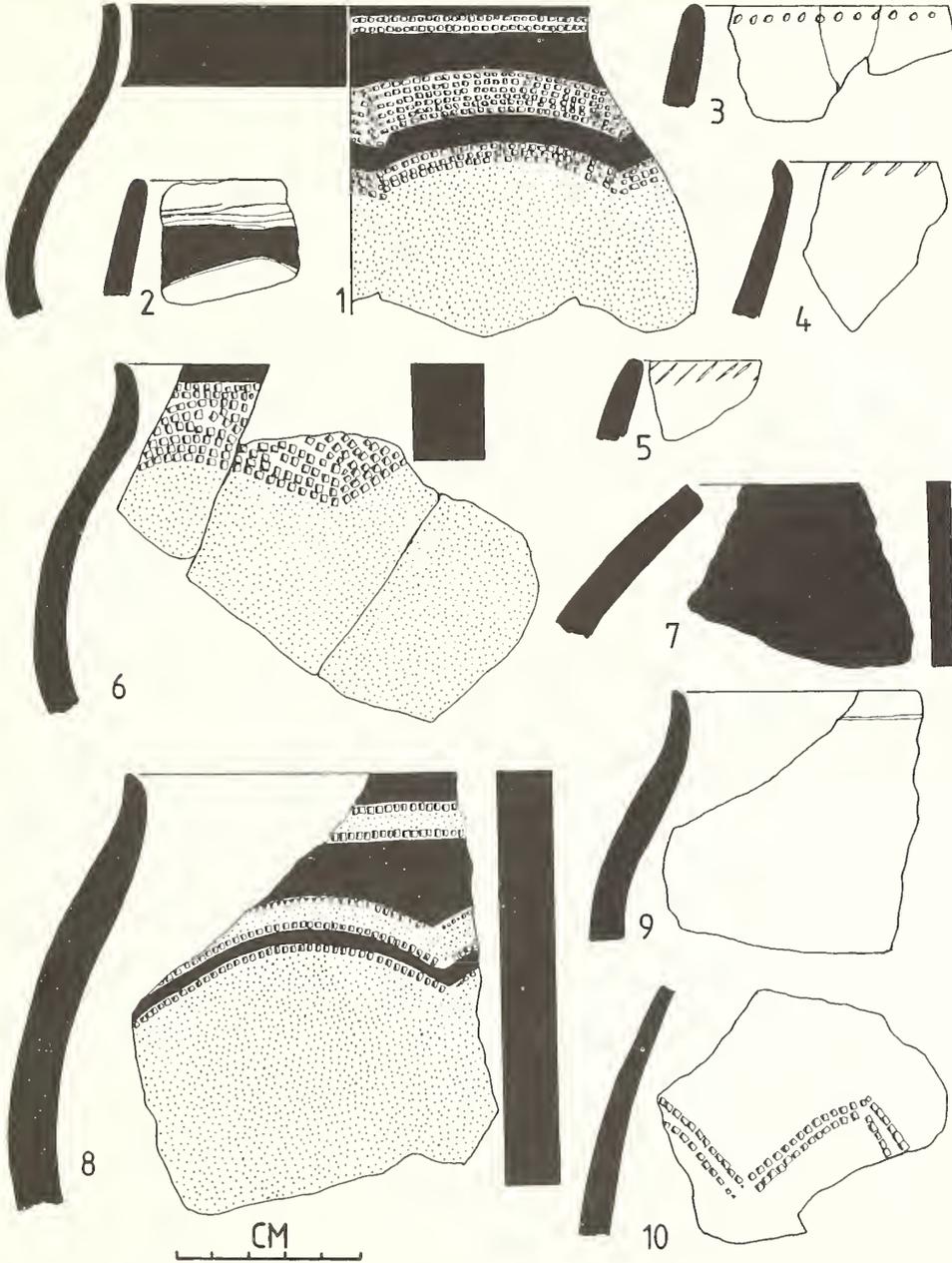


Fig. 39. Class 1, 3 and 4 vessels from 101/78.

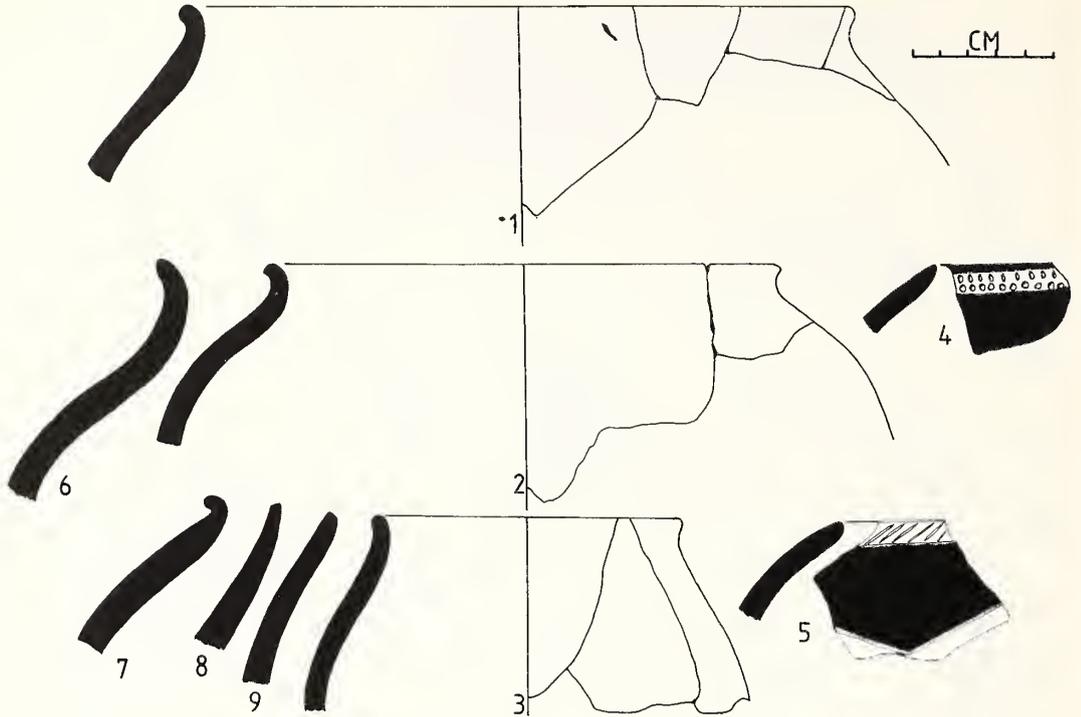


Fig. 40. Class 4 and 8 vessels from 101/78.

meta-tarsal shafts. The 28 mm long bead from II/B2/5-10 may have been made from the long bone shaft of a bird. The bead from I/D4/15-20 retained the proximal articular surface of a meta-tarsal bone intact. The rough-out from II/A4/15-20 illustrates well the cut and snap method of manufacture. All beads were smoothed around the ends and one from I/C4/15-20 was grooved around the circumference 2 mm below one end. Possibly this bone was intended as a pendant rather than a bead.

Part of an ivory armband came from I/D5/15-20 (Fig. 43 no. 6). It had an internal diameter of about 9 cm and was 5 mm thick. The surface was encrusted with cemented ash but had been well polished all over. A bovid tooth was recovered from I/C5/15-20 which had been grooved just below the crown and was probably intended as a pendant (Fig. 43 no. 12). One fragment of fresh water mussel shell was clearly abraded on one side (Fig. 43 no. 13).

COMPARISON BETWEEN ROOIKRANS AND RHENOSTERKLOOF SITES

Before comparing the RU-4 ceramics with assemblages from elsewhere in the Transvaal and the Orange Free State, it is interesting to examine the similarities and differences between the sites excavated and described here. Rooikrans and Rhenosterkloof were built by their inhabitants in two distinctly different localities, Rooikrans being situated on a steep and rugged

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TABLE 19. No. of pottery classes present at each stone wall site.

	Hill top 131/78	Hill top 3/79	Valley floor 101/78
Class 1	38	5	1
2	17	16	
3	9	9	4
4	1	1	3
5	1		
6	2	1	1
7	39	32	
No. of classes present	7	6	4

TABLE 20. Comparison of vessel classes at each stone wall site, expressed as a percentage of presence/absence.

	131/78	3/79	101/78
131/78			
3/79	92		
101/78	73	80	

hill, whereas Rhenosterkloof was sited around the gentle basal contours of a small hill. Although the sample of recorded stone wall sites is small, the sites found in these contrasting situations generally showed different designs in the way the stone wall component of the sites was laid out. To recapitulate, what has been called the hill top mode (Rooikrans) had primary circular enclosures which in turn were enclosed by surrounding walls, whereas at Rhenosterkloof the walling was composed only of isolated primary enclosures and occasionally two of these could be joined together (Fig. 2). Considerably more survey and mapping work will have to be done in order to determine whether this is an enduring pattern, but for the present purposes these differences indicate that a comparison between the two sites is worthwhile.

When the pottery is compared an initial difference is evident. The valley floor mode pottery is of poorer quality than and shows a smaller amount and range of decoration than the hill top mode pottery. This, however, may be simply a product of the smaller sample. Other comparisons are as follows.

	131/78 Hill-top mode	3/79 Hill-top mode	101/78 Valley floor mode
Profile 1	73	59,7	66,2
Profile 2	3	4,4	4,5
Profile 3	24	35,9	29,3
% decorated	20	34,8	15
no. of motifs	72	49	21

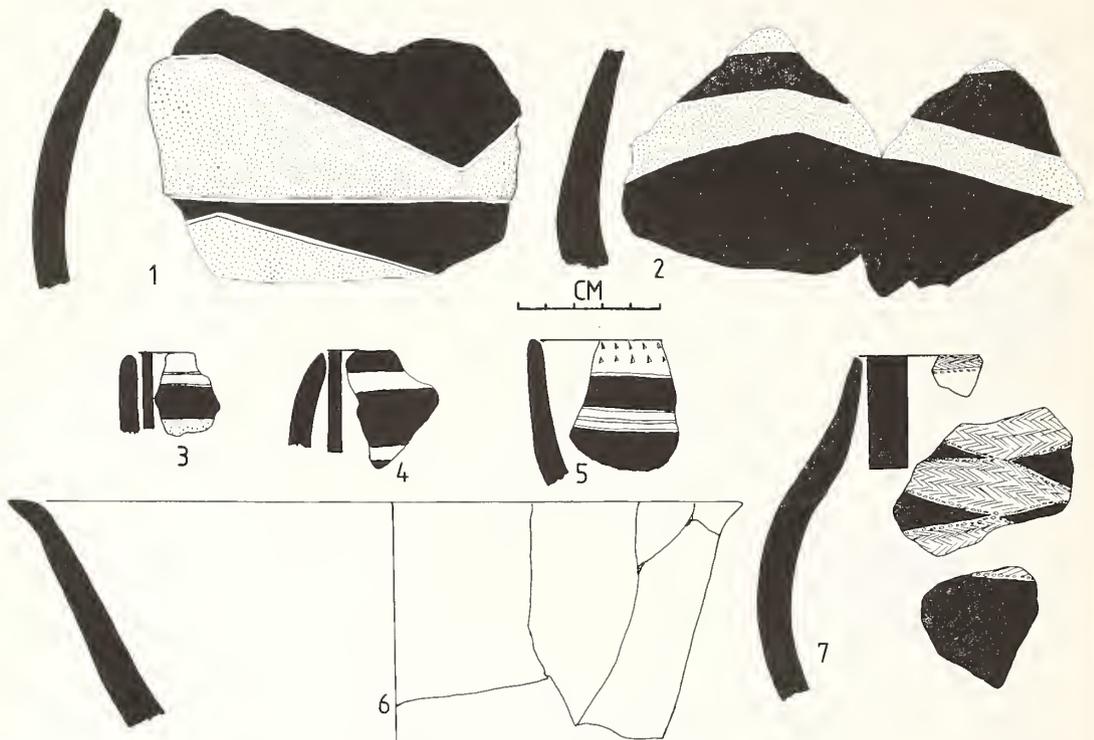


Fig. 41. Class 7 and 8 vessels from 101/78.

The ratio between the profiles at each mode is consistent. There is a decrease in the amount at the valley floor mode (230 plain sherds per m^3 as composed with 380 per m^3 at the hill top mode). Of the seven stylistic classes, defined for hill top site 131/78, six were present at the other hill-top site and only four at the valley floor mode site (Table 19). Two classes absent at the valley floor mode were common on the hilltop.

Following Taylor (1979) the degree of relationship between stone wall sites was calculated using the presence or absence of stylistic classes. Each percentage in the matrix was calculated by dividing the total number of classes present at each pair of sites, into double the number of classes common to each pair (Table 20).

The largest samples at the hilltop sites allow recognition of the close similarity between them. They clearly belong together. The relationship between the two modes is also high but the smaller sample from the valley floor mode makes it advisable to compare individual traits.

At the valley floor site, incision is dominant over comb-stamping to a considerable degree and rim-nicking is completely absent. Furthermore, the motif theme of horizontal lines, a persistent feature at the hill-top mode, is completely absent at the valley floor site and stamped jars have only arcade motifs and no chevrons. The arcades at the valley floor site are always preceded by a horizontal band below the rim but at the hill top mode, arcades are preceded by oblique stamping and it is the chevrons which combine with the horizontal lines. Oblique stamping, a dominant feature at the hill top mode, is completely absent at the valley floor site.

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TABLE 21. Qualitative inventory of material from Rooikrans 131/78 and Rhenosterkloof 101/78.

ITEM	ROOIKRANS	RHENOSTERKLOOF
Site type	LIA stone wall	LIA stone wall
Date	17th C	17th C
Locality	Hill top	Valley floor
Affinities	Uitkomst like	Uitkomst like
Pottery	Much, well made	Little, poorly made
Smelting debris	Present	Present
Melting debris	Present	Absent
Smithing tools	Present	Absent
Iron	Present	Present
Copper	Present	Present
Tin ore	Present	Absent
Burials	Present	Absent
Bone ornaments	A few	Many
Beads	A few	Many
Abraded bone	A few	Many
Cow figurines	Absent	Present
Toy pottery	Absent	Present
Clay pipes	Absent	Present
Protein herded	66,4%	94,8%
Protein wild	32,8%	1,0%
Activity herded	35,7%	64,0%
Activity hunted	52,4%	28,0%
Age classes: Cattle	All ages	Young and old only
Age classes: Sheep	All ages	All ages
Bone density	Lower	Higher
Bone fragmentation	Higher	Lower

Rims at the valley floor site tend to be more strongly everted than at the hill top mode. The valley floor mode pottery appears to be a simpler expression of the hill top mode and the differences between the two, in terms of specific traits, may be real. However, the small sample from the valley floor site makes it safer not to split them. Huffman (1980) has shown that within an ethnic group large stylistic gaps are apparent between villages, no one being stylistically completely representative. In this light, too much should not be made of the variability between the Rooikrans and Rhenosterkloof ceramics.

Having established that stone wall sites may be sub-divided in the Rooiberg area by locality and site layout, but that we cannot safely make any cultural distinctions, examination of Table 21 suggests that although generally similar mixed economies were practised (no direct evidence for crops was found, however) interesting differences in the emphasis of the economies is apparent. Two main emphases are suggested by the list, one being in the range of metal working debris and the other in the composition of the faunal assemblages.

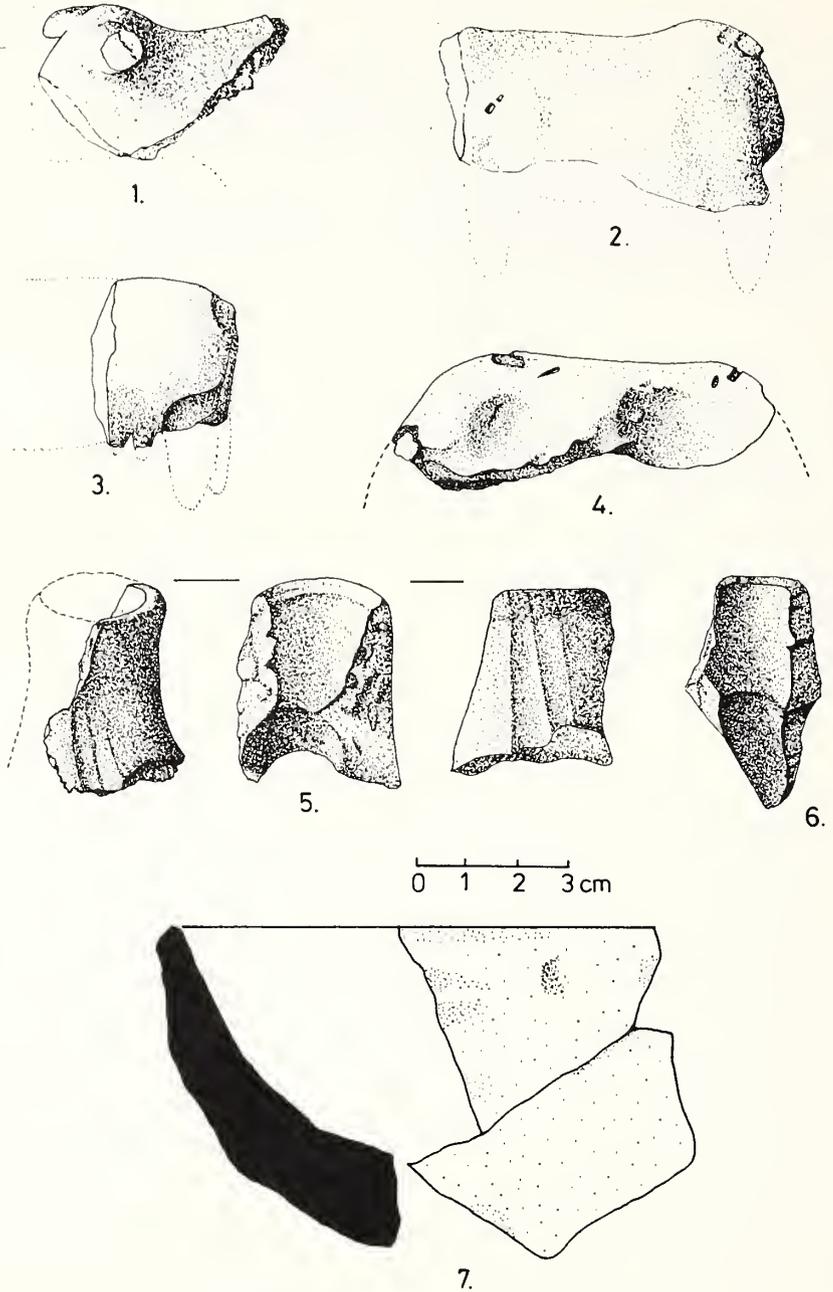


Fig. 42. Figurines, pipes and toy pottery from 101/78.

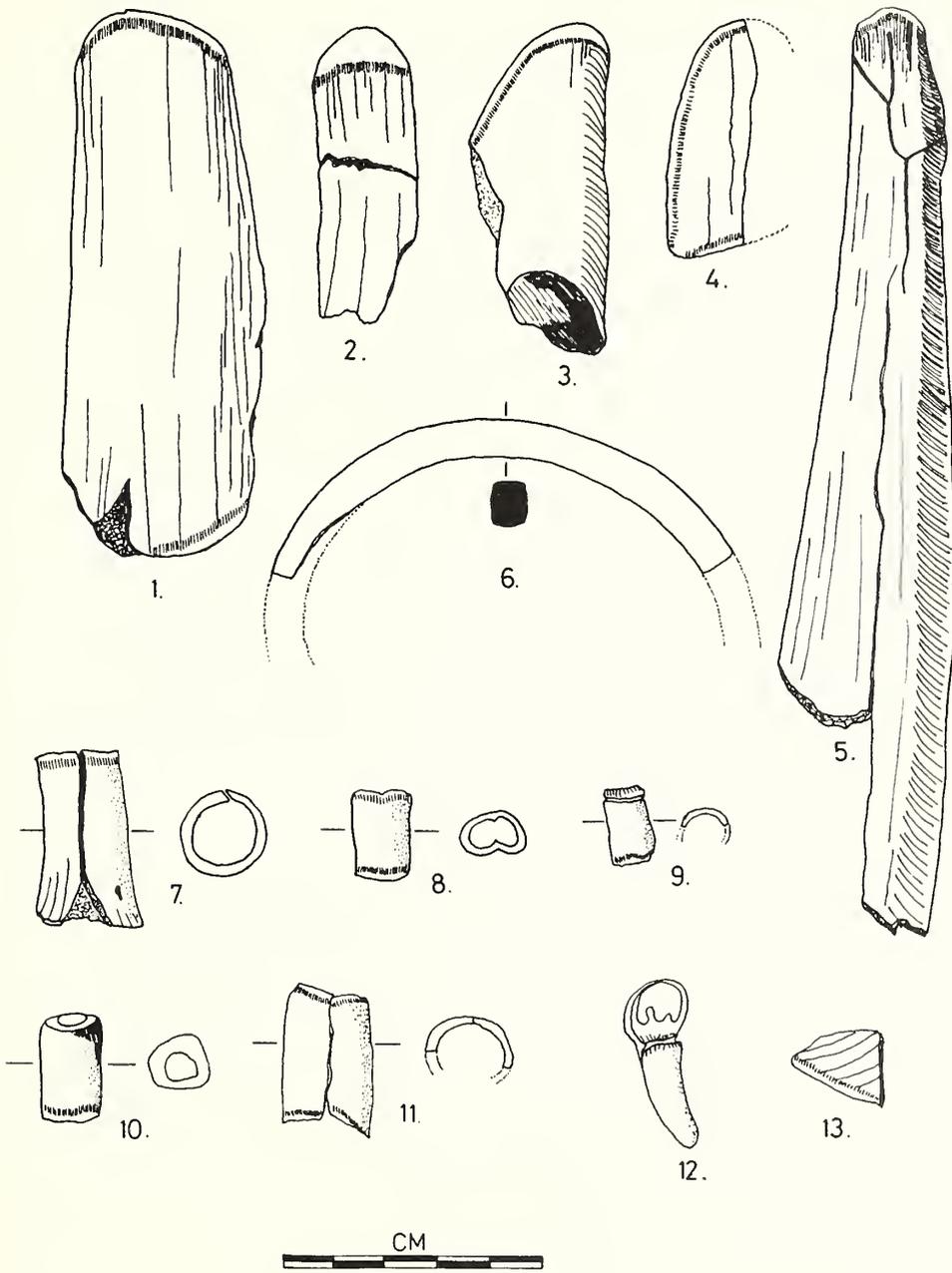


Fig. 43. Worked bone and shell from 101/78.

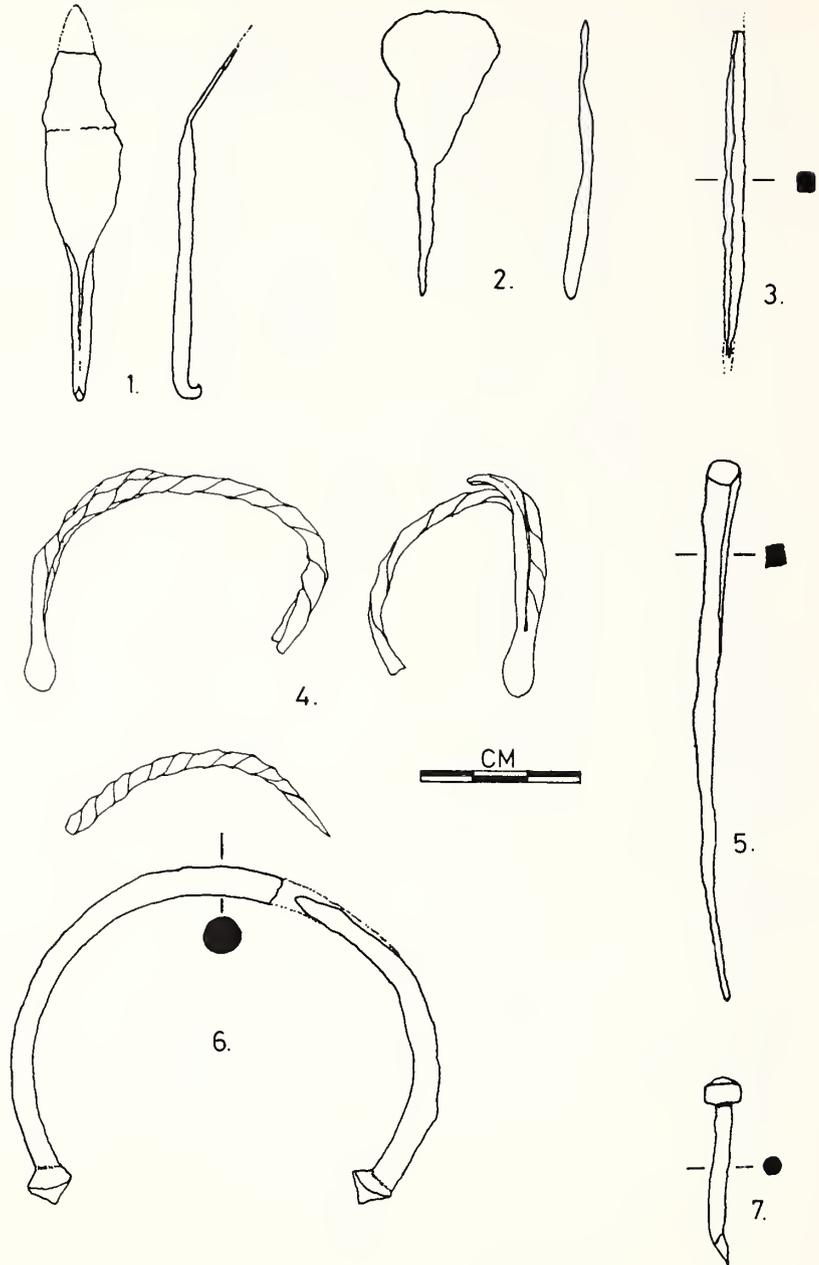


Fig. 44. Iron artefacts from 101/78.

In terms of the metal working there are slight grounds for suggesting that the hill top mode witnessed a greater variety and intensity of metal working. For example, the crucible sherds, crucible furnace and tin ore were found at the hill top sites and not at the valley floor site. It was also a general impression that more slag and tuyère debris was present at the hill top mode. These differences are not the result of sampling.

Turning to the faunal assemblages, it is apparent that although the hill top mode provided a larger faunal sample, the density of the bone was lower (600 grams per m³) compared with the valley floor mode (2 500 grams per m³). Also a crude fragmentation index, calculated by dividing the total bone weight by total bone number, shows that on average the hill top bone is more fragmentary (2,3 grams per bone) than at the valley floor mode (5 grams per bone). The lower fragmentation at the valley floor mode may be the result of either preservation and/or length of occupation. Certainly, the smaller and shallower ash heaps at the valley floor site suggest a shorter occupation than at the hill top site. In this light, the higher density of bone at the valley floor site is remarkable and, as the species list shows, underlines a more intense use of domestic herds.

Examination of the species list (Appendix 1) shows that less dependence was placed upon domestic herds for protein at the hill top mode (66,4%). This figure is low when compared with the range of 82 to 98% obtained from other Iron Age sites in the Northern Transvaal (Voigt 1980 and 1983). The equivalent figure for domestically derived protein at the valley floor mode falls into the upper bracket (94,8%). The differences between the faunal assemblage are repeated when economic activities are calculated (expressed as a percentage of the minimum numbers). Hunting forms 52,4% of the activity at the hill top mode compared to 20,0% at the valley floor mode. Lastly, at the hill top mode all age classes of cattle are represented while at the valley floor site classes V and VI are absent, indicating that prime breeding animals were not slaughtered (Appendix 1).

It is possible that there is a direct correlation between the importance of cattle at the valley floor mode and the high numbers of abraded bone found there (26 per m³ as opposed to 2 per m³ at the hill top mode). These artefacts are interpreted for use in hide preparation (Mason 1964 and 1969) and certainly this industry appears to be more important at the valley floor mode. It may also be significant that the only cattle figurines found also came from the valley floor site.

It is unfortunate that no comparative human skeletal material was found at the valley floor site to compare with the consistent orientation of the burials towards the west and the fact that these burials shows signs of nutritional deficiencies (de Villiers, 1981). Perhaps the lack of burials at the valley floor site is significant, in that the dead were not buried within the confines of the community, as at the hill-top mode. This may have cultural significance but it is also possible that the hill top burials in the ash heaps were forced through lack of space or suitable ground in which to dig pits.

Interpretation of the difference between the two modes is obviously hampered by the small number of observations. Before outlining a possible explanation, however, it must be mentioned that the modes sampled in this project are close enough together and within the same ecological zones, to preclude the differential operation of environmental factors. On the basis of the calibrated dates from the modes the sites must be seen as contemporary and in this light it is difficult to see any cultural separation of them. The differences in the economies of

the two modes may then be viewed simply, either as extremes in continuous Iron Age variability, or a specific activity variants in the region, but not necessarily of each other.

In summarizing this section, the stone wall Unit 4 has been subdivided into two locality modes. All RU-4 sites sampled in this project appear to be roughly contemporary, dated to the early part of the seventeenth century. Although no difference could be seen between the two modes, from the ceramic samples available, RU-4 sites exhibit somewhat different economic emphases, especially in the amounts of protein derived from domestic stock and hunted bovids.

COMPARISON OF THE ROOIBERG UNIT 4 CERAMICS WITH CERAMICS FROM FURTHER AFIELD

Turning to a comparison with stone wall sites to the south of the Rooiberg area, it is clear that a broad similarity exists over a wide area. Rooiberg Unit 4 ceramics are essentially the same as Uitkomst vessels when the assemblages from Hennops River, Uitkomst Cave and Klipriviersberg are compared as a whole (Mason 1951 and 1962). Individually, however, there is considerable variation. For example, the Hennops River material is decorated with bands and multiple lines but triangles, chevrons, arcades and rim-nicking are absent. Triangles and a single rim-nicked sherd came from Uitkomst cave, however. Rim nicking seems to be generally absent from Uitkomst assemblages (except Tafelkop) and this does mark a difference between them and the hill top mode sites, where rim nicking is an integral part of the assemblage.

The larger pottery assemblage from Tafelkop (Mason 1952) has also been included within the Uitkomst culture (Mason 1962) and this larger size permits a closer comparison. Apart from the single class 5 vessel at 131/78, stylistic classes are nearly identical. Comb-stamping and incision are both present at Tafelkop in similar percentages to the hill top mode. The presence, however, of coil impressed motifs (12%), which are absent at RU-4 sites, marks a difference. Unlike other Uitkomst assemblages though Tafelkop has rim-nicking which is an integral part of the assemblage and unlike rim-nicking at the hill top mode, combines with decoration on the neck and shoulder rather than occurring as an isolated motif. The Tafelkop assemblage is not dated and Maggs (1976) has queried whether it is in fact a true Uitkomst assemblage. In view of the apparent time depth of Uitkomst like pottery (Mason 1973), it cannot be ruled out that Tafelkop is earlier than other Uitkomst assemblages and possibly ancestral to stone wall assemblages. Although rim nicking is present at the hill top mode, there is clearly no comparison with the predominantly notched pottery which characterizes the Buispoort culture to the west of the Uitkomst area. The absence of conical pot lids in Unit 4 assemblages further underlines this difference.

Comparison between the actual stone wall layouts shows that sites are generally larger, better made, with more of them in the Southern and Western Transvaal, than in the Rooiberg area. Mason (1962) sees little difference between the Klipriviersberg layout (Uitkomst) and Olifantspoort layout (Buispoort). However, there appears to be little similarity between these large well made, scallop walled sites and the layouts in the Rooiberg area. In terms of Mason's (1968) stone wall typology, his class 1, "isolated circle or a few adjacent but isolated circles," is most similar to the valley floor phase, while class 3 sites, "clear enclosing wall and inner circles" would define the hill top phase. The settlement typology of the Southern and Western Transvaal appears to be far more complex than in the Rooiberg area.

A little further to the south in the Vredefort Dome area Taylor's Group 1 sites (Taylor 1979), defined as "an elliptical wall enclosing a group of small enclosures in the centre", are most similar to the hill top mode. The pottery appears to be similar as well, though the presence of coil impressed motifs and the absence of incised decoration may be significant differences. There may be some significance in the dominance of arcade motifs at Group III sites and the valley floor mode but samples all round are too small to make a positive connection. There are no affinities with Group II, both in terms of site layout and pottery.

In the Orange Free State the most comparable of Magg's (1976) Types is N but there are clear differences as well. Comb-stamped motifs account for most of the decoration, (93% at OU1 and 69% at OU2) and although the figures vary, both are higher than comb-stamping in the Unit 4 modes. Further, there is no incision in the Type N assemblages but, rather, 24% of the assemblage at OU2 is decorated with applied bands, which are altogether absent in Unit 4. Another difference which may be significant is the absence of an oblique theme at Type N sites. The type N site layout is similar to the hill top mode.

Whereas pottery of Types Z and V shares certain similarities to Unit 4 ceramics as a whole, the presence of finger impressed and pinched decoration at Type V and the dominance of grooved decoration at Type Z clearly separates them. Pottery from Robertsdrift (Derricourt and Everts 1973) and Wildebeestfontein (Taylor 1979) appears to be closely related to Type V in the Orange Free State and therefore not comparable with any of the Unit 4 phases.

In conclusion, similarities between RU-4 can be traced with Uitkomst, Group I and Type N, but the closest affinity lies with the Uitkomst assemblages.

It was emphasized in the introduction that the research was primarily aimed at constructing a sequence for the Iron Age around Rooiberg, Transvaal. Four units have been established, but it is the description of the material excavated from the stone wall sites of the youngest unit that forms the basis of this report.

From this initial probe, several interrelated possibilities for future research on RU-4 sites are apparent. A more extensive and systematic survey for stone wall sites is warranted in view of the suggestions made here that two site layouts are already apparent and that both these layouts appear to have specific locational preferences. Before any general statements are possible it will first have to be established whether these patterns have regional coherence. An offshoot of this work will obviously be further investigations into the economic extremes noted here, and the relationship of these economic emphases to different layout and locational types.

Finally, a thorough examination of the local oral histories may help in the interpretation of the archaeology of the stone wall phase of the Late Iron Age.

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REFERENCES

- ACOCKS, J. P. H. 1953. Veld types of South Africa. *Mem. bot. Surv. S. Afr.* **28**: i-iv, 1-192.
- BAUMANN, M. 1919. Ancient tin mines in the Transvaal. *J. chem. metall. Min. Soc. S. Afr.* **19**: 120-131.
- COLLET, D. P. 1982. Excavation of stone-walled ruins in Badfontein valley, Eastern Transvaal, South Africa. *S. Afr. archaeol. Bull.* **35** (135): 34-43.
- DENBOW, J. R. 1979. *Cenchrus ciliaris*: An ecological indicator of Iron Age middens using aerial photography in Eastern Botswana. *S. Afr. J. Sci.* **75**: 405-408.
- DERRICOURT, R. M. and T. M. EVERS, 1973. Robertsdrift, an Iron Age site and settlement on the banks of the Vaal and Klip Rivers near Standerton, South Eastern Transvaal. *African Studies* **32**: 183-193.
- DE VILLIERS, H. 1981. Report on burials I, II and III from 131/78. In: Hall, S. L., *Iron Age Sequence and settlement in the Rooiberg, Thabazimbi Area*. M.A. Thesis, University of the Witwatersrand, Appendix I.
- EVERS, T. M. 1975. Recent Iron Age research in the Eastern Transvaal, South Africa. *S. Afr. archaeol. Bull.* **30**: 71-83.
- EVERS, T. M. 1980. Klingbeil Early Iron Age sites, Lydenburg, Eastern Transvaal, South Africa. *S. Afr. archaeol. Bull.*, **35**: 46-57.
- EVERS, T. M. and J. C. VOGEL 1980. Radio carbon dates for Iron Age sites at Lydenburg and White River, Eastern Transvaal. *S. Afr. J. Sci.* **76**: 230-231.
- HALL, S. L. 1981. *Iron Age sequence and settlement in the Rooiberg, Thabazimbi Area*. M.A. Thesis, University of the Witwatersrand.
- HAMMERBECK, E. C. I. and SCHOEMAN, J. J. 1976. Copper. In: Coetzee, C. B. ed., *Mineral Resources of the Republic of South Africa*; 5th ed. Pretoria: The Government Printer.
- HANISCH, E. O. M. 1979. Excavations at Icon, Northern Transvaal. *S. Afr. archaeol. Soc. Goodwin series.* **3**: 72-79.
- HUFFMAN, T. N. 1980. Ceramics, classification and Iron Age entities. *Afr. Stud.* **39**: 123-173.
- KING, L. C. 1951. *South African Scenery*; 2nd ed. Edinburgh: Oliver and Boyd.
- KLAPWIJK, M. 1973. An Early Iron Age site near Tzaneen, N.E. Transvaal. *S. Afr. J. Sci.* **69**: 324.
- MAGGS, T. M. O'C. 1976. Iron Age communities of the southern Highveld. *Occ. Publ. Natal Museum* **2**.
- MASON, R. J. 1952. South African Iron Age pottery from the Southern Transvaal. *S. Afr. archaeol. Bull.* **7**: 70-79.
- MASON, R. J. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.
- MASON, R. J. 1964. Iron Age bone artefacts. *S. Afr. archaeol. Bull.* **19**: 38.
- MASON, R. J. 1968. Transvaal and Natal Iron Age settlement revealed by aerial photography and excavation. *Afr. Stud.* **27**: 1-14.
- MASON, R. J. 1969. Iron age stone artefacts from Olifantspoort, Rustenberg District and Kaditshwene, Zeerust District. *S. Afr. J. Sci.* **65**: 41-44.
- MASON, R. J. 1971. The archaeology and human ecology of Melville Koppies Nature Reserve, Johannesburg. *Occ. Pap. Dep. Archaeol., Univ. Witwatersrand* **6**.
- MASON, R. J. 1973. Early Iron Age settlement of Southern Africa. *S. Afr. J. Sci.* **69**: 324-326.
- MASON, R. J. 1974. Background to the Transvaal Iron Age—new discoveries at Olifantspoort and Broederstroom. *Jl S. Afr. Inst. Min. Metall.* **74**: 211-216.
- MAVROCORDATUS, C. E. 1981. Metallographic examination of our Archaeological specimens. In: Hall S. L., *Iron Age sequence and settlement in the Rooiberg, Thabazimbi Area*. M.A. Thesis, University of the Witwatersrand.
- South Africa (Republic) Dept. of Mines. Geological Survey. 1974. *Geological Series Map 2426 Thabazimbi 1:250,000*. Pretoria: Government Printer.
- STEWART, J. 1979. The Rooiberg Tin occurrence. *The Rooiberg Minerals Development Company, Rooiberg*.
- TAYLOR, M. O. V. 1979. *Late Iron Age Settlements on the Northern edge of the Vredefort Dome*. M.A. Dissertation, University of the Witwatersrand.
- VOGEL, J. C. 1971. Radiocarbon dating of Iron Age sites in Southern Transvaal. In: Mason, R. J., The archaeology and human ecology of Melville Koppies Nature Reserve, Johannesburg. *Occ. Pap. Dep. Archaeol. Univ. Witwatersrand* **6**, pp. 59-63.
- VOIGT, E. A. 1980. Reconstructing Iron Age economies of the northern Transvaal: A preliminary report. *S. Afr. archaeol. Bul.* **35**: 39-45.
- VOIGT, E. A. 1983. *Mapungubwe: an archaeozoological interpretation of an Iron Age community*. Transvaal Museum Monograph No. 1. Pretoria: Transvaal Museum.

APPENDIX 1: The faunal remains from two Iron Age sites, Rooikrans and Rhenosterkloof, Central Transvaal

by

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Introduction

The two Iron Age sites of Rooikrans (131/78) and Rhenosterkloof (101/78) were excavated by S. Hall in the course of his Masters project.

The excavator submitted all identifiable bone to the Transvaal Museum for analysis after which the collection was sent to the Archaeological Research Unit of the University of the Witwatersrand where it is currently housed. The excavator dealt with the waste bone of the assemblage.

Analysis of material and age determination of domestic bovids was done according to procedures developed at the Transvaal Museum by Brain (1974) and Voigt (1983). The total sample of diagnostic bone is shown in Table 1. At Rooikrans three ash heaps were excavated in 10 cm thick spits. No stratigraphy was present and the ash heaps can be regarded as single units. At Rhenosterkloof two ash heaps were excavated in 5 cm spits. These too can be regarded as single units. The faunal analysis was initially done according to spit levels for both sites. These were later combined in each ash heap to form three integrated units for Rooikrans and two for Rhenosterkloof.

TABLE 1. Rooikrans (131/78) and Rhenosterkloof (101/78): Total sample of diagnostic bone.

Skeletal part	Rooikrans			Total	Rhenosterkloof		Total
	Ash heap I	Ash heap II	Ash heap III		Ash heap I	Ash heap II	
Bovid teeth and tooth rows	95	14	5	114	85	35	120
Bovid skeletal parts	672	241	41	954	158	75	233
Other identified remains	134	24	11	169	14	18	32
TOTAL	901	279	57	1 237	257	128	385

Species present

Species were mainly identified on the basis of the teeth present in the samples. Minimum number of individuals was determined on the basis of both teeth and skeletal parts present.

Rooikrans (131/78)

Ash heap I yielded the largest quantity of diagnostic bone representing 53 individuals of 26 different species. Ash heap II yielded 21 individuals belonging to 13 species and Ash heap III only 10 individuals representing eight species. Although the possibility exists that the remains of one individual could be spread over all three ash heaps, this would be difficult to demonstrate.

The species list for Rooikrans is an interesting one as it includes an unusually large number and variety of wild bovids (Table 2). The wild animals present in the sample reflect to a large extent the mountainous, hilly terrain. Klipspringer and mountain reedbuck are limited in their distribution to mountainous area, whereas the reedbuck usually prefers less hilly and more open country. The two reedbuck species do occasionally occur together (Dorst and Dandelot, 1970: 217). This was obviously the case at Rooikrans and was also observed to occur during the Later Stone Age at Bushman Rock Shelter (Plug, 1978).

The remains of seven carnivores were present in the sample. Unfortunately there were very few teeth, making species identification difficult. The only identifiable tooth was that of a brown hyaena. The tooth is in a maxillary fragment, the sides of which are polished. A hole was drilled through the bone, suggesting that the object could have been used as a pendant.

TABLE 2. Rooikrans: Species present, minimum number of individuals (MNI) and basis of identification.

No. in brackets = Number of juveniles

No. before species see Swanepoel *et al.*, 1980

No.	SPECIES	MNI	TEETH			SKELETAL PART	
			Deciduous	Unerrupted	Permanent	Cranial	Post cranial
ASH HEAP I							
	Large carnivore	1					2
	Medium sized feline	1					3
	Medium sized carnivore	1					7
	Jackal sized carnivore	1				1	3
	Small carnivore	1			1		2
420	<i>Orycteropus afer</i> (antbear)	1					7
	<i>Procavia</i> sp. (hyrax)	1			7	2	
432	<i>Equus burchelli</i> (Zebra)	1					4

PLUG: FAUNAL REMAINS FROM ROOIKRANS AND RHENOSTERKLOOF

No.	SPECIES	MNI	TEETH			SKELETAL		PART Shell/Carapace fragment
			Deciduous	Unerupted	Permanent	Cranial	Post cranial	
438	<i>Phacochoerus aethiopicus</i> (warthog)	1			1		3	
	<i>Bos taurus</i> (Cattle)	7 (1)	10	1	12	1		
	<i>Ovis aries</i> (sheep)	1					1	
	<i>Ovis/Capra</i> (sheep/goat)	11 (8)	23	1	24	4		
462	<i>Oreotragus oreotragus</i> (Klipspringer)	3			18	2		
464	<i>Raphicerus campestris</i> (steenbok)	2 (1)	3		4	2		
479	<i>Sylvicapra grimmia</i> (common duiker)	2	3		3	1		
490	<i>Redunca arundinum</i> (Reedbuck)	3	3		3			
491	<i>Redunca fulvorufula</i> (mountain reedbuck)	2				10		
	Bov. II (non-domestic, not <i>Redunca</i>)	1				1		
	Bov. III (non-domestic)	1	1					
	<i>Lepus/Pronolagus</i> (hare)	3 (1)				3		
	Hare	2 (1)			1	8	56	
195	<i>Pedetes capensis</i> (Springhare)	1			1			
280	<i>Hystrix africae australis</i> (porcupine)	1			1	1		
	Medium sized rodent	1				1		
	Guineafowl sized bird	1					1	
	Tortoise	2					3	22
ASH HEAP II								
396	<i>Hyaena brunnea</i> (brown hyaena)	1			1	1	1	
420	<i>Orycteropus afer</i> (antbear)	1					2	
432	<i>Equus burchelli</i> (zebra)	2		1	1		4	
438	<i>Phacochoerus aethiopicus</i> (Warthog)	1 (1)	1					
	<i>Bos taurus</i> (cattle)	4 (1)	8		3			
	<i>Ovis/Capra</i> (sheep/goat)	3 (1)		1	2	1		
462	<i>Oreotragus oreotragus</i> (klipspringer)	1			1		2	
	Bov. I	2					7	
	Bov. II (non-domestic)	2					6	
	Bov. III (non-domestic)	1					3	
	Hare	1				1	7	
280	cf. <i>Hystrix africae australis</i> (porcupine)	1					3	
	Tortoise	1						6

No.	SPECIES	MNI	TEETH			SKELETAL		PART
			Deciduous	Unrupted	Permanent	Cranial	Post cranial	
ASH HEAP III								
168	<i>Papio ursinus</i> (baboon)	1			1		1	
	Large carnivore	1					1	
432	<i>Equus burchelli</i> (zebra)	1					3	
	<i>Bos taurus</i> (cattle)	2			1	1		
	<i>Ovis/Capra</i> (sheep/Goat)	2			3			
	<i>Oreotragus oreotragus</i> (klipspringer)	1			2	1	1	
	Hare	1				1	3	
	Tortoise	1						1

Rhenosterkloof (101/78)

The samples from the two ash heaps yielded the remains of 50 individuals representing 13 species (Table 3). The remains of the mongoose and the two rodents were relatively fresh-looking and appear to be later intrusions into the deposit.

TABLE 3. *Rhenosterkloof*: Species present, minimum number of individuals (MNI) and basis of identification.

No. in brackets = Number of juveniles

No. before species see Swanepoel *et al.*, 1980

No.	SPECIES	MNI	TEETH		SKELETAL		PART
			Deciduous	Permanent	Cranial	Post cranial	
ASH HEAP I							
	Mongoose	1			2	2	
	<i>Procavia</i> sp. (hyrax)	1				1	
	<i>Bos taurus</i> (cattle)	15 (5)	21	39	3		
	<i>Ovis/Capra</i> (sheep/goat)	8 (2)	3	23	5		
	Bov. I	2				3	
	Bov. II (non-domestic)	1				3	
	Hare	2 (1)				4	
	<i>Unio/Aspatheria</i> (Large freshwater bivalve)	2					2

PLUG: FAUNAL REMAINS FROM ROOIKRANS AND RHENOSTERKLOOF

No.	SPECIES	MNI	TEETH		SKELETAL		PART
			Deciduous	Permanent	Cranial	Post cranial	
ASH HEAP II							
432	Medium sized carnivore	1				1	
	<i>Procavia</i> sp. (hyrax)	1				1	
	<i>Equus burchelli</i> (zebra)	1				6	
	<i>Bos taurus</i> (cattle)	5 (1)	5	17		3	
	<i>Ovis/Capra</i> (sheep/goat)	4 (1)	1	16		2	
	Bov. I	1				1	
	Hare	1				2	
	Large rodent	1				1	
	Medium sized rodent	1				1	
	Guineafowl sized bird	1				3	
<i>Unio/Aspatharia</i> (large freshwater bivalve)	1					3	

The freshwater molluscs indicate the presence of open water in the vicinity of the site. These molluscs could have been collected for food as well as for their shells.

The faunal sample from Rhenosterkloof is dominated by the remains of domestic animals in contrast to the Rooikrans fauna which is dominated by non-domestic animals.

Diet and Economy at Rooikrans and Rhenosterkloof

Hunting, snaring and gathering were more important activities than herding at Rooikrans, but at Rhenosterkloof herding was the most important activity (Tables 4 and 5). Nevertheless, herded animals still contributed most of the meat to the diet at Rooikrans (66%), while at Rhenosterkloof domestic animals yielded almost all the meat (95%).

Non-contributors to the food sample include later intrusions as well as the carnivores and the baboon. Some of these animals could have been hunted for their skins and it is also possible that some carnivores could have been eaten. However, in modern African societies the use of carnivores for food is very variable (Grivetti, 1976), therefore carnivores were not included in the dietary calculations. Carnivore and baboon skeletal parts are often incorporated in sets of divining bones and would have been hunted for such a reason as well.

Age determination of domestic bovids

The people of Rooikrans slaughtered domestic animals of almost all ages, with a slight emphasis on adult cattle and on younger sheep/goat individuals. At Rhenosterkloof sheep/goat of all ages were slaughtered with a small peak in Class V. Cattle of the age Classes V and VI were not represented in the sample from Rhenosterkloof (Table 6).

TABLE 4. Rooikrans: Economic activities and meat contribution to the diet based on MNI counts.

Species	MNI per economic activity	Meat wt.50% of live wt.	Total meat wt.	% of meat
Herding				
<i>Bos taurus</i> : Adult	11	249,0	2 739,0	57,1
Juvenile	2	99,0	198,0	4,1
<i>Ovis/Capra</i> : Adult	8	16,0	128,0	2,6
Juvenile	9	12,8	115,2	2,4
TOTAL HERDED	30		3 180,2	66,4
Hunting: bovids				
<i>Sylvicapra grimmia</i>	2	7,8	15,6	0,3
<i>Raphicerus campestris</i>	2	6,5	13,0	0,3
<i>Oreotragus oreotragus</i>	5	6,5	32,5	0,7
<i>Redunca arundinum</i>	3	38,0	114,0	2,4
<i>Redunca fulvorufula</i>	2	25,0	25,0	0,5
Bov. I	2	7,8	15,6	0,3
Bov. II (non-domestic)	1	16,0	16,0	0,3
Bov. II (b)	2	20,2	40,4	0,8
Bov. III (non-domestic)	2	225,0	450,0	9,4
TOTAL BOVIDS HUNTED	21		722,1	15,0
Non-Bovids				
<i>Orycteropus afer</i>	2	34,0	68,0	1,4
<i>Equus burchelli</i>	4	181,4	725,6	15,1
<i>Phacochoerus aethiopicus</i>	2	31,7	63,5	1,3
TOTAL NON-BOVIDS HUNTED	8		857,1	17,8
TOTAL HUNTED	29		1 579,2	32,8
Snaring:				
Dassie	1	2,0	2,0	<0,1
<i>Lepus</i> sp.	3	1,1	3,3	0,1
Hare	4	1,1	4,4	0,1
Porcupine	2	9,0	18,0	0,4
Guineafowl sized bird	1	0,8	0,8	<0,1
Gathering: Tortoise	4	0,7	2,8	0,1
TOTAL SNARED, GATHERED	15		888,3	18,5
TOTAL FOOD ANIMALS	74		4 790,6	
NON-CONTRIBUTORS	10			
TOTAL MNI	84			

PLUG: FAUNAL REMAINS FROM ROOIKRANS AND RHENOSTERKLOOF

TABLE 5. Rhenosterkloof: Economic activities and meat contribution to the diet based on MNI counts.

Species	MNI per economic activity	Meat wt.50% of live wt.	Total meat wt.	% of meat
Herding				
<i>Bos taurus</i> : Adult	14	249,0	3 486,0	77,5
Juvenile	6	99,0	594,0	13,2
<i>Ovis/Capra</i> : Adult	9	16,0	144,0	3,2
Juvenile	3	12,8	38,4	0,9
TOTAL HERDED	32		4 262,4	94,8
Hunting: Bovids				
Bov. I	3	7,8	23,4	0,5
Bov. II (b)	1	20,2	20,2	0,5
TOTAL BOVIDS	4		43,6	1,0
Non-bovids				
<i>Equus burchelli</i>	1	181,4	181,4	4,0
TOTAL HUNTED	5		225,0	5,0
Snaring:				
Dassie	2	2,0	4,1	0,1
Hare	3	1,1	3,4	0,1
Guineafowl sized bird	1	0,8	0,8	<0,1
Gathering:				
Freshwater bivalve	3			
TOTAL SNARED, GATHERED	9		233,3	5,3
TOTAL FOOD ANIMALS	46		4 495,7	
NON-CONTRIBUTORS	4			
TOTAL MNI	50			

Bone preservation and bovid skeletal parts

The Rooikrans bone sample was much more fragmented than the Rhenosterkloof sample. At Rooikrans there were 14,5 bones per individual identified; for Rhenosterkloof the figure is 7,7 bones per individual. Calculations on bone mass and bone fragmentation indicate that the

TABLE 6. Rooikrans and Rhenosterkloof: Domestic bovids age classes.

<i>Bos taurus</i> (cattle)		
AGE CLASS	ROOIKRANS	RHENOSTERKLOOF
I (birth to 6 months)	0	1
II (6-15 months)	1	3
III (15-18 months)	1	2
IV (18-24 months)	4	3
V (24-30 months)	1	0
VI (30-42 months)	2	0
VII (Adult animals)	1	3
VIII (Mature, medium wear on M3)	1	5
IX (Aged, heavy wear on all teeth)	2	3
TOTAL	13	20

<i>Ovis/Capra</i> (sheep/goat)		
AGE CLASS	ROOIKRANS	RHENOSTERKLOOF
I (birth to 3 months)	1	0
II (3-10 months)	5	1
III (10-16 months)	3	2
IV (16-30 months)	3	2
V (30-60 months)	4	5
VI (Older than 60 months)	1	2
TOTAL	17	12

average mass per bone from Rooikrans was 2,4 g; whereas at Rhenosterkloof the average mass per bone was approximately 4,8 g (Hall, pers.comm.).

The bone sample from Rooikrans was also much more weathered than the Rhenosterkloof sample, particularly the remains from Rooikrans Ash heap III where the heavily weathered bone suggests an exposed position.

Bovid post-cranial material was well represented on both sites and no unusual distribution patterns could be detected.

Discussion

The faunal remains from Rooikrans and Rhenosterkloof indicate that there are some distinct differences between the two sites relating to economy and diet. The Rooikrans sample reflects a society in which snaring, gathering and hunting of bovids in particular played a major

role in obtaining animal protein. These activities were of minor importance at Rhenosterkloof, where herding was the main contributor of animal protein to the diet.

The relatively low figure for meat contribution by herded animals at Rooikrans is unusual for sites in the southern and northern Transvaal. At Wildebeestfontein, a Later Iron Age site in the southern Transvaal, almost all the meat was obtained from domestic animals (Plug, 1979). Later Iron Age sites from the southern Highveld also reflect diets and economies largely dependent on the domestic herds (Maggs, 1975). At Icon and the Limpopo valley sites of Mapungubwe, Schroda, Pont Drift and Commando Kop meat contribution from domestic herds varied from 71% to 98% (Voigt, 1983; Voigt and Plug, 1981). In the central Transvaal meat contribution to the diet by herded animals is variable. At Ficus in the Makapan Valley the figure for meat contribution by domestic animals in the Third Component which is roughly contemporaneous with Rooikrans and Rhenosterkloof is 84%. For Ficus First and Second Components which predate A.D. 1000 the figure is 60% and 65% respectively (Moore, 1981; Plug, 1980).

The age distribution of cattle slaughtered also differs between the two sites. At Rooikrans most cattle were of prime breeding age (between 18 and 24 months) but at Rhenosterkloof prime breeding animals (Classes V and VI) were not represented in the faunal sample. This is unusual as these two age classes are of the most common age classes in many Iron Age sites e.g. Mapungubwe and Pont Drift (Voigt, 1983; Voigt and Plug, 1981). The absence of these two age classes at Rhenosterkloof strongly suggests that prime breeding stock was either left untouched or was not present on the site at all.

The Rooikrans faunal sample reflects a relatively high figure for small stock slaughtered as compared to Rhenosterkloof. In actual meat contribution this difference disappears to a large extent due to the fact that at Rooikrans more juveniles were slaughtered than at Rhenosterkloof where preference was given to the fully adult and therefore heavier animals.

The differences in economic subsistence patterns between the two sites cannot be explained in terms of different cultural associations or through separation in time and space. The sites are roughly contemporaneous, are not very far apart and share the same environment. The explanation may lie in the different settlement patterns relating to the actual positions of the sites. Rooikrans is a hilltop site in a defensive position, whereas Rhenosterkloof is an open valley site. The sites predate the difaqane period, but may have been involved in the displacement of the Rolong of the Thabazimbi area by the expanding Kwena-Hurutshe (Ngcongco, 1982). This upheaval seems to have taken place during the 16th century and it is possible that the hilltop site of Rooikrans is indicative of this troubled period: a site in a defensible position and with a reduction in the cattle population, resulting in greater reliance on hunting.

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REFERENCES

- BRAIN, C. K. 1974. Some suggested procedures in the analysis of bone accumulations from Southern African Quaternary sites. *Ann. Transv. Mus.* 29(1): 1-18.
- DORST, J. and DANDELLOT, P. 1970. *A field guide to the larger mammals of Africa*. London: Collins.
- GRIVETTI, L. E. 1976. *Dietary resources and social aspects of food use in a Tswana tribe*. D.Phil. Dissertation, Univ. of California, Davis.

- MAGGS, T.M.O'C. 1975. Faunal remains and hunting patterns from the Iron Age of the southern Highveld. *Ann. Natal Mus.* 22(2): 449-454.
- MOORE, P. 1981. *The Iron Age of the Makapan Valley, Central Transvaal*. M. A. Dissertation, Univ. of the Witwatersrand, Johannesburg.
- NGCONGCO, L. 1982. Precolonial migration in southeastern Botswana. In: Hitchcock, R. R. and Smith, M. R. eds, *Symposium on Settlement in Botswana—the historical development at a human landscape*. Gaborone: Botswana Society, pp. 23-30.
- PLUG, I. 1978. *Die Latere Steentydperk van die Boesmanrotsskuiling in Oos-Transvaal*. M.A. Thesis, University of Pretoria, Pretoria.
- PLUG, I. 1979. The faunal remains from Wildebeestfontein. *S. Afr. archaeol. Soc. Goodwin Ser.* no. 3: 130-132.
- PLUG, I. 1980. *The faunal remains from Ficus and Kekane, two Iron Age sites from the Makapan Valley, Transvaal*. Unpublished report. Department of Archaeozoology, Transvaal Museum.
- SWANEPOEL, P., SMITHERS, R. H. N. and RAUTENBACH, I. L. 1980. A checklist and numbering system of the extant mammals of the Southern African Subregion. *Ann. Transv. Mus.* 32(7) 155-196.
- VOIGT, E. A. 1983. *Mapungubwe: an archaeozoological interpretation of an Iron Age community*. Transvaal Museum Monograph No. 1, Pretoria: Transvaal Museum.
- VOIGT, E. A. and PLUG, I. 1981. *Early Iron Age herders of the Limpopo Valley*. Report prepared for the Human Sciences Research Council. Transvaal Museum, Pretoria.

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A survey of fortifications in the Province of Queen Adelaide and British Kaffraria, 1835–1866

by

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ABSTRACT

During the period from 1835 to 1866 four phases of fort building occurred in the territory between the Kei and the Keiskamma rivers. Aside from fortified camps constructed during the course of wars and of short-term duration, some thirty fortifications were built. At the peak of the colonial authorities' reliance on military force to maintain authority over the area, c1856, sixteen forts were maintained and garrisoned.

This study seeks to describe the location and nature of the fortifications in the Province of Queen Adelaide and British Kaffraria and to put them in their historical context. Questions dealt with include their exact nature, where they were located, why they were erected, how they related to the broader trends of frontier history and how their existence affected the lives of the soldiers who manned them and the indigenous people amongst whom they were built.

INTRODUCTION

Historians studying the Cape's eastern frontier, the various frontier wars or simply frontiers in general, frequently refer to one or more of the fortifications that existed between the Kei and

Keiskamma rivers. In general, these tend to emphasise military aspects of the fortifications and little attempt is made at either objectivity or to consider their history from the point of view of the indigenous inhabitants. A recent article in *Militaria* is an extreme example of this. Poorly researched and containing a multitude of factual errors, it likens the struggle on the Cape's eastern frontier to South Africa's war with SWAPO "terrorists" in Namibia.¹

Whilst the existence of numerous forts in the area is well-known, matters relating to them are passed over. Their exact nature, where they were sited, why they were erected, how they relate to the broader trends of frontier history, and how their existence affected the lives of the soldiers who manned them and the indigenous people amongst whom they were built, are all questions which need to be considered. The present survey, which covers the period from 1835 to 1866, deals with some of these issues. During that time British authority was twice extended over the territory between the Kei and Keiskamma rivers. On the first occasion the Province of Queen Adelaide was established and on the second British Kaffraria came into being. In 1866 British Kaffraria was incorporated into the Cape Colony and ceased to exist as a nominally independent colony.

Most nineteenth century writers make no distinction between the terms "fort" and "post". The terms were often used interchangeably. If a difference existed it was only in that a fort was sometimes regarded as a more permanent structure than a post, but even in this regard, a distinction was often made between permanent posts and temporary posts. This was not so much related to the intended lifespan of the fortification, but to its mode of construction. Permanent posts were constructed of stone and, to a lesser extent, of brick. Temporary posts usually consisted of a group of wattle-and-daub huts, surrounded by an earthen parapet and a fosse. A further distinction was sometimes drawn between "posts of occupation" and "posts of communication". The former were larger posts with a garrison strong enough to be able to undertake offensive operations. The latter were small posts built on wagon routes where patrols could ensure that lines of communication remained open and where wagon teams could find shelter.

During the period under review four phases of fort building occurred: in the War of 1834-35, during and after the War of the Axe from 1846 to 1847, during the War of 1850-53 and during the excitement surrounding the Cattle Killing. The study that follows attempts to describe the location and the nature of the fortifications and to put them in their context, since some of the forts remain relatively unknown. Indeed, certain posts have yet to be precisely located by researchers. The fortifications are related to the broader context because a study of fortifications without reference to the events that spawned them is meaningless.

D'URBAN'S ABORTED PROVINCE: THE PROVINCE OF QUEEN ADELAIDE, 1835-1836

On 21 December 1834, Xhosa warriors precipitated war by crossing the Fish River and raiding the eastern Cape Colony on a broad front. The war—variously known as the Sixth Frontier War, the War of 1834-35 and Hints'a's War—took the colonial forces by surprise. Colonel Harry Smith, arriving at Grahamstown on 6 January 1835, assumed control as second-in-command to the Governor. The British concentrated on forcing the Xhosa out of the colony before assuming the offensive. By the end of March 1835, they recovered sufficiently to assemble four divisions and invade Xhosaland. The Governor, Sir Benjamin D'Urban, and the Headquarters Staff accompanied the first division. By May the British forces had advanced as far

as the Great Kei River and on 10 May 1835 D'Urban issued a proclamation taking possession of the territory "lying between the Eastern Boundary of the Colony of the Cape of Good Hope and the Kye River", to "form a part of the Colony of the Cape of Good Hope, and shall belong to His Britannic Majesty's Colonial Dominions."¹ On 16 June 1835 he ratified this proclamation, naming the territory the Province of Queen Adelaide.

Following a campaign in the trans-Keian territory (during which the Gcaleka chief, Hintsu, was killed) the war came to an end. Peace with the Ngqika and the Ndlambe was formally concluded on 17 September 1835 and an agreement was reached with the Gqunukhwebe. On 11 December 1835, the Gcaleka made an agreement ceding, *inter alia*, a strip of land from the Kei Drift along the wagon route to Butterworth Mission Station.

In order to take possession of the territory claimed on 10 May 1835 D'Urban arranged for the construction of a number of fortifications. Before the cessation of hostilities he embarked upon the creation of a series of posts or forts at strategic points (Fig. 1).

The first of these, Fort Warden, was begun only two days after the proclamation of 10 May: "I am now employed here in constructing the Entrenched Camp for my *first* fort of occupation in the New Territory."²

This fort, situated on a branch of a tributary of the Kei River, the Mpotshane, was near the wagon route to the territory across the Kei. The fortification, which consisted of a square redoubt of sixty yards on each side (containing a cattle kraal, stables and "beehive huts" for officers and men) and well surrounded by a ditch and abattis, was completed by 20 May whereupon detachments of artillery, cavalry and infantry, under Captain Warden of the Cape Mounted Riflemen, were stationed there. A "hamlet" of Mfengu was formed near the post, "to be of assistance to the troops in various ways."³ The fort, initially known as the "Intrenched (*sic*) Camp on the Impotshana", soon became known as Warden's Post or Fort Warden.

Having established the post, D'Urban proceeded towards the Buffalo River where he intended establishing his main centre in the Province. En route, the first division camped near the heights on the eastern side of the Gqunube River, which were named the "Heights of Wellington". On 21 May 1835 Fort Wellington, a post of communication with Fort Warden, was begun.

Situated some 17 miles from Fort Warden, the post was laid out and constructed in one day. Alexander vividly recorded that:

"A circular work of a hundred feet in diameter, with a parapet of sods, six feet high, having six feet of base and three of crest, with a good ditch round it, was commenced in the morning and completed in the evening."⁴

Branches for an abattis were cut and "two strong fences were picketed (*sic*) down round the work, one on the counterscarp of the ditch, and the other out of assegai range". The following day, a raised sentry-box was constructed in the centre of the fort to command the approaches to it.

While D'Urban and the first division moved on to the Buffalo River, the post was placed in the charge of Lieutenant Leslie of the 72nd Regiment with a contingent that included ten mounted and forty dismounted men, "Highlanders and Hottentots." A few Mfengu families were located near the fort.

On 20 July 1835 the post was attacked by the Xhosa. Following recent successes against the British (which included the killing of Lieutenant Bailie and 30 Khoi of the Provisional Battalion

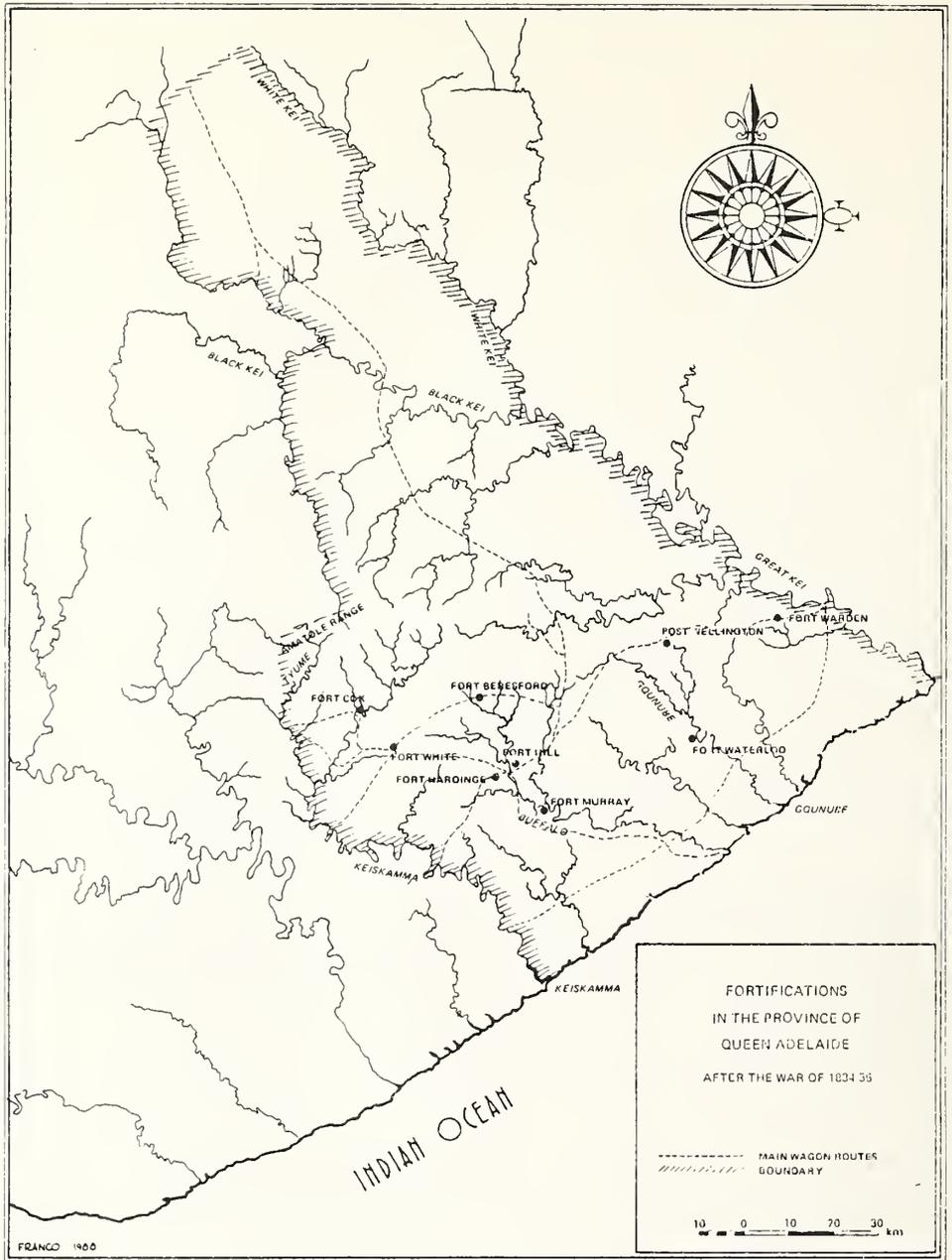


Fig. 1. Fortifications in the Province of Queen Adelaide after the War of 1834-35.

and the ambushing of stragglers from the Major Cox's camp and Major Bagot's battalion), Xhosa swooped down on Fort Wellington.⁵ Fatally stabbing a soldier of the 72nd Regiment, they drove off the horses. Turning their attention to the post, they kept up a heavy concentration of musket fire on the inhabitants, shooting holes through the sentry-box. The fight continued for an hour and a half, during which "an incessant fire was kept up" by the attackers, but they were unable to carry the post. After a number had been killed trying to scale the outer fence, they retired.

The site D'Urban chose for the main fort in the Province of Queen Adelaide was the site of the remains of the Rev. John Brownlee's Buffalo Mission. Besides being centrally situated and on a drift on the principal wagon road through the area, the water supply was ample. He planned the construction of a fortification that would be the depot and centre of the line of forts for the occupation of the new province (Fig. 2). On 24 May 1835, D'Urban proclaimed the capital of the new province, King William's Town, on the same spot.⁶

The fort, named Fort Hill in honour of Lord Hill, was laid out by Lieutenant M. Williams of the Royal Engineers. The work progressed rapidly, with the men being encouraged by an issue of rum. It was planned as a large star-shaped earthwork "to contain a thousand men, of two hundred feet face, with redans in the centre of the faces."⁷ By 10 June 1835 the fort was sufficiently completed to receive its garrison. It would seem that the fortification was constructed in some haste and certain modifications and repair work later became necessary. These included



Fig. 2. Fort Hill as viewed by Captain Lumley Graham of the 43rd Regiment during the War of Mlanjeni. Built in 1835 and rebuilt in 1847, the fort was a star-shaped earthwork (a portion of which is visible on the left) and was intended as the principal fortification in the Province of Queen Adelaide. (Photograph: Kaffrarian Museum)

paving one of the gun platforms with stone and lining the interior of a redan with the same material. Armament for the fort included two 9-pounder guns. In August Buku and Kinki, on their way back to the Gcaleka, passed through King William's Town. In trying to impress them Smith ordered a shot to be fired from one of the 9-pounders, accidentally killing one of his own horses!⁸

A small earthwork, Fort Hardinge, was constructed across the Buffalo River on the slope opposite Fort Hill. Little more than a square earthen redoubt, it was designed to guard the drifts on the river. Laid out by Williams, it was, in his opinion, "very cleverly constructed".⁹ The armament included a brass howitzer.

Two flanking posts were also erected higher up and lower down the Buffalo River. The former, Fort Beresford (after Lieutenant G. de la Poer Beresford, D'Urban's aide-de-camp) was situated about nine miles from Fort Hill near the source of the river.

Located on a slope about 300 yards from a wide drift, it consisted of wattle-and-daub buildings enclosed by a star-shaped earthen parapet and ditch. The wattle-and-daub huts were thatched with rushes and arranged in the form of a square, with a magazine in the centre. The fort's defences included 3-pounder cannon. Its construction appears to have been completed by the last week in June 1835.¹⁰

A sutler named Lucas settled near the post and plied his trade. He built himself a "very good house" near the fortification which he shrewdly sold to the officer commanding Fort Beresford when it was rumoured that the Province of Queen Adelaide was to be abandoned.¹¹ Although it did not suffer an attack from the Xhosa, the garrison experienced considerable excitement when the barracks caught fire. The flames, which burnt out two sides of the square, caught on the thatched roof of the magazine three times before the fire was doused.¹²

Fort Murray, constructed at the same time as Fort Beresford, was sited about nine miles from Fort Hill, down stream, near the site of Mount Coke Wesleyan Mission. As with Beresford, this fortification was built near a drift where the road from the Cape Colony crossed the Buffalo River.

The exact nature of this Fort Murray is unclear from the sources and research in the field has failed to pinpoint visible remains. There is, however, little reason to doubt that, like the other posts, it was an earthwork. It appears to have been named after Colonel Murray of the 42nd Regiment; not John Murray, the Chief of Medical Staff, as is sometimes believed. It also appears to have been garrisoned by a contingent of the 72nd Regiment.

En route to Grahamstown D'Urban fixed upon the site of a post of communication between King William's Town and Fort Willshire, 14 miles from the former and 20 miles from the latter. Situated near Ntaba KaNdoda (re-named "Herbert Taylor's Hill"), the post was laid out by Williams. It was named in honour of Major T. C. White, who had been ambushed and killed near the Mbashe River whilst surveying during Smith's foray into the trans-Keian territories. Its garrison (10 mounted men, 15 British infantry and 15 Khoi infantry) was similar to that of the other post of communication, Fort Wellington.¹³

A post of occupation in the Amathole mountains, Fort Cox, was erected on a bend in the Keiskamma River. Named after Major William Cox of the 75th Regiment and a former commanding officer of the Cape Mounted Riflemen, it was situated on a hill (three sides of which were very rugged and steep) at a drift near Burnshill Mission.¹⁴ Work on the fort began on 1 July and took some three months to complete. Eighty Khoi of the 2 Provisional Battalion were

employed clearing the site until Williams marked out the design and suitable tools for building were despatched from Fort Willshire.

Fort Cox, like the other posts in the Province of Queen Adelaide, appears to have been an earthwork although stone was used in its construction. The soldiers, poorly clothed and badly supplied, laboured on the construction of the fortification in appalling weather. The Xhosa, meanwhile, applied harassing tactics. On 13 July a party of Khoi soldiers foraging for corn was ambushed by the Xhosa and one soldier was killed. A further five soldiers were killed within sight of the camp when they wandered away from it.¹⁵

Only on 21 September 1835 was Cox able to declare the fort completed. Its armament was initially planned to consist of 3- pounder cannon, but these were considered to have insufficient range. Since Fort Cox occupied a position of great strategic value, a 24-pounder howitzer and a 9-pounder were sent from Fort Willshire to augment the defences. Williams' assessment of the value of Fort Cox proved to be prophetic:

"Fort Cox is perhaps one of the boldest and most important positions yet taken up, being as it were in the very teeth of the enemy, and the key to the strong fortress of the Chumie Hoek, the Amatola, the Keiskamma Hoek and the Buffalo Mountains . . ."¹⁶

Another post of occupation was erected on the west side of the Gqunube River, near its confluence with the Xinirha River. Fort Waterloo, as it came to be known, was about 25 miles from King William's Town. The construction of this post in Ndlambe territory completed D'Urban's arrangements for the maintenance of a hold on the Province of Queen Adelaide. References to a fortification near the Kei River, "Smith's Tower", appear on certain maps.¹⁷ The precise nature of this fort is unclear since it does not appear alongside the others in the usual documents. The only useful reference found in the sources consulted is a passing mention by Alexander who, in crossing the Kei from the east in May 1835, passed an isolated hill overlooking the river. This site had, apparently, been selected as the site of a work "to be called Smith's tower".¹⁸ It could be argued that this was what later became Fort Warden, but this is doubtful. Alexander was actively involved in the construction of the latter and would hardly have been misled. It could well be that although the site was marked out, the fortification itself was not built. Cartographers in England would not have been immediately aware of the discrepancy, and continued to indicate Smith's Tower on their maps.

The general strategy behind D'Urban's scheme of fortifications in the Province of Queen Adelaide appears to have been two-fold: to dominate the wagon roads through the province and to physically occupy areas where the defeated Xhosa tribes were settled. Thus, Fort Murray and Fort Waterloo were sited within Ndlambe territory, and Fort Cox and Fort Beresford were established in the heart of the Ngqika lands. The central wagon route from Grahamstown in the Cape Colony passed through King William's Town to Fort Warden near the Kei Drift, effectively separating the Ngqika to the north and the Ndlambe and Gqunukhwebe to the south.

Fort Beresford and Fort Murray had the additional advantage of being near drifts on the Buffalo River and alternative wagon routes into the province, from Fort Willshire and Line Drift Post respectively. To facilitate communications and protect traffic on the roads, posts of communication were established at Fort Wellington and Fort White.

The roads, so essential for the rapid movement of troops and the transportation of supplies, were generally in an excellent condition. It was estimated that wagons could reach Fort Wellington from King William's Town in a day's march and Fort Warden in another four hours. Troops "if necessary can perform the whole in one day".¹⁹

The posts of occupation, besides serving as physical reminders of the extension of British authority over the lands of the Xhosa, also served as bases from which future offensive operations could be launched. Fort Cox, for example, was "a centre from which they [i.e. the Ngqika] can be readily attacked and harassed. . . ." ²⁰

D'Urban appears to have personally taken an inordinate interest in the construction of the fortifications:

"I have held it to be my duty to remain to see the works . . . completed. . . ." ²¹

He was directly involved in the laying out of Fort Warden, Fort Wellington and Fort Hill, and he selected the site for Fort White before returning to the Cape Colony. Through his correspondence with Smith he made sure that there was no deviation from his proposals. He despatched cannon for his forts with an almost fatherly benevolence.

The forts generally appear to have been well sited, although some problems were encountered. The water supply at Fort White was erratic and the water itself was of a poor quality. Fort Beresford was too close to a deep gorge and "impenetrable thick bush, where any number of Kaffirs might conceal themselves and carry the fort with ease by a sudden and unexpected rush". ²²

Some idea of the living conditions of the soldiers who built and manned the fortifications can be gathered from the case of Fort Cox. Set in the heart of the Amathole mountains, the fort's garrison endured the bitter cold of the eastern Cape winter in 1835 with very little clothing and scarce supplies. On 8 August, Cox recorded:

"Rains heavy during the night. The hills covered with snow." ²³

By 11 September, the hills were still covered with snow. Under such circumstances the Khoi of the Provisional Battalion became insubordinate. After some attempted to desert Cox had to rely on a court-martial and floggings to maintain discipline.

D'Urban's scheme for the areas between the Kei and the Keiskamma Rivers was subject to approval from England. He appears to have hoped that two major considerations—expense and manpower—would win the necessary approval for his arrangements. In a lengthy dispatch to the Earl of Aberdeen he mentioned that the expenses required for the upkeep of the posts in the old line (i.e. Albany) "much exceed that which will be required for the new . . ." ²⁴ In a marginal note he emphasised:

"The Posts of occupation & communication which I have caused to be constructed in the New Province have been made without expense;—while at the same time, if it should be deemed advisable to render them permanent, they will only require the improvement of a Stone Revetement, which will cost little or nothing there being excellent Stone Quarries all about them." ²⁵

In terms of manpower, D'Urban estimated the number of troops required to hold the Province of Queen Adelaide to be:

Two Companies of the Royal Artillery (80)	=	160
One Company of Sappers	=	80
Five Battalions (of 500)	=	<u>2 500</u>
TOTAL		2 740

In contrast, the manpower needed to hold the old line of fortifications totalled about 3 400. ²⁶

As events transpired, D'Urban's scheme for the Province of Queen Adelaide came to naught. Lord Glenelg, the new Secretary for State for the Colonies, refused to sanction his arrangements and a Lieutenant-Governor for the Eastern Districts, Captain Andries Stockenstrom, was instructed to begin the creation of a new frontier settlement based on treaties with the indigenous polities. On 5 December 1836 he repealed and declared void D'Urban's extension of the eastern and northern boundaries of the Cape Colony, and the treaties with the Ngqika, Ndlambe and Gqunukhwebe.²⁷

The posts in the Province of Queen Adelaide were dismantled and abandoned. The Rev. John Brownlee at the Buffalo Mission was able to buy "at a trifling expence (*sic*)", three houses and the hospital at Fort Hill.²⁸ The latter, ironically, was turned into a school and place of worship for the Xhosa.

THE WAR OF THE AXE AND THE CREATION OF BRITISH KAFFRARIA, 1846–1850

The frontier war of 1846–47, commonly known as the War of the Axe, was not caused by the theft of an axe *per se*. Peires emphasizes the role played by the alienation of Xhosa territory.¹ Le Cordeur and Saunders effectively show that the war was the outcome of a host of incidents involving murder, cattle raiding, distrust, misunderstanding, racism and cultural differences.² All of these contributed to undermining the fragile "treaty system". The decision to erect a post at Block Drift in Xhosa territory on the east side of the Tyume river, was an act of great provocation. The theft of an axe, the culprit's escape from custody and the subsequent colonial demands for the surrender of those involved in freeing him occurred against this backdrop.

Unlike other frontier conflicts, the war of 1846–47 was directly precipitated by British military actions. From the outset the Governor of the Cape Colony, Sir Peregrine Maitland, and Lieutenant-Governor Hare attempted to conduct the war in Xhosaland. The first British column (which included over one hundred and twenty baggage wagons) to enter the Amatholes in pursuit of Sandile, was attacked at Burnshill and heavily defeated. The scale of the conflict broadened when Phato, alienated by Mfengu encroachments on his lands, brought the Gqunukhwebe into the war, and when large numbers of Thembu under Mapasa also entered the conflict against the British.

As the war progressed the Xhosa forces suffered two sharp defeats, in an attack on Fort Peddie and at the battle of Gwangqa in June 1846. Stockenstrom, at the head of the burgher forces, crossed the Kei River and opened negotiations with Sarhili, only to resign later over disagreements with Maitland.

The general conduct of the war was hampered by the prevailing drought. When rains fell in September, the Ngqika, including Maqoma, indicated a willingness to cease fighting in order to plant crops.³ Maitland authorised a system whereby the newly-appointed Commissioner to the Ngqika, Henry Calderwood, could register as British subjects those willing to lay down their arms and to issue them with "protection tickets".⁴

On 13 January 1847 Maitland, perhaps under the impression that the war had petered out, but more likely trying to re-establish his credibility since his recall as Governor, repealed martial law and declared that "a speedy termination to all military operations" was imminent.⁵ Sir Henry Pottinger, his successor, found the conflict far from over. He and the new commander of the forces, Sir George Berkeley, were forced to continue hostilities, particularly against Phato. In August 1847 Sandile was proclaimed an outlaw and hunted until his surrender. Phato held out until December.

Pottinger, whose appointment was not regarded as permanent, was replaced by Sir Harry Smith. When the two met on 16 December 1847 the war had to all intents and purposes ended, although a formal peace had yet to be concluded. This was achieved at King William's Town by Smith on 23 December 1847 in front of the assembled chiefs. On 7 January 1848 he reinforced the subjugation of the tribes in a humiliating display involving the symbolic tearing up of treaties, fireworks, and a series of oaths coerced out of the chiefs.⁶

Embodied in the peace treaty of 23 December 1847 was the proclamation of the area between the Kei and the Keiskamma rivers as the separate colony of British Kaffraria.⁷ The "treaty system" was abandoned; and a revived King William's Town became the administrative capital of the new colony. The nearby port of East London was developed, but included in the Cape Colony, largely to facilitate the collection of customs dues and to prevent smuggling.

British Kaffraria came under the direct control of Smith in his capacity as High Commissioner. The territory was initially under martial law and civilians who settled in King William's Town and in the vicinity of the forts were to be regarded as "camp followers".⁸ A Commandant and Chief Commissioner, Lieutenant-Colonel G. Mackinnon, was appointed to administer the colony. In the former capacity he controlled the military and in the latter he administered the Xhosa. A Commissioner and two Assistant Commissioners were the link between Mackinnon and the chiefs. Captain J. Maclean, as Commissioner, and William Fynn, Assistant Commissioner, were stationed amongst the Ndlambe. The other Assistant Commissioner, Charles Brownlee, was stationed amongst the Ngqika. Specific territories for the various tribes were demarcated and named after British counties. The chiefs' great places were likewise given English names and it thus transpired that Sandile had his kraal at York, Siwani lived at Newark and Mhala was at Cambridge.⁹

Having dwelt on the infrastructure of British Kaffraria at some length, it is now possible to turn to an examination of how the administration actually functioned. Undoubtedly, the establishment of the colony rested on its military occupation through the extensive construction of fortifications. Without the military, the commissioners would have been powerless. Without the protection afforded by forts, the military would have been vulnerable. Exactly what form the military occupation was to take—and indeed, where forts were to be sited—was debated from an early date.

In September 1846, Maitland had formulated tentative proposals for the trans-Keiskamma territory which included establishing villages of Mfengu, Khoi, Tswana and "Bastards". Each village was "to be under some form of military organisation supported by military posts."¹⁰ In November he outlined clearer proposals. Chieftainship and certain customs were to be abolished, the tribes were to be placed under magistrates and large posts to support the civil power "and act instantly on the offensive" were to be constructed.¹¹ The system of numerous small posts was, in his opinion, useless. What was required was a number of large forts ("able to detach a force of not less than 500 men to operate at once") erected at key places. The minimum garrison of each fort was to be a battalion of infantry, a squadron of cavalry (or a company of Cape Mounted Riflemen) and two guns.¹²

The proposals illustrate a subtle change in the thinking behind the establishment of forts. Where previously a number of small posts (as in the Province of Queen Adelaide and the eastern part of the Colony itself) were considered adequate, larger concentrations of force were now required.

In England, Grey's instructions to Maitland's successor contained ideas similar to those

formulated by Maitland. Approving of the idea of the annexation of the trans-Keiskamma area, he stipulated that it was not to be ruled as part of the Cape Colony, "but by means *inter alia* of a military presence" and the recruiting of Xhosa troops under British officers.¹³ The planned policy of relying on the presence of the military in posts gained impetus in July 1847 when Grey sent Pottinger a despatch containing recommendations from Sir Harry Smith who had "so greatly distinguished himself in the late Kafir war under Sir. B. D'Urban."¹⁴

Smith's recommendations for bringing hostilities to an end contained, in unequivocal language, proposals for the re-establishment of the forts at Fort Murray, King William's Town, Beresford, Cox, on the Debe Flats (Fort White), Wellington, Warden and Waterloo.¹⁵ In effect this meant following a policy of building numerous small forts instead a few large ones. These, he maintained, required no regular fortification, but

"... stone walls, or mud, half fort, half stable, loop-holed, and a good door, may be so constructed to give a flank fire. . . ."¹⁶

In the event, by the time the war was over, military strategy during the conflict had necessitated the construction of numerous temporary posts. Some were rebuilt near the remains of the 1835 posts, others were built where changed tactical situations required them. In particular, the Buffalo Mouth, used as a landing point for supplies, required extensive protection as did the wagon route along the Buffalo River. For this purpose posts were constructed at the river mouth, Need's Camp and the "Goolah Heights". Thus by the time Smith came to planning the military occupation of British Kaffraria there were already posts in existence. The decision he faced was which were to be abandoned and which were to be converted into permanent fortifications. He eventually fixed on the following eight: Fort Glamorgan, Fort Wellington, Fort Waterloo, King William's Town, Fort White, Fort Cox, Fort Hare and Fort Murray (Fig. 3).¹⁷ Small permanent forts were planned for all these sites.

Fort Glamorgan, on the west side of the Buffalo River mouth, began as an encampment where supplies for the forces were landed during the War of the Axe. Frequently referred to as the "Camp at the Buffalo", it served an invaluable logistical function. As British Kaffraria's only port, it was an obvious site for a permanent fort. The sort of establishment Smith envisaged included barracks for one cavalry officer and 20 men, quarters for three companies of infantry with their headquarters, a large commissariat store as a depot and a hospital.

Fort Wellington, near the site of Wesleyville Mission Station was to be built on the site of the Chalumna Post and should not be confused with the old Fort Wellington on the Gqunube heights. It was planned to have quarters for one cavalry officer and 30 men, 100 infantry, a commissariat store and a small hospital. The Ndlambe Commissioner, Maclean, and his interpreter were to be stationed at the post.

Although estimates were called for it would seem that Fort Wellington was not constructed. On 27 January 1848 Mackinnon informed Smith that the chief Royal Engineer had found the water supply at the post inadequate for a large fort and that he had "directed him to suspend any works at that place until the matter has been referred to your Excellency's consideration".¹⁸ Whether it was resumed is unclear from the sources, but fieldwork in the area has yet to reveal remains of a fortification resembling that called for in the estimates. Since there are remains, in one form or another, of the other forts from this period, it would seem to indicate that Fort Wellington was never built. Likewise, it does not feature in the Returns for Fortifications in the Cape of Good Hope Blue Books.

Fort Waterloo in the Ndlambe territory east of the Buffalo River was re-established. Plans

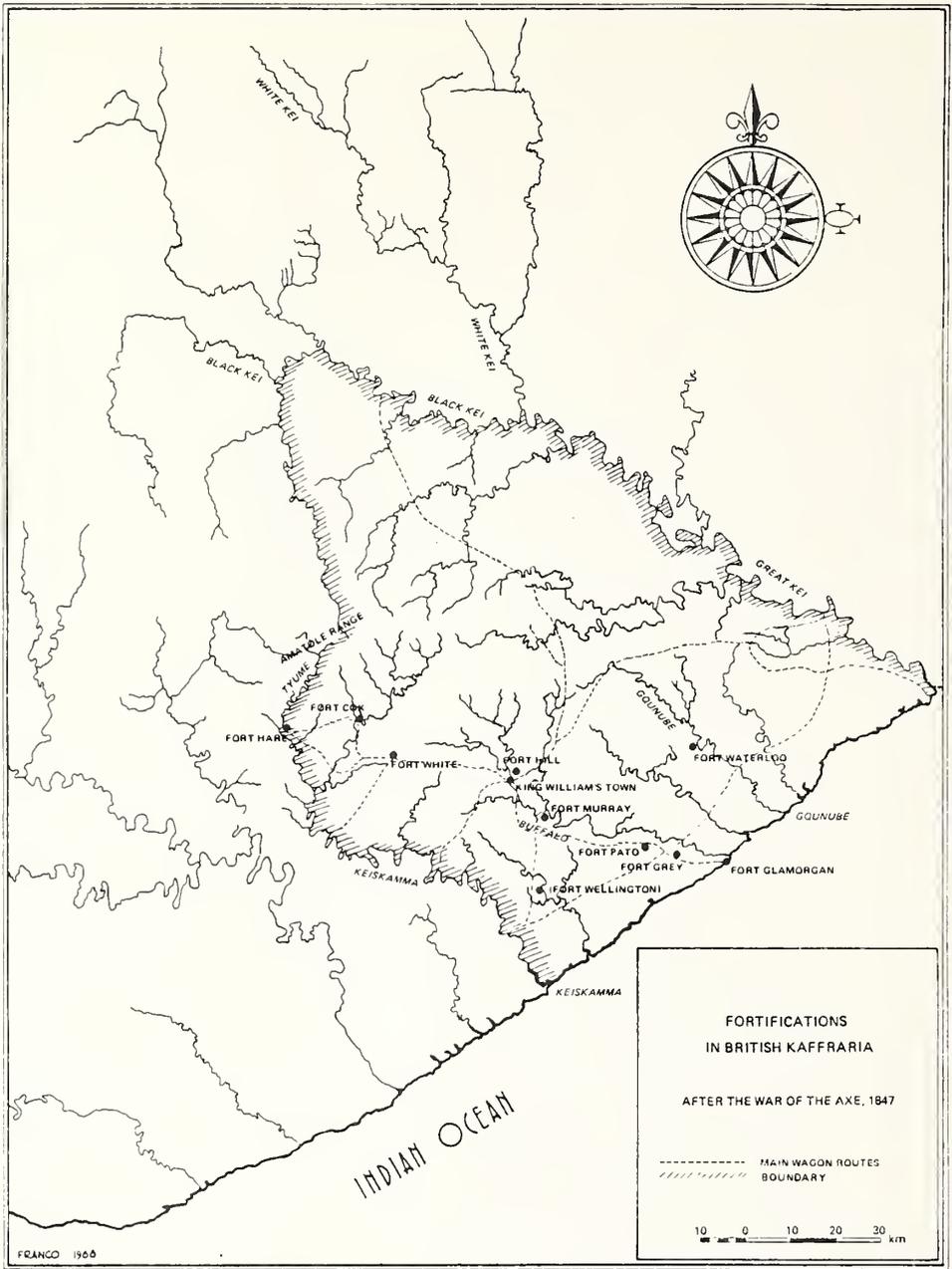


Fig. 3. Fortifications in British Kaffraria after the War of the Axe, 1847.

were drawn up to include quarters for one cavalry officer and 30 men; 100 infantry; and a commissariat and a small hospital. The Assistant Ndlambe Commissioner, Fynn, was stationed there. It would seem that the fort, if completed at all, was abandoned very quickly. It appears only in 1848 in the lists of forts in the Strength Returns for the Cape Mounted Riflemen and nowhere else.¹⁹ It is not included in the Return for Posts and Works. During the period 1853–54, the Anglican missionaries from St Luke's Mission received permission to remove dressed stone "and any other useful building material from Fort Waterloo" for the construction of a mission house and chapel.²⁰

The fortifications at King William's Town were rebuilt and extended. Although both Fort Hardinge and Fort Hill were brought into service, the latter name all but disappeared, being replaced simply by "King William's Town". It continued to be used on certain maps in relation to the old star-shaped earthwork itself, not to the whole complex of military buildings that sprang up. The general area demarcated for military use was known as the Military Reserve. As the headquarters of the military forces in British Kaffraria, the fort included quarters for one non-commissioned officer and nine men of the Artillery, barracks for a troop of cavalry, barracks for an infantry battalion, commissariat and ordnance stores, a hospital and a prison. Other military buildings in King William's Town included houses for the Commandant, the Brigade Major, the Secretary of the High Commissioner and "a small quarter for the interpreter".

Fort Cox was rebuilt near the site of the old post of that name. It included quarters for one officer and 30 men of the cavalry, barracks for two companies of infantry, a magazine and small prison, a hospital and a commissariat store. The Ngqika Commissioner was stationed at the fort, and a small house for his use and quarters for his interpreter were included in the estimates.

Fort Murray was reconstructed near the old fort, but closer to the river (Fig. 4). It was envisaged as a post of communication with Fort Glamorgan. Similar to Fort White, it consisted of quarters for one non-commissioned officer and 10 men of the Cape Mounted Riflemen, barracks for a company of infantry and a commissariat store (Fig. 5). Commissioner Maclean had his residence a short distance from the fort (Fig. 6).

The last post in Smith's scheme, Fort Hare, was already completed in 1847 and may have served as a rough model of what was required for the other posts in British Kaffraria. The general pattern for the construction of the forts was explained by Walpole, the Captain Commanding the Royal Engineers:

"... the mode contemplated in the construction of the various buildings . . . is to run up the walls of rubble stonework set in clay, to form the roofs of poles and to cover them with thatch. . . ."²¹

Fort Glamorgan, because of the shortage of thatch in the vicinity, was to have roofs of "deal scantling and boarding, covered with asphalted felt."

It is clear that a difference exists between the plans outlined by Smith and what was actually achieved. As has been indicated, Fort Wellington appears to have remained only a plan and Fort Waterloo was not operational for long. The official return for 1848 lists only forts at Glamorgan, Cox, Hare, Murray and King William's Town.²² By the same token, forts constructed during the War of the Axe and earmarked for abandonment do not appear to have been immediately dismantled. In 1848, Cape Mounted Riflemen were still listed at a post at Pirie Mission and at Fort Grey.²³ Furthermore, although Smith did not create a post halfway between Fort Murray

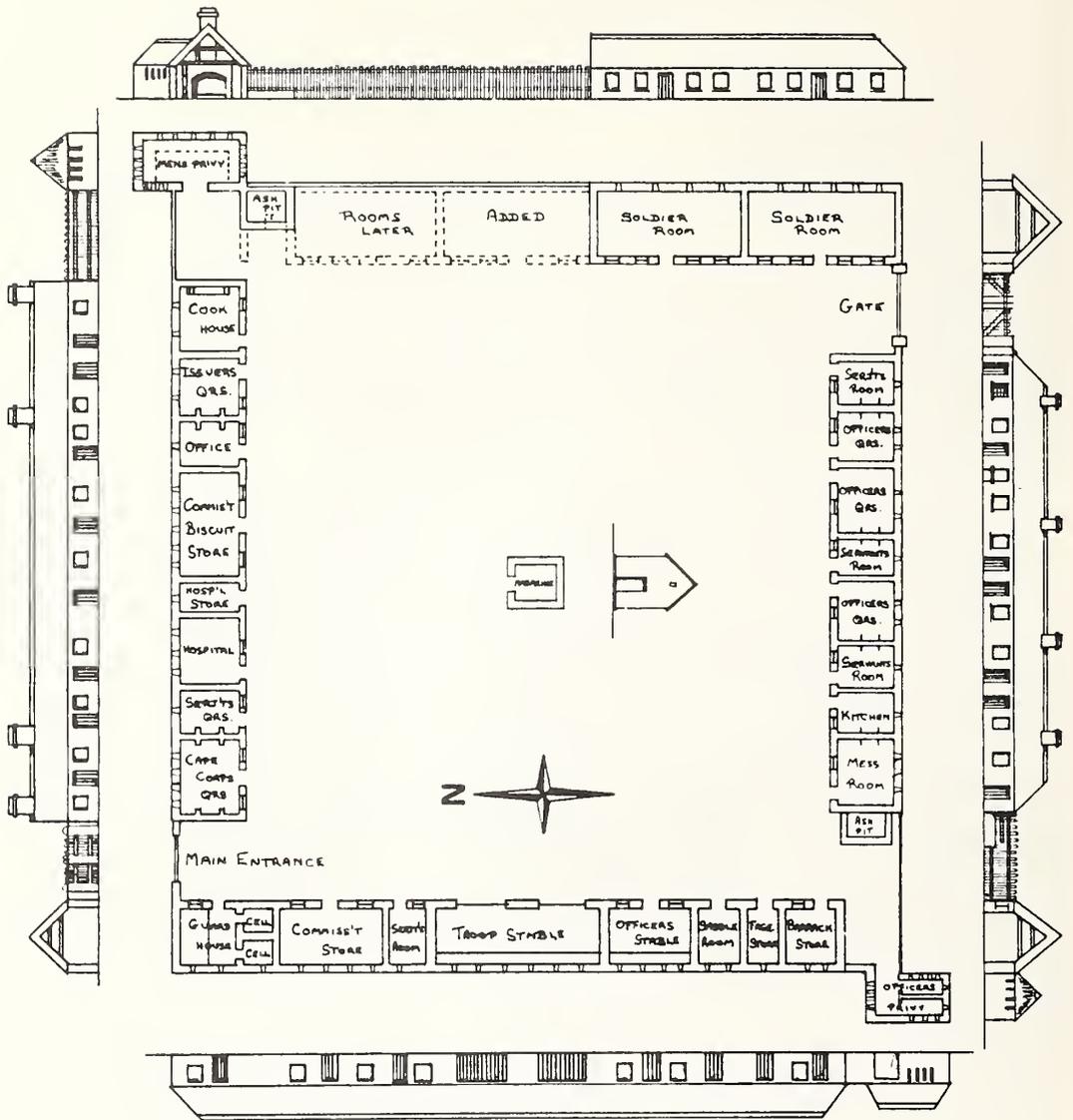


Fig. 4. Plan of Fort Murray, 1848, showing the layout of the fort. (Kaffrarian Museum, W 6489)



Fig. 5. Interior of Fort Murray. The thatched stone buildings in the form of a square with a central magazine were typical of the "permanent" fortifications of 1848. (Photograph: Africana Library)

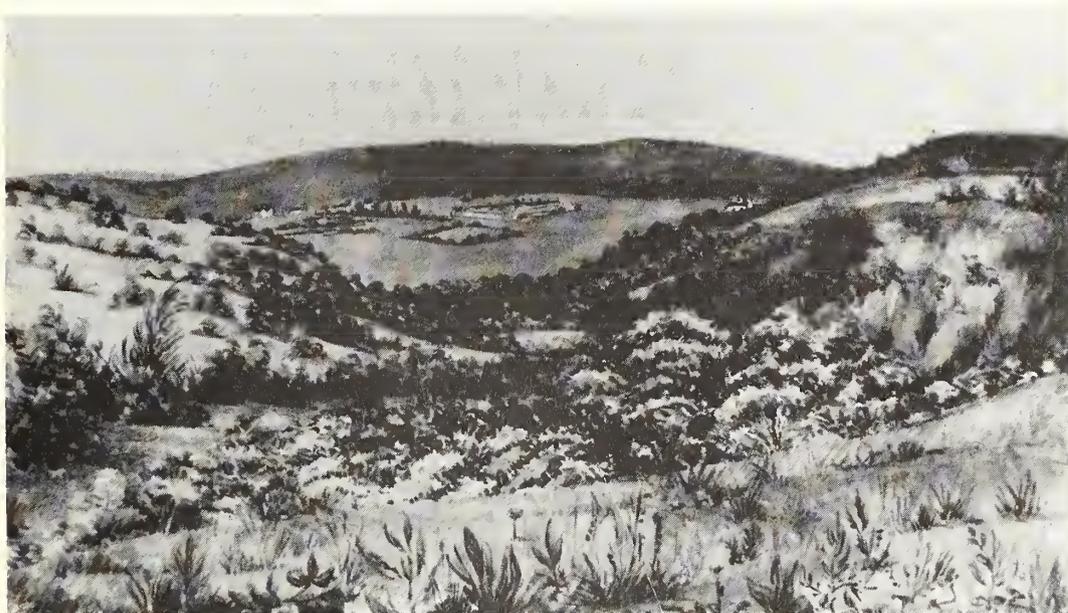


Fig. 6. Fort Murray from the east, as viewed by Annabella Harkness. The house built for the Ndlambe commissioner is on the left, the stone fort is in the centre and the hotel is located on the right of the picture. (Photograph: Africana Library)

and Fort Glamorgan, Mackinnon appears to have authorised a “post of communication on the Goolah heights . . . to be called Fort Grey” (Fig. 7).²⁴

In general, the strategy behind the location of the fortifications differed little from that used for the Province of Queen Adelaide. Recent developments in the form of the creation of a port at the Buffalo Mouth, however, were incorporated in the planning. The line of communication running from King William’s Town through Fort White to Line Drift and on to Grahamstown was retained. The area between King William’s Town and the Kei River did not feature in the planning of the fortifications, but a new wagon route, the “Buffalo Line”, along the west bank of the Buffalo River from King William’s Town to Fort Glamorgan was maintained. British Kaffraria depended heavily on the nascent port for supplies and troop movements.

The military force involved in occupying British Kaffraria totalled over 1 000 men. Smith’s fortifications were much more than simply centres of occupation, however. They were planned and sited with a view to the civil administration of the tribes. Commissioners were stationed in the vicinity of Fort Waterloo, Fort Murray and Fort Cox. The implication that unless they obeyed the civil authorities the military would descend upon them must have been clear to the Xhosa. Although the Commissioners were stationed at forts, their agents were not the military in the forts, but the so-called “Kafir Police”.

It would seem that Smith also intended the forts to be islands of civilisation, disseminating positive influences. No traditional huts were allowed near the posts, only “English huts”. Large rayons were to be surveyed around each post, and spots selected for gardens for both officers and



Fig. 7. Fort Grey as depicted in the *Illustrated London News*, based on a sketch by Thomas Baines. Baines visited the fort in 1849 and later added a note to his journal describing the fort as “a miserable collection of broken huts dignified with the title of Fort Grey and not a little flattered by the woodcut in the *Illustrated News*”. (Photograph: Kaffrarian Museum)

men, "for such purposes as a progressive general improvement in British Kaffraria and its military occupation may lead to in the habits and propensities of the native population".²⁵ Seeds were to be obtained from Cape Town and issued to the troops.²⁶

To the casual observer, the occupation of British Kaffraria was thorough and effective. Smith's overbearing personality backed up by his system of fortifications had browbeaten the Xhosa into submission. This, however, proved not to be the case for any length of time.

THE WAR OF MLANJENI AND CATHCART'S "CASTLES", 1850-1854

The Frontier War of 1850-53 (also known as the Eighth Frontier War or the War of Mlanjeni) broke out in December 1850. In discussing its causes, Du Toit emphasises the unsettled nature of the territory and the inability of the authorities to prevent the Xhosa from circumventing restrictions on where they could settle.¹ Bergh lists some of the causes as Xhosa grievances concerning territorial losses and curbs on the power of the chiefs; friction between the Ngqika and the military settlers of Woburn, Auckland and Juanasberg; Smith's tactless deposition of Sandile; the subsequent outlawing of Sandile and Anta; and the prophecies of Mlanjeni.²

The prophecies of Mlanjeni need to be viewed against the strain placed on Xhosa society through Smith's high-handed treatment of the traditional authorities, the limitations placed on the institution of chieftainship, restrictions on the occupation of land, the activities of the Commissioners and the existence of numerous military posts in the midst of the Xhosa serving to remind them of their subjugation.

Given these factors, the three years of "peace" after the War of the Axe can be seen as an interlude in which the Xhosa regrouped and built up their resources for an attempt to throw off the British yoke. Hostilities recommenced when the Ngqika successfully ambushed a British column in the Boma Pass. The military villages in the Amathole mountains were attacked the next day. Smith was besieged at Fort Cox. Fort White and Fort Hare (and later, Fort Beaufort in the Cape Colony) were attacked.³

The conflict broadened when the subjects of the Ndlambe chief, Seyolo, and Mapasa's Thembu entered the war. It took on another aspect when the Kat River Khoi and the inhabitants of Shiloh Mission also took up arms against the British. A further dimension was added when the Kafir Police and large numbers of Khoi in the Cape Mounted Riflemen deserted to the Xhosa.

Significantly, Pato remained loyal and the British forces were able to utilise the Buffalo Line wagon route for supplies. Smith, whose cheerfully optimistic accounts of the progress of the war were continually contradicted by events, was recalled in 1852. His successor, Sir George Cathcart, was only able to proclaim peace in March 1853. The war centred on the north-western portion of British Kaffraria, the Kat River settlement and the Waterkloof. It was waged with conspicuous brutality, particularly in the later stages, by units such as Lakeman's Volunteers.

Cathcart, on arriving in the Cape Colony, immediately began to formulate plans for British Kaffraria. In the end, the scheme put into effect only partially related to his original plans. In taking over from Smith in the course of a war Cathcart inherited Smith's policies concerning fortifications and the occupation of the territory. Besides the permanent posts at Fort Murray, King William's Town, Fort Cox, Fort Glamorgan and Fort Hare, various temporary posts had been constructed by the forces in the field. He did, however, attempt to inject his own ideas into the arrangements. As his experience of the conflict centred on the north-western corner of

British Kaffraria, it comes as no surprise that his ideas were mainly concerned with the Amathole mountains and the subjugation of the Ngqika.

The temporary type of fortification he found unacceptable:

“The large enclosures chiefly composed of mud, with bastions, & c., I see in this country called posts or forts, appear to me for the most to be preposterous.”⁴

Besides involving too many men in their defence, the frontier had altered to such an extent that most of the posts were in the wrong places.

The scheme he advocated involved the construction of one small keep or tower, “of sufficient height to command and overlook all the low huts and tents outside this tower”, surrounded by a stone breastwork. Not only would this involve fewer men in their defence (thus freeing more to patrol and act on the offensive), but such towers or “castles” could later serve as the nucleus for villages. They would, of course, also be “a demonstration” to the Xhosa that their territory was effectively occupied.⁵

The prototype castle was constructed in the heart of the Amathole mountains, at Keiskamma Hoek (Fig. 8). Castle Eyre, as it was named, was built of locally quarried stone, “15 feet square and two stories high, with a flat roof to carry a gun; . . .”⁶ A second tower was built at Tamacha Post, about 12 miles from King William’s Town and six miles from Line Drift. It would, however, seem that “Tamacha Castle” was not built to the same standards as Castle Eyre.⁷

In total, Cathcart proposed seven towers for the Amathole region and one at Line Drift on the road to Grahamstown. He was at pains, in his efforts to promote his idea, to differentiate between his type of tower and “some most costly and useless martello towers built as telegraph stations” in the Cape Colony.⁸

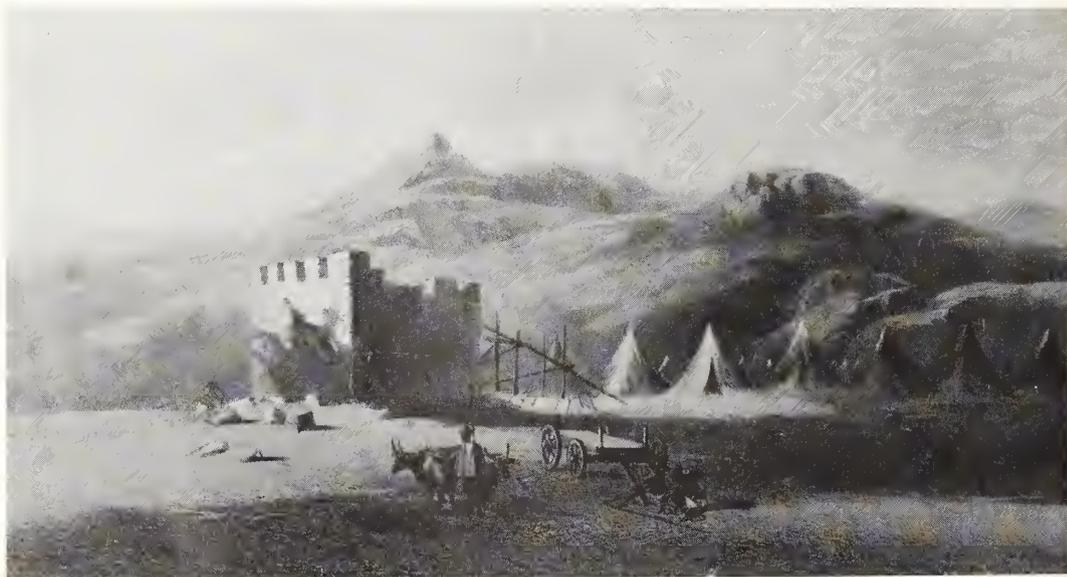


Fig. 8. The construction of Castle Eyre at Keiskamma Hoek Post, portrayed by Captain Lumley Graham. Cathcart intended this to be the prototype of a series of new fortifications in British Kaffraria. (Photograph: Kaffrarian Museum)

Cathcart had initially hoped to expel the Ngqika from British Kaffraria altogether, but his experience soon brought the realities of the situation home to him, and he eventually settled on expelling them from the Amathole mountains.⁹ By denying them access to their fortress he hoped to neutralise their power. In order to effectively block them from re-entering the region, he unsuccessfully proposed the settling of two regiments of Swiss military settlers in the mountains. When it became clear that settlers would not be forthcoming, he fell back on maintaining a string of military posts. The Ngqika were relocated east of the Amatholes. The vacated territory, now known as the Royal or Crown Reserve, was ringed with numerous fortifications and selectively opened to Mfengu settlers (Fig. 9). White civilians were restricted to the vicinity of the posts.

By the time of Cathcart's recall in 1854, 11 temporary posts were garrisoned to enforce his policies. These were Bailie's Grave Post, Chumie Post, Middle Drift Post, Fort White, Keiskamma Hoek Post (with Castle Eyre), Kabousie Post, Tamacha Post, (including the tower), Izeli Post, Dohne Post, Fort Pato, and Fort Grey. Permanent fortifications at King William's Town, Fort Glamorgan, Fort Cox, Fort Hare and Fort Murray were still maintained.¹⁰ Two detailed reports by military officers, one from 1855 and one from 1856, make it possible to build up a comprehensive picture of these fortifications.¹¹ Tables 1 and 2 summarise the findings of these reports.

Bailie's Grave Post, about 15 miles from King William's Town, was located on the road to Keiskamma Hoek. Chumie Post was situated near the Kwezana Stream in the Tyume valley within the Royal Reserve, some nine miles from Fort Hare. It was intended as a "Post of observation" and a place from which attacks could be made on the strongholds of the Ngqika. The post at Middle Drift was situated on the road between King William's Town and Fort Hare, about 11 miles from the latter. Fort White, on the road from King William's Town to Grahamstown and Fort Hare, was situated about 18 miles from King William's Town. Because the water supply at the site of the original Fort White had proved exceedingly poor, the fortification had been relocated in 1852. The new Fort White was built not far from its original site (Figs 10–12). Keiskamma Hoek Post, some 25 miles from King William's Town and in the heart of the Amathole mountains, was a relatively sophisticated post of no little importance with a large garrison (Figs 13–14). The tower, Cathcart's "castle", stood in the middle of the post, part of it being used as a magazine. Kabousie Post was sited in the Royal Reserve, on a spur dividing the sources of the Keiskamma and Kabhusi Rivers, about 12 miles from Keiskamma Hoek, on the road of communication to Dohne Post. Also within the Royal Reserve was Tamacha Post. It was situated about 14 miles from King William's Town, for the purpose of protecting the line of communication between King William's Town and Grahamstown. It also served to protect the loyal Ndlambe chief, Siwani, after he was allocated the forfeited lands of Seyolo, who had joined the Ngqika in the War of Mlanjeni.¹² Izeli Post, situated at the junction of the Izeli and Buffalo Rivers, was about eight miles from King William's Town and within the Royal Reserve. Dohne Post, about 25 miles from King William's Town, in the Royal Reserve, was named after Jakob Dohne, the missionary who began the nearby Bethel Mission (Figs 15–17). The Ngqika Commissioner, Charles Brownlee, had his residence in the vicinity. Forts Pato and Grey were situated on the Buffalo Line, and built in order to protect the supply route between Fort Glamorgan and King William's Town. Fort Pato, about 10 miles from Fort Murray, was established during the War of Mlanjeni at an old outspan place. Fort Grey was about eight miles from Fort Glamorgan.



Fig. 9. Fortifications in British Kaffraria after the War of Mlanjeni and the Cattle Killing Scare, 1857.

TABLE 1.

Details of the buildings and garrisons of the eleven temporary posts after the War of Mlanjeni.

NAME	NATURE OF BUILDINGS	PROPOSED GARRISON	ACTUAL GARRISON, 1856
1. Bailie's Grave Post	Officers' Quarters—wattle-and-daub huts Soldiers' Barracks—wattle-and-daub huts Guardhouse—wattle-and-daub building Stables—wattle-and-daub huts Commissariat Store—wattle-and-daub building Magazine—stone building for 32 quarter barrels of powder	2 Infantry Officers 5 Cavalry Rank and File 21 Infantry Rank and File 7 Troop horses 3 Officers' horses	2 Infantry Officers 8 Cavalry Rank and File 53 Infantry Rank and File 8 Troop horses
2. Chumie Post	Officers' Quarters—stone building Soldiers' Barracks—wattle-and-daub buildings Guardhouse—stone building Stables—wattle-and-daub building Commissariat Store—wattle-and-daub building Hospital—wattle-and-daub building Magazine—stone building for 32 quarter barrels of powder Cookhouse—stone building	3 Infantry Officers 7 Cavalry Rank and File 52 Infantry Rank and File 10 Troop horses 6 Officers' horses	2 Infantry Officers 8 Cavalry Rank and File 53 Infantry Rank and File 7 Troop horses
3. Dohne Post	Officers' Quarters—wattle-and-daub huts Soldiers' Barracks—wattle-and-daub huts Guardhouse—brick building Stables—wattle-and-daub building Commissariat Store—wattle-and-daub building Hospital—wattle-and-daub hut Magazine—brick building for 40 quarter barrels of powder Cookhouse—brick building	1 Cavalry Officer 4 Infantry Officers 10 Cavalry Rank and File 48 Infantry Rank and File 21 Troop horses 3 Officers' horses	3 Infantry Officers 16 Cavalry Rank and File 106 Infantry Rank and File 16 Troop horses 1 Officer's horse
4. Fort Grey	Officers' Quarters—wattle-and-daub huts Soldiers' Barracks—wattle-and-daub huts Guardhouse—wattle-and-daub building Stables—wattle-and-daub building Commissariat Store—wattle-and-daub building Magazine—stone building for 32 quarter barrels of powder	1 Infantry Officer 7 Cavalry Rank and File 20 Infantry Rank and File 25 Troop horses 1 Officer's horse	2 Infantry Officers 6 Cavalry Rank and File 42 Infantry Rank and File 6 Troop horses

NAME	NATURE OF BUILDINGS	PROPOSED GARRISON	ACTUAL GARRISON, 1856
5. Izeli Post	Officers' Quarters—wattle-and-daub huts Soldiers' Barracks—wattle-and-daub huts Guardhouse—brick or stone building Stables—wattle-and-daub building Commissariat Store—wattle-and-daub building Hospital—wattle-and-daub building Magazine—stone building for 32 quarter barrels of powder Cookhouse—brick building	2 Infantry Officers 10 Cavalry Rank and File 33 Infantry Rank and File 10 Troop horses	1 Infantry Officer 6 Cavalry Rank and File 73 Infantry Rank and File 6 Troop horses
6. Kabousie Post	Officers' Quarters—wattle-and-daub huts Soldiers' Barracks—wattle-and-daub huts Guardhouse—brick building Stables—wattle-and-daub buildings Commissariat Store—wattle-and-daub building Hospital—wattle-and-daub hut Magazine—stone building for 32 quarter barrels of powder	3 Infantry Officers 7 Cavalry Rank and File 51 Infantry Rank and File 11 Troop horses 6 Officers' horses	2 Infantry Officers 6 Cavalry Rank and File 99 Infantry Rank and File 6 Troop horses
7. Keiskama Hoek Post	Officers' Quarters—brick or stone buildings Soldiers' Barracks—wattle-and-daub huts Guardhouse—stone building (probably) Stables—brick building Commissariat Store—? Hospital—wattle-and-daub building Magazine and Tower—stone 2-storey building for 60 half barrels of powder Cookhouse—brick building Cavalry Barracks—brick building Barbette Battery—stone structure (probably)	2 Cavalry Officers 20 Infantry Officers 26 Cavalry Rank and File 331 Infantry Rank and File 47 Troop horses 38 Officers' horses	1 Cavalry Officer 15 Infantry Officers 54 Cavalry Rank and File 459 Infantry Rank and File 50 Troop horses 9 Officers' horses
8. Middle Drift Post	Officers' Quarters—brick building Soldiers' Barracks—wattle-and-daub buildings Guardhouse—brick building Stables—wattle-and-daub buildings Commissariat Store—wattle-and-daub buildings Hospital—wattle-and-daub building Magazine—brick building for 36 quarter barrels of powder Cookhouse—stone building	4 Infantry Officers 6 Cavalry Rank and File 46 Infantry Rank and File 10 Troop horses 5 Officers' horses	3 Infantry Officers 7 Cavalry Rank and File 65 Infantry Rank and File 7 Troop horses 1 Officer's horse

NAME	NATURE OF BUILDINGS	PROPOSED GARRISON	ACTUAL GARRISON, 1856
9. Fort Pato	Officers' Quarters—one brick building, one wattle-and-daub hut Soldiers' Barracks—wattle-and-daub building Guardhouse—wattle-and-daub building Stables—wattle-and-daub building Commissariat Store—loop-holed stone building with flat roof Magazine—stone building for 32 quarter barrels of powder Cookhouse—small, loop-holed stone building	1 Cavalry Officer 1 Infantry Officer 7 Cavalry Rank and File 32 Infantry Rank and File 15 Troop horses 5 Officers' horses	2 Infantry Officers 11 Cavalry Rank and File 66 Infantry Rank and File 12 Troop horses
10. Tamacha Post	Officers' Quarters—some brick buildings, some wattle-and-daub huts Officers' Mess Room—wattle-and-daub huts Soldiers' Barracks—wattle-and-daub huts Guardhouse—? (probably wattle-and-daub) Stables—wattle-and-daub huts Commissariat Store—? (probably wattle-and-daub) Magazine—stone building for 60 quarter barrels of powder	1 Cavalry Officer 7 Infantry Officers 9 Cavalry Rank and File 76 Infantry Rank and File 30 Troop horses 8 Officers' horses	7 Infantry Officers 15 Cavalry Rank and File 180 Infantry Rank and File 15 Troop horses 3 Officers' horses
11. Fort White	Officers' Quarters—? (probably wattle-and-daub huts) Soldiers' Barracks—wattle-and-daub building Stables—stone building Commissariat Store—wattle-and-daub buildings Magazine—stone building for 80 quarter barrels of powder Cavalry Barracks—wattle-and-daub huts	2 Infantry Officers 46 Infantry Rank and File 20 Troop horses 2 Officers' horses	2 Infantry Officers 9 Cavalry Rank and File 62 Infantry Rank and File 10 Troop Horses

Source: GH36/1, pp. 249–304; Bolton, Report, 1 March 1856; GH 39/1, pp. 871–885; Bisset, Memorandum on Sites Proposed . . . Settlement for the German Legion, 30 June 1855.

Note: Some of the figures for the garrisons given by Bolton differ from those provided by Bisset.

TABLE 2.

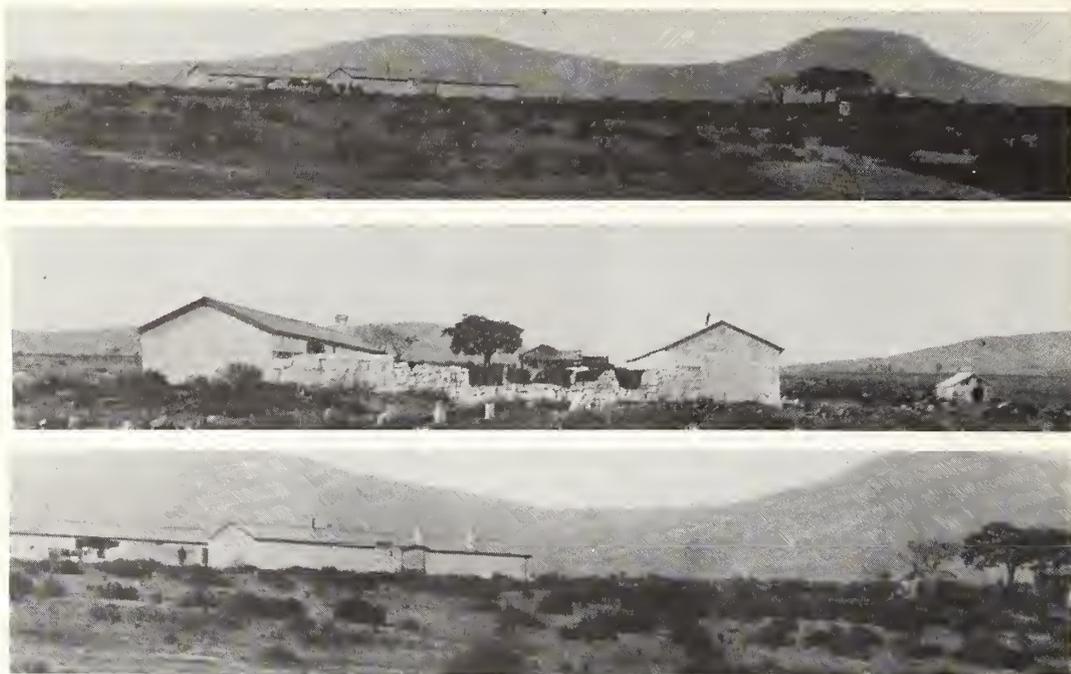
Details of the buildings and garrisons of the five permanent posts after the War of Mlanjeni.

NAME	NATURE OF BUILDINGS	PROPOSED GARRISON	ACTUAL GARRISON, 1856
1. Fort Cox	Officers' Quarters, Soldiers' Barracks and 'other buildings'—built of brick with thatched roofs Magazine—brick or stone for 96 quarter barrels of powder Guardhouse—sited halfway to river to protect water parties	1 Cavalry Officer 6 Infantry Officers 10 Cavalry Rank and File 96 Infantry Rank and File 24 Troop horses 10 Officers' horses	2 Infantry Officers 7 Cavalry Rank and File 93 Infantry Rank and File (including Artillery) 7 Troop horses
2. Fort Glamorgan	Main fort: Officers' Quarters, Soldiers' Barracks and other buildings built of stone Magazine—stone building for 32 quarter barrels of powder Away from the main fort: Ordnance Magazine—probably stone, for 540 quarter barrels of powder Commissariat Store—brick or stone buildings Barracks—brick or stone buildings Guardhouse—stone building	1 Cavalry Officer 3 Infantry Officers 5 Cavalry Rank and File 43 Infantry Rank and File 9 Troop horses 7 Officers' horses	1 Cavalry Officer 2 Infantry Officers 8 Cavalry Rank and File 63 Infantry Rank and File (including Royal Sappers and Miners) 5 Troop horses
3. Fort Hare	Various buildings of unbaked brick, half-baked brick, and wattle-and-daub	4 Cavalry Officers 20 Infantry Officers 64 Cavalry Rank and File 153 Infantry Rank and File 30 Troop horses 17 Officers' horses	1 Cavalry Officer 11 Infantry Officers (including Artillery and Royal Sappers and Miners) 34 Cavalry Rank and File 441 Infantry (including Artillery and Royal Sapper and Miners) 21 Troop horses 10 Officers' horses

NAME	NATURE OF BUILDINGS	PROPOSED GARRISON	ACTUAL GARRISON, 1856
4. King William's Town	Officers' Quarters—stone building Officers' Mess—stone building Cavalry Barracks and Stables—wattle-and-daub huts; also some stone buildings Infantry Barracks—wattle-and-daub buildings Cookhouse—? Hospital—one building of stone and another of brick Guardhouse—stone buildings Prison—stone building Ordnance Building—? Mule Train Establishment—? Barrack Store Houses—stone buildings Ordnance Magazine—stone building for 1 600 quarter barrels of powder Redoubt—built of stone with own guardhouse, barracks for 12 men and magazine Officers' Quarters, Barracks and "other buildings" all built of stone and thatched	2 Infantry Officers 224 Cavalry Rank and File 15 Artillery Rank and File 324 Infantry Rank and File (including Royal Sappers and Miners) 221 Troop horses 24 Artillery Troop horses 8 Officers' horses	9 Cavalry Officers 2 Artillery Officers 22 Infantry Officers 258 Cavalry Rank and File 35 Artillery Rank and File 737 Infantry Rank and File (including Royal Sappers and Miners) 210 Troop horses 20 Artillery Troop horses 48 Officers' horses
5. Fort Murray	Officers' Quarters, Barracks and "other buildings" all built of stone and thatched	3 Infantry Officers 6 Cavalry Rank and File 50 Infantry Rank and File 7 Troop horses 3 Officers' horses	1 Infantry Officer 8 Cavalry Rank and File 38 Infantry Rank and File 8 Troop horses

Source: GH36/1, pp. 249-304: Bolton, Report, 1 March 1856; GH 39/1, pp. 871-885: Bisset, Memorandum on Sites Proposed . . . Settlement for the German Legion, 30 June 1855.

Note: Some of the figures for the garrisons given by Bolton differ from those provided by Bisset.



Figs 10-12. Three views of Fort White before the demolition of the buildings. The 1848 fortification was relocated during the War of Mlanjeni because of problems with the water supply. (Photographs: Cory Library)

These temporary posts were, in general, constructed to a similar design, with only minor variations (Fig. 18). Bisset summed up the basic layout as follows:

“They consist of a square redoubt, enclosed by an earthen parapet about eight feet high and a ditch from four to five feet deep. The faces of the redoubt are flanked by two small square bastions at opposite corners, formed of palisades, ball proof, and loop-holed for musquetry. The salients of these bastions are again flanked by small tambours palisaded. Each bastion, with the permanent stone buildings at its gorge, forms a strong keep. One bastion has a permanent stone guard-house, with flat roof and parapet for musquetry fire at the gorge, one contains a powder magazine generally holding about from thirty-two to sixty gun barrels of powder. The other bastion has a stone cook-house, with asphalt roof at its gorge, and contains the cattle-kraal in war time, and a picket-house. . . .”¹³

Of the permanent posts, forts Cox, Glamorgan and Murray were built on similar lines (as had been ordered by Smith): stone buildings arranged in a square with the outside walls loop-holed. The fortifications at King William’s Town were a number of wattle-and-daub buildings and a few buildings of brick and of stone, spread over the Military Reserve. The star shaped earthwork, Fort Hill, still existed, but was in a poor condition. In addition, three small fortifications appear to have been added to King William’s Town’s defences in the course of the war: Fort Garvock, Fort Mackinnon and Fort Cloete along the Buffalo River.¹⁴ Fort Hare differed from the others, being a rectangular fieldwork surrounded by an earthen wall and a ditch, with several small bastions for guns in the walls. The buildings included a large magazine



Fig. 13. Keiskamma Hoek Post in the late 1860s. This photograph, said to have been taken in 1869, shows the appearance of the tower. A sentry box and some of the thatched buildings of the rest of the post are also visible. (Photograph: *Keiskamma Hoek Centenary Brochure*, King William's Town, 1953)



Fig. 14. Soldiers at Keiskamma Hoek Post. A company of the 20th Regiment (Lancashire Fusiliers) at Keiskamma Hoek Post in 1869. The base of the tower and other buildings are visible in the background. (Photograph: *Keiskamma Hoek Centenary Brochure*, King William's Town, 1953)

built of stone, a guardhouse, huts for officers, soldiers' barracks, and a hospital, built variously of unbaked brick, baked brick and wattle-and-daub.

The principle governing the administration of British Kaffraria after the War of Mlanjeni rested, quite clearly, on the military occupation of the territory through the systematic garrisoning of fortifications at strategic points. Yet, even through this system, the British were fairly powerless to force changes on the Xhosa:

"As to witchcraft and chiefs eating their people up: we really must not attempt to alter the customs of the people unnecessarily, and where we have *not the power*. . . ."¹⁵



Figs 15-16. Two views of the interior of Dohne Post in the 1860s. The dilapidated wattle-and-daub buildings are clearly visible. Dohne Post was one of the series of "temporary" posts built during the War of Mlanjeni and kept in service despite Carthcart's original plans. (Photographs: Kaffrarian Museum)



Fig. 17. An external view of Dohne Post, showing the earthwork (which is palisaded on one side), the thatched roofs of the wattle-and-daub buildings and the brick guardhouse. (Photograph: Kaffrarian Museum)

Thus, within the parameters set by the fortifications, and despite the presence of commissioners in their midst, the Xhosa were left much to their own devices. White settlers were, for the most part, excluded from anywhere but the vicinity of the posts:

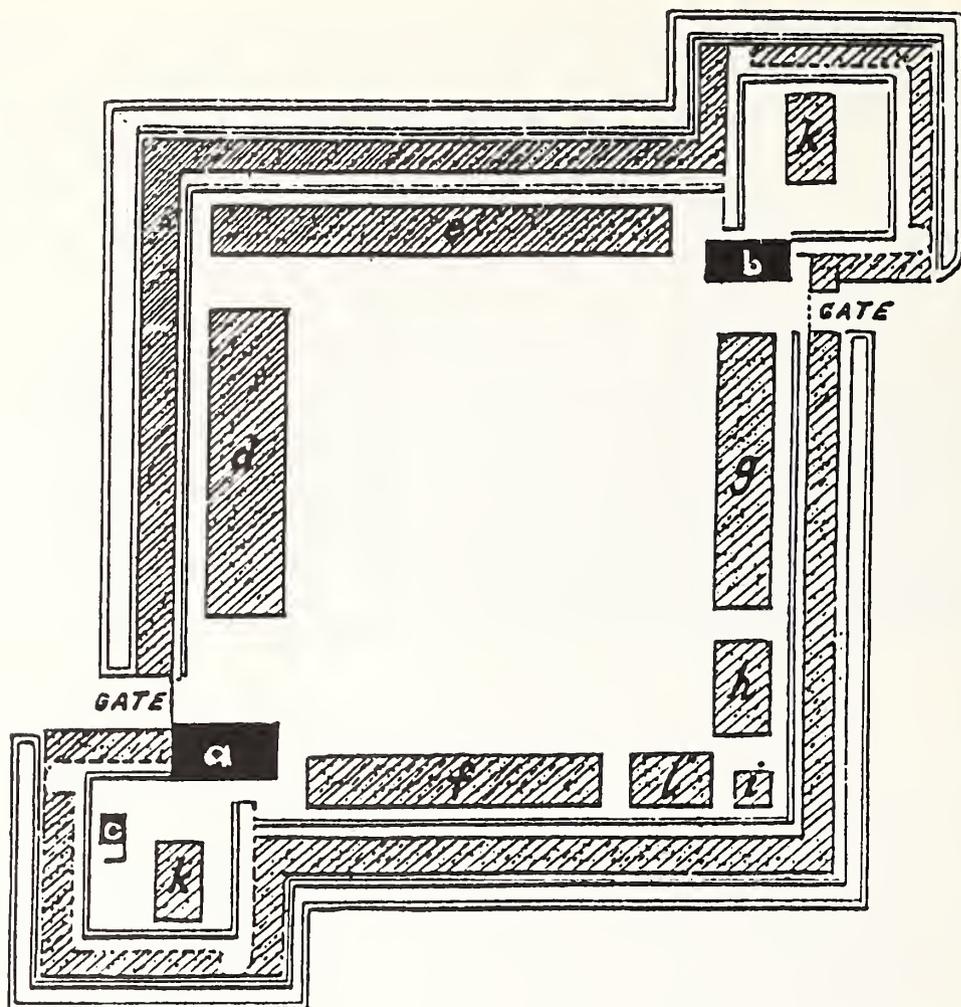
“I must remind you that military control, not colonisation, is the principle of policy which has induced me to advise the retention of Kaffraria as a separate government . . . therefore the greediness of land speculators must be resisted.”¹⁶

Cathcart’s scheme has quite legitimately been summed up as one of “military control and rigid segregation.”¹⁷

BRITISH KAFFRARIA: CHANGES IN POLICY, STRATEGY AND STATUS, 1854–1866.

The arrival of Cathcart’s successor, Sir George Grey, heralded fundamental changes in British Kaffraria. Whilst Grey’s policies may not have been as innovative as commonly believed¹, they were nonetheless a radical departure from those pursued by Cathcart:

“The plan I propose . . . is to attempt to gain an influence over all tribes included between the present North Eastern boundary of this Colony and Natal, by employing them upon public works, which tend to open up the country: by establishing institutions for the Education of their children, and the relief of their sick, by introducing among them institutions of a civil character suited to their present condition; and by these and other like means to attempt gradually to win them to civilization and Christianity. . . .”²



REFERENCES

- | | |
|---|---|
| <p>a. Stone Guard-house.
 b. Do. Cook-house.
 c. Do. Powder Magazine.
 d. Wattle and daub Huts, Officers' Quarters.
 e. Do. Infantry Soldiers'.</p> | <p>f. Cavalry do. and Troop Stables.
 g. Do. Commissariat and Hospital.
 h. Wattle and daub officers' Stables.
 i. Hospital Privy do.
 k. Do. Picket-house.
 l. Do. Forage Store.</p> |
|---|---|

(Source: GH 39/1, p. 882: Memorandum, Bisset, 30 June 1855.)

Fig. 18. Plan of temporary posts constructed in British Kaffraria during the War of Mlanjeni, 1850-53.

The execution of this "civilizing" policy falls beyond the scope of this study, but recent research has indicated that its implementation proved to be less high-minded than its stated aims.³ What is of concern is how this affected the status of fortifications in British Kaffraria. Various factors during Grey's lengthy administration worked towards changing the strategy of maintaining numerous military posts in the territory between the Kei and Keiskamma rivers.

Firstly, Grey was expected by the home government to reduce military expenditure. Before Cathcart's departure, the authorities mentioned the desirability of reducing the garrison in British Kaffraria.⁴

Secondly, the "Great Scare" occasioned by the millenarian movement amongst the Xhosa, from 1856 to 1857, exerted a dual effect on the nature of fortifications in the territory. Grey's carefully orchestrated war psychosis during the Cattle Killing provoked a review on the feasibility of maintaining the Buffalo Line supply route from King William's Town to East London.⁵ Experiences during the War of Mlanjeni had shown the difficulty of ensuring the safe passage of wagons, even with the active assistance of the Gqunukhwebe chief, Phato. When Phato began participating in the events of 1856 and the outbreak of war seemed possible, a new supply route through Ndlambe territory on the opposite bank of the Buffalo River was speedily brought into use.⁶ Ultimately, three temporary fortifications, namely Fort Jackson (approximately mid-way between East London and King William's Town) and, later, Blaney Post (near King William's Town) and Amalinda Post (near East London) were erected to protect the new wagon route.⁷

The overall effect of the Great Scare on the strategy of forts was, however, of more lasting significance than simply the erection of three temporary fortifications and the development of a new supply road. The large scale death and deprivation following the Cattle Killing more effectively sapped Xhosa resistance to the occupation of their lands than any war. In the wake of the Cattle Killing, the Xhosa were a truly conquered people. The need to maintain a large number of fortifications to subjugate them was removed.

The influx of white immigrants in large numbers similarly alleviated the necessity of maintaining a string of forts. It is difficult to underestimate the effect of the opening up of British Kaffraria to white settlers. The white civilian population which stood at 949 in 1856, had risen to 5 895 in December 1865.⁸ In particular the arrival of the British German Legion in 1857 and the establishment of military villages in strategically important places effectively nullified the need to maintain so many fortifications. The arrival of a second wave of German immigrants from 1858 to 1859 consolidated this immigration scheme and filled gaps left by members of the Legion who had deserted or volunteered for service in India.

The "Grantee System" whereby applicants, largely from the Cape Colony, received extensive tracts of farming land on the understanding that they would pay a quit-rent and render military service whenever required further reduced the need to maintain a large number of fortifications. Indeed, the white farmers more effectively occupied the territory than soldiers concentrated in forts had been able to do.

In all, the construction of roads throughout the territory, the generally defeated air of the Xhosa after the Cattle-Killing, the systematic imprisonment of their leaders, and the presence of a larger white population capable of bearing arms contributed towards the sense of security in British Kaffraria. These factors, together with a report on the strategic value of the fortifications in British Kaffraria presented in 1856 by Col. Bolton of the Royal Engineers, prompted a change of attitude. The policy of maintaining numerous fortifications was changed.

By 1858 Fort Cox, Bailie's Grave Post, Kabousie Post, Fort Pato, Fort Grey and Tamacha Post, were dismantled and abandoned. The following year the latter was, however, returned to service for two more years. Blaney Post, Amalinda Post, Dohne Post and Izeli Post were similarly dismantled and abandoned a year later. In 1860, however, Dohne Post was recommissioned. The abandoning of other forts followed. By 1866, Fort Hare, Chumie Post, Fort White and Tamacha Post were listed as "Unoccupied". Only the fortifications at King William's Town, Middle Drift Post, Keiskamma Hoek Post, Dohne Post, Fort Jackson and Fort Murray were in use, the rest having been abandoned and dismantled.⁹ Table 3 provides a summary of the official returns for fortifications from 1845 to 1866.

Some of the posts, such as Izeli Post and Dohne Post, were handed over to the Chief Commissioner of British Kaffraria.¹⁰ Others, such as Chumie Post and Fort Hare were leased to civilians. The latter, with 400 acres of land was leased to Lovedale Mission. The actual title to the land on which the forts stood was retained, in most cases, by the War Department. Only in 1879 was much of this transferred to the government of the Cape Colony.¹¹

In 1866, British Kaffraria underwent a change of status. Annexed to the Cape Colony, it ceased to exist as a separate entity. Whilst detachments of British troops were still maintained at King William's Town, Fort Murray, Fort Jackson, Keiskamma Hoek, Middle Drift Post, Dohne Post and East London, the Cape's para-military force, the Frontier Armed and Mounted Police (which had previously been restricted to the borders of British Kaffraria and Komgha), now began to operate within the territory between the Kei and the Keiskamma rivers. Two companies, No. 5 Company and part of No. 2 Company, were stationed at King William's Town, Post Wellington, Maclean Town, Izeli Post, Chalumna Post, Annexation Post and Middle Drift.¹²

The detachments were small and the new stations, although glorying in the name of "posts", do not appear to have been fortifications even in the broadest sense of the word. Sub-Inspector D. B. Hook, who was involved in the construction of Post Wellington near the site of the 1835 fort of that name, described the post as "a cabin of raw brick" for himself and sod huts for his men. The "magazine" was the space under Hook's table.¹³

By 1866, the days of numerous well-garrisoned fortifications in British Kaffraria appeared to have passed—but this was so only until the outbreak of the War of Ncayecibi in 1877.

THE MILITARY, STRATEGIC AND SOCIAL SIGNIFICANCE OF THE FORTIFICATIONS

From 1835 to 1866, numerous fortifications were constructed and maintained between the Kei and the Keiskamma rivers. Aside from fortified camps built during the wars and of short-term duration, some thirty posts were erected. At the peak of the colonial authorities' reliance on military fortifications, c1856, sixteen posts were maintained and garrisoned. Table 4 lists all these fortifications.

These fortifications were, for the most part, built where strategy demanded: either at key drifts, in the midst of certain Xhosa groups, on important wagon routes or in areas where they could dominate their surroundings (Fig. 19). Local conditions, however, often influenced these strategic concerns. In particular, forts had to be located near a good source of water. As a result, they were sometimes built in hollows where their ability to command the surrounding countryside was hampered.

TABLE 3.
Summary of Returns of Military Posts in Cape of Good Hope Blue Books, 1845–1866

NAME	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	
1. Fort Hare		T	T	T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2. Fort Glamorgan			T	T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3. King William's Town			T	T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4. Fort Cox			T	T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5. Fort Murray				T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6. Chumie Post								T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7. Middledrift										T	P	P	P	P	P	P	P	P	P	P	P	P	P
8. Fort White										T	P	P	P	P	P	P	P	P	P	P	P	P	P
9. Keiskamma Hoek										T	P	P	P	P	P	P	P	P	P	P	P	P	P
10. Bailie's Grave										T	P	P	P	P	P	P	P	P	P	P	P	P	P
11. Kabousie										T	P	P	P	P	P	P	P	P	P	P	P	P	P
12. Fort Pato										T	P	P	P	P	P	P	P	P	P	P	P	P	P
13. Fort Grey										T	P	P	P	P	P	P	P	P	P	P	P	P	P
14. Tamacha										T	P	P	P	P	P	P	P	P	P	P	P	P	P
15. Izeli										T	P	P	P	P	P	P	P	P	P	P	P	P	P
16. Dohne											P	P	P	P	P	P	P	P	P	P	P	P	P
17. Fort Jackson																							
18. Golubi (probably Blancey Post)																							
19. Amalinda																							

Key:
P = permanent
T = temporary

A = abandoned and dismantled
U = unoccupied

Note: The above are the "official" fortifications that existed in British Kaffraria. Posts and entrenched camps constructed during a campaign are not necessarily listed in these Returns (e.g. Fort Waterloo, Need's Camp and Chalumna are not listed for 1847 even though there were troops stationed there that year).
The first mention of Golubi and Amalinda are when they are listed as abandoned and dismantled. The Returns from 1858 to 1866 indicate posts at Windvogelberg, Tylden and Imvani, but following Sir George Cathcart's territorial arrangements after the War of Mlanjeni these technically fell outside British Kaffraria. They have therefore not been included.

TABLE 4.
List of fortifications in the province of Queen Adelaide and British Kaffraria, 1835-1866.

War of 1834-35	War of the Axe, 1846-47	War of Manjeni, 1850-53	Cattle Killing Scare, 1856-57
1. Fort Beresford 2. Fort Cox 3. Fort Hardinge 4. Fort Hill 5. Fort Murray 6. Fort Warden 7. Fort Waterloo 8. Post Wellington 9. Fort White	1. Chalumna Post* 2. Fort Cox 3. Fort Glamorgan 4. Fort Grey 5. Fort Hare 6. King William's Town 7. Fort Muirray 8. Need's Camp* 9. Perie Post* 10. Fort Stokes* 11. Fort Waterloo 12. Fort Wellington (planned but probably not built)	1. Baillie's Grave Post 2. Chumie Post 3. Fort Cloete 4. Dohne Post 5. Fort Michel* 6. Fort Garvoek 7. Iqubeka Post* 8. Izeli Post 9. Kabousie Post 10. Keiskamma Hoek Post (Castle Eyre) 11. Fort Mackinnon 12. Middle Drift Post 13. Fort Pato 14. Tamacha Post 15. Fort White	1. Amalinda Post 2. Blaney Post 3. Fort Jackson 4. Perie Camp*

Note: This list has been compiled chiefly from the Cape of Good Hope Blue Books, supplemented by other sources. Posts marked with an asterisk (*) are ones that appear to have existed only in the course of a war and were more like fortified camps than forts as such. The list differs substantially from that compiled by A. W. Burton, in *Highlands of Kaffraria*, which was found to be erroneous on numerous points. Doubtless further research will uncover new information that will necessitate a revision of the above.



Fig. 19. Sketch of Fort Cox, emphasising the strategic position it occupied in the rugged Keiskamma River Valley. (Photograph: Cory Library)

Three basic patterns seem to have evolved. In 1835, the posts of occupation consisted of star-shaped earthworks with wattle-and-daub buildings; the smaller posts of communication consisted of circular or star-shaped earthworks with tents or wattle-and-daub buildings. Following the War of the Axe, sturdy stone forts were built. Stone buildings, loop-holed for defence, provided the actual fortification. During the War of Mlanjeni numerous rectangular earthworks with two bastions were constructed. These usually contained a few buildings of brick or stone and numerous structures of wattle-and-daub. The materials for the construction of the forts were largely obtained locally. Whatever their appearance, the fact remained that fortifications in British Kaffraria did not compare favourably with fortifications in Europe. Fort Hare, the largest in British Kaffraria was still mean and insignificant when compared to European fortifications:

“Though covering a large extent of ground, the works hardly deserve the name, being in reality nothing more than a village of thatched mud cottages, enclosed by picketing and low walls mounting a few guns and old musquetoons.”¹

The policy of maintaining a chain of fortifications appears to have had three discernible goals: to occupy the territory between the Kei and Keiskamma rivers; to subjugate the Xhosa and maintain the *Pax Britannica*; and, allied to this, to prevent a Xhosa invasion of the Cape Colony.

In the purely military sense, the fortifications east of the Keiskamma River were extremely successful. Although Fort Wellington, Fort White and Fort Hare were attacked, and although Fort Cox was besieged, the Xhosa failed to capture any of them (Fig. 20). In broader terms, however, the policy of relying on fortifications was less effective. Less than three years after Smith completed his fortifications for British Kaffraria, hostilities recommenced. While the fortifications were of little use in pacifying the Xhosa, Smith believed that they prevented a general invasion of the Cape Colony in 1850.² This may well have been the case initially, but perhaps it is true only in so far that the Xhosa concentrated on targets closer to home instead of immediately invading the Cape Colony as they did in 1834.

The system of fortifications did not constitute a satisfactory means of effectively occupying the country. The soldiers were restricted to particularly small areas in the vicinity of their posts (Fig. 21). Some of the posts were badly sited. They had no command of the surrounding countryside and grazing in the vicinity soon became depleted. Large numbers of soldiers who needed to be equipped, provisioned and periodically relieved were tied up garrisoning these forts. The forts were also difficult to supply in war time. All movements of wagons had to be accompanied by a corresponding troop movement. These escorts had to be large enough to ensure that the convoys got through. In January 1851 it took over 2 000 troops to replenish Fort Hare and Fort White; and in February Mackinnon had to use 2 750 men to put 400 men and stores into Fort Hare. As Scott has pointed out, all this was limited to the pace of an ox.³



Fig. 20. Few of the forts in British Kaffraria were attacked during the frontier wars and none was ever overrun. Fort Cox was besieged for a short time at the outbreak of the War of Mlanjeni. The *Illustrated London News* provided its readers with a rather romanticized version of Sir Harry Smith's escape from the fort, disguised as a Cape Mounted Rifleman. (Photograph: Kaffrarian Museum)

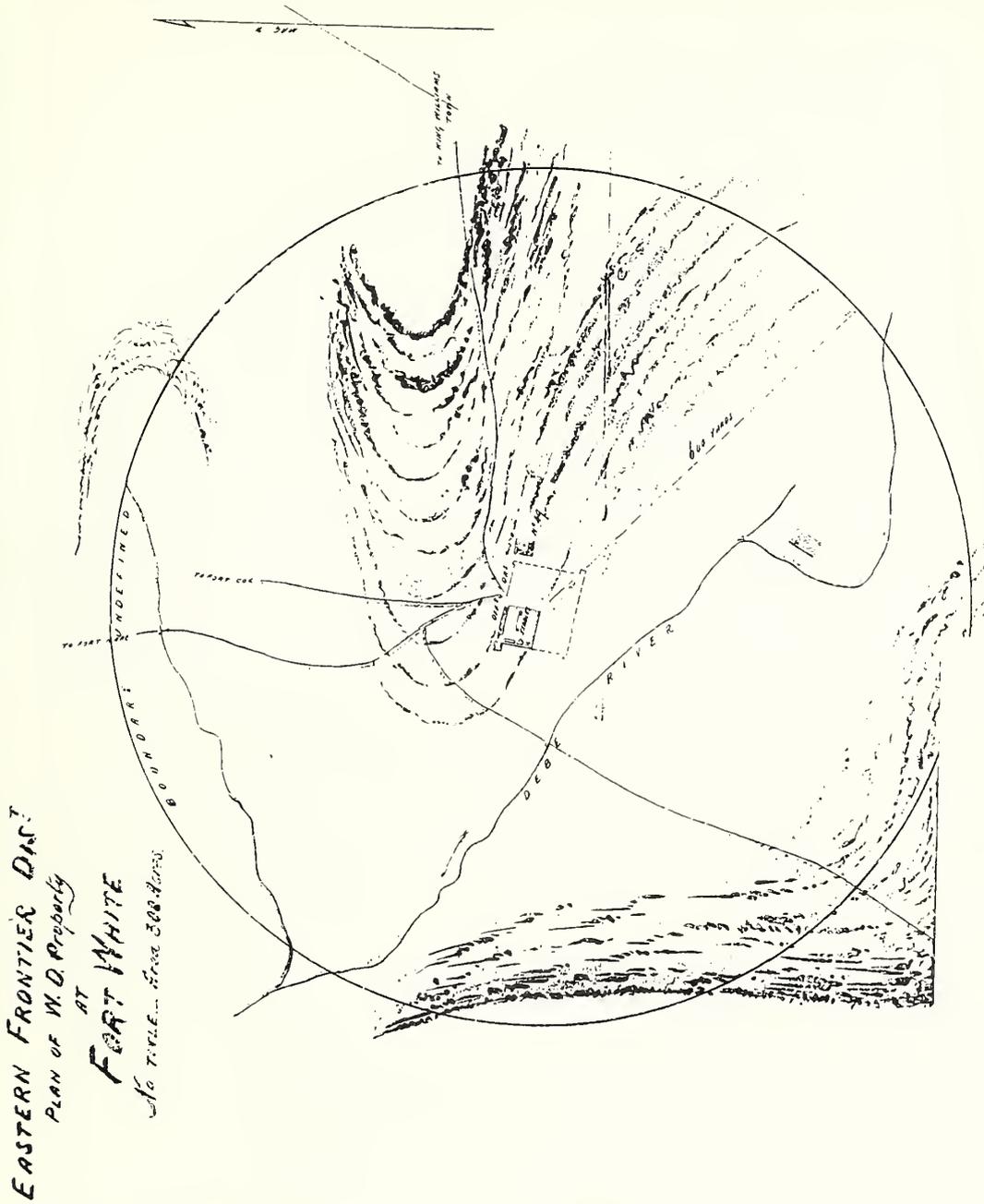


Fig. 21. Plan of Fort White showing the extent of the rayon surrounding the fort. (Cory Library, MP 271)

Despite these problems, however, the colonial authorities did not have viable alternatives. Until the Xhosa were completely subjugated, British authority could only be extended through the construction of fortifications. It was really only after the Cattle Killing and the introduction of white settlers under the "Grantee System", that land in British Kaffraria effectively passed into white hands.

In general, soldiers were accommodated in the forts under extremely primitive circumstances. The rank and file were usually housed in cramped wattle-and-daub structures that were subject to extreme changes in temperature. In 1835, the ill-fed and poorly equipped Khoi at Fort Cox experienced both rain and snow.⁴ During the War of Mlanjeni Capt. W.R. King of the 74th Regiment was stationed at Fort Hare. The quarters horrified him:

"Anything more miserable in the shape of barrack accommodation than the officers' quarters in the fort can hardly be conceived, uneven floors of dried cow-dung, bending walls of "wattle and daub", smoke blackened rafters excluded the light, and admitted in turn, wind, rain, and clouds of sand, were the characteristics of the best."⁵

In 1856 Colonel Bolton of the Royal Engineers noted that the wattle-and-daub barracks at Kabousie Post were inadequate and "in a situation so exposed, the Buildings should be of Stone or Brick with Fire Places and Glass Windows".⁶ Officers and horses were marginally better off, sometimes being housed in quarters of brick or stone (Fig. 22).

Indeed, most of the posts in British Kaffraria were in such a state of decay by 1856 that the Officer Commanding, Lt. General J. Jackson, complained to the Horse Guards:

"There is no portion of Her Majesty's Army in any part of Her Dominions so wretchedly housed as the troops now serving in British Kaffraria, and on the Frontier."⁷

These squalid conditions were not only apparent to the military, but to civilians as well. Robert Wilmot's description of Bailie's Grave Post graphically illustrates this:

"From the name of the place I had not expected a particularly lively location, but the dismal square of falling mud hovels, planted around a mud swamp of equal sloshiness and tenacity, the hopeless expression on the face of Mr. Morrah the hapless subaltern in command, and the disreputable appearance of the whole scene struck me with a cold shiver."⁸

Whilst such primitive quarters could be tolerated in war-time as one of the rigours of campaigning, in times of peace they were less than acceptable. Officers, in particular, found mud hovels with cow dung daubed on the walls and floor abhorrent:

"It is no exaggeration to say, that a civilized man in any other part of the world would hesitate before he put an ordinary hack into it."⁹

During periods of peace the garrisons of forts were expected to undertake twice weekly patrols. Regular rifle practices at ranges of 200, 400 and 600 yards were also expected.¹⁰ Aside from these and the normal garrison fatigues, soldiers manning the fortifications had little to keep them occupied. Boredom was a constant factor. Harriet Ward, who accompanied her husband to the eastern frontier during the War of the Axe observed:

"At Fort Hare, they are endeavouring to drive away ennui by hack races, or any kind of amusement which easily presents itself. The listlessness of a camp life is too often complained of to need comment."¹¹

In her opinion, this was exacerbated by the difficulty of obtaining books and other reading materials.

Drunkenness amongst the garrisons was a problem.¹² While officers frequently indulged in hunting and riding, those in command of isolated posts were unable to indulge in these pursuits.



Fig. 22. An officer's room at Fort Murray in the 1860s. This painting, by the wife of an officer at the fort, shows a room which appears to be more comfortable than was generally the case. The typically Victorian "clutter" includes bird wings and nests and the loopholes facing outwards have been covered by windows (visible on the right). (Photograph: Africana Library)

In addition, the caste system made the loneliness of officers worse.¹³ The rank and file, with lesser financial resources, did not even have this outlet for their boredom. In addition to the free ration of spirits soldiers received (one third of an imperial pint issued morning and evening), alcohol was usually available from licensed canteens at the posts. For sums of about three hundred and fifty Pounds (or even as high as four hundred and twenty-five Pounds in one case), traders received permission to operate in the vicinity of posts (Fig. 23).¹⁴ According to regulations published in King William's Town in 1857:

"The tenant of the canteen is required to supply the soldiers at fair and reasonable market prices, with Liquors, etc., of a good and proper quality, and no Wine, Beer or any description of Liquors, are to be sold to them except at the established canteen. The latter part of this . . . does not however apply to Liquors purchased for the sole and exclusive use of the Sergeant's (*sic*) Mess".¹⁵

In addition, strict rules were laid down concerning opening times, soldiers' activities in the canteens (no "gaming, cards, or gaming tables") and the sale of alcohol. In no uncertain terms, the canteen keepers were placed under the authority of the officers commanding the posts. Although canteen keepers were prohibited from conducting any other trade on their premises, some were able to circumvent this. Those who did frequently fulfilled a need created by a badly

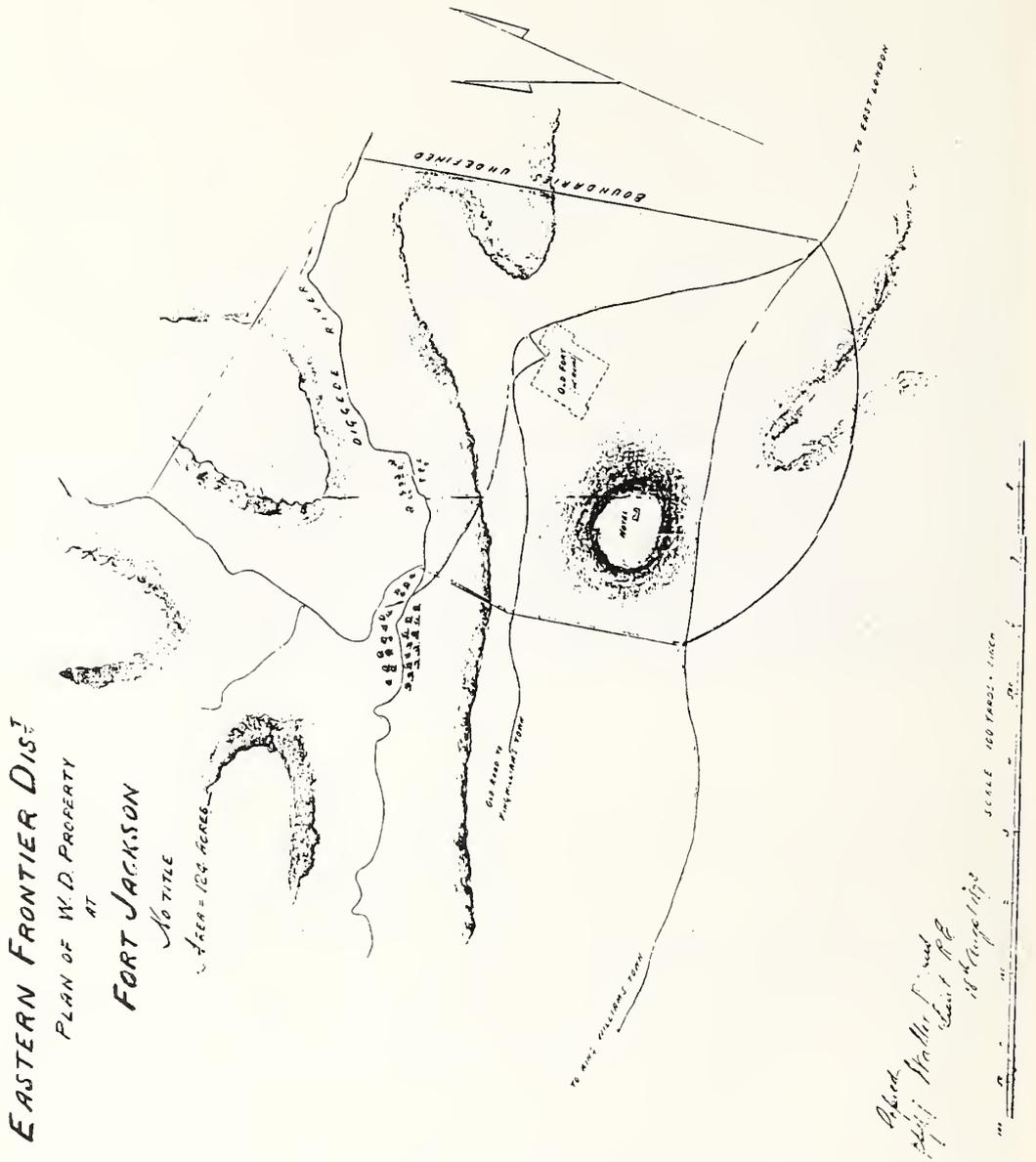


Fig. 23. Plan of Fort Jackson showing the location of the hotel in relation to the old fort. (Cory Library, MP 294)

organized Commissariat. The canteens may have been popular with the men, but some canteen keepers clashed with the officers in charge of certain posts. The canteen keepers harboured deserters, charged exorbitant prices, employed military labour illegally, and generally undermined military authority.¹⁶

The impact of the forts on the Xhosa is an issue that cannot be adequately dealt with in a few paragraphs. In general terms, the peace settlements imposed on the Xhosa after the wars of 1834–1835, 1846–1847 and 1850–1853 deprived them of lands they had previously inhabited. The fortifications facilitated the enforcement of these arrangements. The Nqgika were prevented from occupying their traditional lands, after 1853, by the ring of forts around the Crown Reserve. As certain groups appeared less likely to attempt to shake off British authority, so the forts in their midst were abandoned. The Ndlambe east of the Nxarhuni River are an example of such a group.

After 1847, the civil administration of the Xhosa operated from Fort Murray, Fort Waterloo and Fort Cox (Fig. 24). Later Dohne Post became the seat of the Nqgika Commissioner. The forts were thus, simultaneously, a physical barrier to the Xhosa re-entering land that had previously been theirs and a symbol of their subjugation.

Following the creation of British Kaffraria, Smith hoped the forts would become islands that disseminated “civilizing” influence. Mackinnon annually distributed gifts such as clothing, spades, axes, sickles, ploughs, saws, hammers, and cooking pots to the tribes through the commissioners at the forts.¹⁷ In this regard the forts could not compete with the mission stations, but the Xhosa were able to pick up Western customs and vices from the forts that were denied them at the mission stations, drunkenness and prostitution being but two of the latter. Sandile’s regular visits to the canteen at Fort Cox were noted by Thomas Baines in 1849 (Fig. 25).



Fig. 24. A meeting at Fort Cox between Xhosa and the civil authorities. After the War of the Axe the civil administration of the Xhosa was conducted by commissioners who were stationed at some of the forts. Charles Brownlee, the Nqgika commissioner had his residence at Fort Cox until the War of Mlanjeni. (Photograph: Cory Library)

Mackay, a former colour sergeant in the 91st Regiment, alluded to the gaggle of Khoi prostitutes in Major General Henry Somerset's entourage during the War of Mlanjeni.¹⁸ Not unexpectedly, prostitution also emerged at the posts. Backhouse mentions that the girls at Brownlee's mission, alongside Fort Hill, were corrupted by soldiers during the War of Hints, but information on the subject is extremely limited.¹⁹ It would appear that while the rank and file patronised them, certain officers commanding posts took an extremely authoritarian view of prostitutes. In 1854, the Officer Commanding Fort Hare sentenced a Khoi woman to three days imprisonment "on account of her loose and improper conduct".²⁰ A year later, Major J.C. Mansergh at Kabousie Post inflicted a more barbaric punishment on a Khoi and two Xhosa women. After being tied to stakes in the ground, hot lime was "applied and well rubbed into their heads and necks." Thereafter they were left in the sun for an hour before being expelled from the post.²¹

Drunkness and prostitution highlight just two social ill-effects caused by the forts in the midst of the Xhosa. The issue of collaboration also jelled around the forts. In the conflict of 1850-1853, Phato protected the wagon route to Fort Glamorgan. So vital was his assistance against the Ngqika and Seyolo's Ndlambe that a fort was named after him in recognition of his services. Tamacha Post, besides protecting the line of communication between King William's Town and Line Drift, also protected Siwani from Seyolo after the former received lands alienated by Cathcart from Seyolo and his people in 1852.²² In this manner, the forts were one of a number of factors that served to disrupt the traditional way of life; and in this sense, they form part of the complex causes of the millenarian movement of 1856-1857.



Fig. 25. The social ill-effects of the forts can be seen in the influence of the canteens or hotels located in the vicinity of the forts. Their trade was with both the soldiers and with the Xhosa. The easy availability of liquor contributed to drunkenness and to the weakening of traditional ways of life. Thomas Baines portrayed Chief Sandile and his followers drinking at the canteen at Fort Cox in 1849. (Photograph: Africana Library)

NOTES

INTRODUCTION

- 1 P. J. Bezuidenhout, "Forte en Verdedigingswerke op die Kaapse Oosgrens 1806–1836", *Militaria*, 15, 4, 1985, p.29.

D'URBAN'S ABORTED PROVINCE: THE PROVINCE OF QUEEN ADELAIDE, 1835–1836

- 1 GH 28/12/1, Enclosure F2 (Proclamation and Declaration), 10 May 1835.
- 2 G.M. Theal, *Documents Relating to the Kaffir War of 1835* (London, 1912), p. 155: D'Urban – Cox, 12 May 1835.
- 3 J.E. Alexander, *Excursions in Western Africa*, Vol. II (London, 1840), pp. 158 and 187.
- 4 *Ibid.*, p. 189.
- 5 Theal, *Documents*, p. 270: D'Urban – Smith, 24 July 1835; p. 314: Smith – D'Urban, 11 August 1835.
- 6 *Ibid.*, p. 189: Notice, 24 May 1835.
- 7 Alexander, *Excursions in Western Africa*, p. 195.
- 8 A.L. Harington, *Sir Harry Smith – bungling hero* (Cape Town, 1980), p. 49.
- 9 Theal, *Documents*, p. 233: D'Urban – Smith, 22 June 1835; p. 353: Williams – D'Urban, 27 August 1835.
- 10 *Ibid.*, p. 243: Smith – D'Urban, 25 June 1835.
- 11 J.J. Bisset, *Sport and War* (London, 1875), p. 29.
- 12 *Ibid.*, p. 35.
- 13 Theal, *Documents*, p. 230: D'Urban – Smith, 22 June 1835.
- 14 P.H. Butterfield, *Peace and War on the Frontier, 1828–1835* (Port Elizabeth, 1982), p. 15.
- 15 *Ibid.*, pp. 15–20.
- 16 Theal, *Documents*, p. 325: Williams – D'Urban, 15 August 1835.
- 17 J.S. Bergh and J.C. Visagie, *The Eastern Cape Frontier Zone, 1660–1980* (Durban, 1985), p. 44; Imperial BB, 1837, p. 16: Enclosure 2 in No. 9, "Sketch Map Shewing the Route of the Mission under the charge of Captain Delacey. . . ." ; Theal, *Documents*, p. 367: Smith – D'Urban, 1 September 1835.
- 18 Alexander, *Excursions in Western Africa*, pp. 157–158.
- 19 G.H. 28/12/1, Enclosure 20: Notice, 18 June 1835. Anyone familiar with the lie of the land will realise this is an exaggeration.
- 20 Theal, *Documents*, p. 326: Williams – D'Urban, 15 August 1835.
- 21 *Ibid.*, p. 197: D'Urban – Bell, 2 June 1835.
- 22 B. Le Cordeur and C. Saunders, *War of the Axe, 1847* (Johannesburg, 1981), p. 47: Memorandum on the Kaffir War in 1847.
- 23 Butterfield, *Peace and War on the Frontier*, p. 19.
- 24 G.H. 23/11, pp. 125–139: D'Urban – Aberdeen, 19 June 1835.
- 25 *Ibid.*, p. 140.
- 26 G.H. 23/11, p. 138: D'Urban – Aberdeen, 19 June 1835.
- 27 Bergh and Visagie, *Eastern Cape Frontier Zone*, p. 46.
- 28 The Rev. John Brownlee, quoted in B. Holt, *Greatheart of the Border* (King William's Town, 1976), p. 95.

THE WAR OF THE AXE AND THE BIRTH OF BRITISH KAFFRARIA, 1846–1850

- 1 J.B. Peires, *House of Phalo* (Johannesburg, 1981), p. 134.
- 2 Le Cordeur and Saunders, *War of the Axe*, p. 16.
- 3 A.E. du Toit, "The Cape Frontier", *Archives Yearbook for South African History*, Vol. 1 of 1954 (Cape Town, 1954), p. 18.
- 4 Le Cordeur and Saunders, *War of the Axe*, p. 19.
- 5 *Ibid.*, p. 19.
- 6 Du Toit, "Cape Frontier", p. 29.
- 7 Bergh and Visagie, *Eastern Cape Frontier Zone*, p. 18. For various reasons, the Letters Patent constituting British Kaffraria were held back.
- 8 B.K. 371, No. 85: Regulations respecting civilians in British Kaffraria, Mackinnon, 1 January 1849.
- 9 Bergh and Visagie, *Eastern Cape Frontier Zone*, p. 48.
- 10 Du Toit, "Cape Frontier", p. 18.
- 11 *Ibid.*, pp. 18–19; Imperial BB, 1847, p. 196: Maitland – Grey, 26 November 1846.
- 12 Imperial BB, 1847, p. 196: Maitland – Grey, 26 November 1846.
- 13 Le Cordeur and Saunders, *War of the Axe*, p. 21.
- 14 Imperial BB, 1847, p. 110: Grey – Pottinger, 26 July 1847.
- 15 *Ibid.*, p. 110: Enclosure in No. 31, Notes on the Kafir War.
- 16 *Ibid.*, p. 110.
- 17 Imperial BB, 1848, pp. 41–42: Memorandum, Smith, 27 December 1847; *Ibid.*, p. 42: Addendum, 1 January 1848.
- 18 B.K. 371, No. 4: Mackinnon – High Commissioner, 27 January 1848.
- 19 Cape BB, 1848, Local Corps, Cape Mounted Riflemen, Strength of the Corps.
- 20 M.H. Taylor, "St. Luke's Mission", *Coelacanth*, 7, 1, April 1969, p. 7.
- 21 Imperial BB, 1848, p. 43: Estimates, Walpole.
- 22 Cape BB, 1848, Return of Military Posts and Works.
- 23 *Ibid.*, Local Corps, Cape Mounted Riflemen, Return of the Corps.
- 24 Imperial BB, 1848, p. 28: General Orders, Mackinnon, 24 December 1847.
- 25 *Ibid.*, p. 42: Memorandum, Smith, 27 December 1847.
- 26 *Ibid.*, p. 29: General Order, Mackinnon, 24 December 1847.

THE WAR OF MLANJENI AND CATHCART'S "CASTLES", 1850–1854

- 1 Du Toit, "Cape Frontier", pp. 47–48.
- 2 Bergh and Visagie, *Eastern Cape Frontier Zone*, p. 52.
- 3 *Ibid.*, p. 52.
- 4 Imperial BB, 1853, p. 134: Enclosure 2 in No. 28, Cathcart – Commanding Royal Engineer, 12 June 1852.
- 5 *Ibid.*, p. 134.
- 6 *Ibid.*, p. 117: Despatch, Cathcart – Secretary of State for Colonies, 20 May 1852.
- 7 GH 36/1, pp. 273–275: Bolton, Report, 1 March 1856.
- 8 Imperial BB, 1853, p. 116: Despatch, Cathcart – Secretary of State for Colonies, 20 May 1852.
- 9 Du Toit, "Cape Frontier", pp. 74–75.

- 10 Cape BB, 1853 and 1854, Return of Military Posts and Works.
- 11 GH 36/1, pp.249–304: Bolton, Report, 1 March 1856; GH 39/1, pp.880–885: Memorandum on Sites Proposed by Sir George Grey on a Settlement for the German Legion, Bisset, 30 June 1855.
- 12 GH 30/4, pp. 31–32: Cathcart – Maclean, 19 October 1852.
- 13 GH 39/1, pp. 884–885: Memorandum, Bisset, 30 June 1855.
- 14 DD 16/3: Map of King William’s Town, 1859, to accompany Civil Building Estimates for 1860–61.
- 15 Du Toit, “Cape Frontier”, p. 82: Cathcart – Maclean, 4 April 1853.
- 16 *Ibid.*, p. 79: Cathcart – Newcastle, 4 February 1854.
- 17 *Ibid.*, p. 56.

BRITISH KAFFRARIA: CHANGES IN POLICY, STRATEGY AND STATUS, 1854–1866

- 1 J.B. Peires, “Sir George Grey versus the Kaffir Relief Committee”, *Journal of Southern African Studies*, 10, 2, April 1984, p. 149.
- 2 Du Toit, “Cape Frontier”, p. 88: Governor Grey – Secretary Grey, 22 December 1854.
- 3 See, for e.g., J.B. Peires, “The Late Great Plot”. *History in Africa*, XII, 1985.
- 4 Imperial BB, 1853, p. 245: Newcastle – Cathcart, 14 March 1853.
- 5 For Grey’s actions see Peires, “The Late Great Plot”.
- 6 BK 97, Smyth-Taylor, 2 February 1856; GH 36/1. p. 269: Report, Bolton, 1 March 1856.
- 7 Cape BB, 1857–1859, Return of Military Posts and Works. Blaney Post was sometimes referred to as “Golubi Post”.
- 8 Bergh and Visagie, *Eastern Cape Frontier Zone*, p. 56.
- 9 Cape BB, 1858–1866, Return of Military Posts and Works.
- 10 BK 99, Smyth – Bolton, 22 February 1859; GH 30/5, p. 83: Travers – Maclean, 16 May 1859.
- 11 GH 41/2, Cape of Good Hope Eastern Frontier Lands and Buildings to be handed over to the Colony, 13 February 1879.
- 12 Cape BB, 1865–1866, Strength and Distribution of Armed and Mounted Police.
- 13 D.B. Hook, *With Sword and Statute* (London, 1906), p. 155.

THE MILITARY, STRATEGIC AND SOCIAL SIGNIFICANCE OF THE FORTIFICATIONS

- 1 W.R. King, *Campaigning in Kaffirland* (London, 1853), p. 40.
- 2 Imperial BB, 1851, p. 1: Despatch, Smith – Grey, 27 January 1851.
- 3 J.B. Scott, “The British Soldier on the Eastern Frontier 1800–1850” (unpubl. PhD thesis, U.P.E., 1973), p. 311.
- 4 Butterfield, *Peace and War on the Frontier*, p. 19.
- 5 King, *Campaigning in Kaffirland*, p. 40.
- 6 GH 36/1, p. 279: Report, Bolton, 1 March 1856.
- 7 GH 36/1, pp. 249–250: Letter, Jackson – Yorke, 26 February 1856.
- 8 R. Wilmot, *Cape Travellers’ Diary, 1856* (ed. P. Lewson, Johannesburg, 1984), pp. 47–48.
- 9 T.J. Lucas, *Camp Life and Sport in South Africa* (London, 1878), p. 160.
- 10 BK 98, Circular Memorandum, Smyth, 29 May 1854.
- 11 H. Ward, *Five Years in Kaffirland*, Vol. II (London, 1848), p. 105.

- 12 A. Brown, "The Ciskei, a vanishing frontier: the case for Historical Archaeology," *Coelacanth*, 24, 1, June 1986, p. 13.
- 13 Scott, "The British Soldier on the Eastern Frontier", p. 252.
- 14 BK 95, Schedule of Tenders received . . . for Licenses to keep Military Canteens . . . , 25 October 1856.
- 15 BK 95, Regulations Required to be Observed by the Lessees of any Canteens, Bisset, 16 June 1857.
- 16 BK 95, Letter, Montgomery – Maclean, 30 January 1854; BK 97, Letter, Taylor – Maclean, 27 August 1857.
- 17 Imperial BB, 1848, p. 42: Memorandum, Smith, 27 December 1847; Du Toit, "Cape Frontier", pp. 38–39.
- 18 J. Mackay, *Reminiscences of the Last Kafir War* (Struik facsimile reprint, Cape Town, 1970), p. 59.
- 19 J. Backhouse, *A Narrative of a visit to the Mauritius and South Africa* (London, 1844), pp. 236–237.
- 20 BK 95, Letter, O.C. Fort Hare – Maclean, 29 May 1854.
- 21 BK 95, Letter, Smyth – Maclean, 10 March 1855.
- 22 GH 30/4, pp. 31–33: Cathcart – Maclean, 19 October 1852.

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The Cory Library kindly gave permission for the publication of pictures in their possession (Figs 10, 11, 12 and 24), as did the Africana Library (Figs 5, 6, 22 and 25). The other pictures are from the collections of the Kaffrarian Museum.

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SOURCE LIST

A. Archival Records

The following series were consulted in the Cape Archives Depot:

- (i) *British Kaffrarian Records*
 BK 17 Surveyor General, 1853–1858.
 BK 18 Surveyor General, 1859.
 BK 19 Surveyor General, 1860.
 BK 20 Surveyor General, 1861.
 BK 21 Surveyor General, 1855–1866.
 BK 95 Military, 1852–1858.
 BK 96 Military, 1859–1866.
 BK 97 Ass. Adjutant General, 1851–1866.
 BK 98 Military H.Q., 1854–1864.
 BK 99 Royal Engineers, Commissariat, Military Stores, 1853–1864.
 BK 371 Letters despatched to High Commissioner, 1848–1854.
 BK 372 Duplicates of BK 371 and Enclosures.
 BK 373 Letter Book of High Commissioners, 1854–1863.
- (ii) *Defence Department*
 DD 16/1 Royal Engineers. Register of Annual Estimates, 1852–1861.
 DD 16/3 Royal Engineers. Annual Estimates and Reports, 1844–1864.
- (iii) *Government House*
 GH 1/251 General Despatches, 1856 Feb.—1856 March.
 GH 8/16 Letters Received from Lt. Gen., Eastern Districts, 1854–1860.
 GH 23/11 General Despatches, 1833 Nov.—1838 June.
 GH 24/5 Register of Despatches Sent to Sec. of State, 1832–1841.
 GH 28/12 Enclosures to Despatches.
 GH 30/3 Letter Book of Lt. Gov., 2 March 1846—6 May 1856.
 GH 30/4 Letter Book, 1852–1860 (British Kaffraria).
 GH 30/5 Letter Book, 1858–1860 (British Kaffraria).
 GH 30/6 Letter Book, 1860–1862 (British Kaffraria).
 GH 39/1 Letters, Military Secretary, British German Legion, 1857–1858.
 GH 41/2 Transfer of Imperial land and buildings to Colonial Government, 1854–1885.
 GH 42/1 Military Secretary's Letter Book, 1853 Jan.—1858 Feb.
 GH 42/2 Military Secretary's Letter Book, 1858 Feb.—1860 May.

B. Official Publications

The following Blue Books were consulted in the Cape Archives Depot:

- (i) *Imperial Blue Books*
 OPB 1/9 Vol. IX, 1836–1837 Kafir War.
 OPB 1/10 Vol. X, 1847–1848 Kafir Tribes.
 OPB 1/11 Vol. XI, 1850–1851 Kafir Tribes.
 OPB 1/13 Vol. XIII, 1852–1853 Kafir Tribes.
 OPB 1/14 Vol. XIV, 1855–1865 Kafir Tribes.
- (ii) *Cape of Good Hope Blue Books*
 CCP 4/2/1 Colonial Forces and Defence, 1853–1883.
 CCP 9/8 Cape of Good Hope Blue Book, 1845.
 CCP 9/9 Cape of Good Hope Blue Book, 1846.
 CCP 9/10 Cape of Good Hope Blue Book, 1847.
 CCP 9/11 Cape of Good Hope Blue Book, 1848.
 CCP 9/12 Cape of Good Hope Blue Book, 1849.
 CCP 9/13 Cape of Good Hope Blue Book, 1850.
 CCP 9/14 Cape of Good Hope Blue Book, 1851.
 CCP 9/15 Cape of Good Hope Blue Book, 1852.
 CCP 9/16 Cape of Good Hope Blue Book, 1853.
 CCP 9/17 Cape of Good Hope Blue Book, 1854.
 CCP 9/18 Cape of Good Hope Blue Book, 1855.
 CCP 9/19 Cape of Good Hope Blue Book, 1856.
 CCP 9/20 Cape of Good Hope Blue Book, 1857.
 CCP 9/21 Cape of Good Hope Blue Book, 1858.
 CCP 9/22 Cape of Good Hope Blue Book, 1859.
 CCP 9/23 Cape of Good Hope Blue Book, 1860.

- CCP 9/24 Cape of Good Hope Blue Book, 1861.
 CCP 9/25 Cape of Good Hope Blue Book, 1862.
 CCP 9/26 Cape of Good Hope Blue Book, 1863.
 CCP 9/27 Cape of Good Hope Blue Book, 1864.
 CCP 9/28 Cape of Good Hope Blue Book, 1865.
 CCP 9/29 Cape of Good Hope Blue Book, 1866.

C. Books, Papers and Theses

(i) Books

- ALEXANDER, A. E., *Excursions in Western Africa and Narrative of a Campaign in Kaffir-land on the Staff of the Commander-in-Chief*, Vol. II. London: Henry Colburn, 1840.
- BACKHOUSE, J., *A Narrative of a Visit to the Mauritius and South Africa*. London: Hamilton, 1844.
- BAINES, T., *Journal of Residence in Africa 1842-1853*, R.F. Kennedy, ed. Cape Town: Van Riebeeck Society, 1961 and 1964.
- BERGH, J. S. and VISAGIE, J. C., *The Eastern Cape Frontier Zone, 1660-1980*. Durban: Butterworths, 1985.
- BISSET, J. J., *Sport and War or Recollections of Fighting and Hunting in South Africa in the Years 1834-1867*. London: John Murray, 1875.
- BOYCE, W. B., *Notes on South African Affairs from 1834 to 1838*. Grahamstown, 1838; Cape Town: Struik facsimile reprint, 1971.
- BRINTON, W., *History of the British Regiments in South Africa 1795-1895*. Cape Town: U.C.T. Department of Extramural Studies, 1977.
- BROWNLEE, C. P., *Reminiscences of Kafir Life and History and Other Papers*. Lovedale: Lovedale Press, 1916.
- BURTON, A. W., *The Highlands of Kaffraria*. King William's Town: King Printing Co., 1942.
- BURTON, A. W., *Sparks from the Border Anvil*. King William's Town: Provincial Publishing Co., n.d.
- BUTTERFIELD, P. H., ed., *Peace and War on the Frontier 1828-1835. The Journal of Major William Cox*. Port Elizabeth: Historical Society of Port Elizabeth, 1982.
- CORY, G. E., *The Rise of South Africa*, Vols. IV and V. London, 1926; Cape Town: Struik facsimile reprint, 1965.
- DAVENPORT, T. R. H., *South Africa—A Modern History*. Johannesburg: Macmillan, 1977.
- DIEMONT, M., and DIEMONT, J., *The Brenthurst Baines*. Johannesburg: Brenthurst Press, 1975.
- DU TOIT, A. E., "The Cape Frontier: A Study of Native Policy with Special Reference to the Years 1847-1866", *Archives Yearbook for South African History*, Vol. 1 of 1954. Cape Town: Government Printer, 1954.
- FRYE, J. ED., *The War of the Axe and the Xosa Bible. The Journal of the Rev. J. W. Appleyard*. Cape Town: Struik, 1971.
- GODLONTON, R., *A Narrative of the Irruption of the Kaffir Hordes into the Eastern Province of the Cape of Good Hope 1834-1835*. Grahamstown, 1835; Cape Town: Struik facsimile reprint, 1965.
- GODLONTON, R., and IRVING, E., *Narrative of the Kaffir War 1850-1851*. Grahamstown, 1851; Cape Town: Struik facsimile reprint with Part II added, 1962.
- GORDON-BROWN, A., ED., *The Narrative of Private Buck Adams*. Cape Town: Van Riebeeck Society, 1941.
- HARRINGTON, A. L., *Sir Harry Smith—Bungling Hero*. Cape Town: Tafelberg, 1980.
- HOLT, B., *Greatheart of the Border, A Life of John Brownlee*. King William's Town: S.A. Missionary Museum, 1976.
- HOOK, D. B., *With Sword and Statute*. London: Greaves, Pass & Co., 1906.
- KING, W.R., *Campaigning in Kaffirland*. London: Saunders & Oxley, 1853.
- LAKEMAN, S., *What I Saw in Kaffirland*. London: William Blackwood & Sons, 1880.
- LE CORDEUR, B., *The Politics of Eastern Cape Separatism 1820-1854*. Cape Town: O.U.P., 1981.
- LE CORDEUR, B., and SAUNDERS, C., *The War of the Axe, 1847, Correspondence between the governor of the Cape Colony, Sir Henry Pottinger, and the commander of the British forces at the Cape, Sir George Berkeley, and others*. Johannesburg: Brenthurst Press, 1981.
- LUCAS, T. J., *Camp Life and Sport in South Africa. Experiences of Kaffir Warfare with the Cape Mounted Rifles*. London: Chapman and Hall, 1878.
- MACLENNAN, B., *A Proper Degree of Terror*. Johannesburg: Ravan Press, 1986.
- MARKS, S., and ATMORE, A., eds., *Economy and Society in Pre-industrial South Africa*. London: Longman, 1980.
- McKAY, J., *Reminiscences of the Last Kafir War*. Grahamstown: 1871; Struik facsimile reprint, Cape Town, 1970.
- MILTON, J., *The Edges of War*. Cape Town: Juta & Co., 1983.
- NEWMAN, W. A., *Biographical Memoir of John Montagu*. London: Harrison, 1855.
- PEIRES, J. B., *The House of Phalo*. Johannesburg: Ravan Press, 1981.
- SAUNDERS, C., and DERRICOURT, R., eds., *Beyond the Cape Frontier*. London: Longman, 1974.
- SCHNELL, E. L. G., *For Men Must Work*. Cape Town: Maskew Miller, 1954.
- SCHWAR, J. F., and JARDINE, R. W., *The Letters and Journal of Gustav Steinbart*, Vols. I and II. Port Elizabeth: University of Port Elizabeth, 1975 and 1978.
- SCHWAR, J. F., and PAPE, B. E., *Deutsche in Kaffraria 1858-1958*. King William's Town: King Printing Co., 1958.
- STAPLES, I., *A Narrative of the Eighth Frontier War*. ed. J. de Villiers, Pretoria: State Library, 1974.
- THEAL, G. M., *Documents Relating to the Kaffir War of 1835*. London: Government Printer, 1912.
- VAN RIET LOWE, C., ed., *The National Monuments of South Africa*. Pretoria: Government Printer, 1941.

WEBB: FORTIFICATIONS IN QUEEN ADELAIDE AND BRITISH KAFFRARIA

- WALKER, E. A., *A History of South Africa*. London: Longmans, Green & Co., 1928.
- WARD, H., *Five Years in Kaffriland; with Sketches of the Late War in that Country*, Vols. I and II. London: Henry Colburn, 1848.
- WILMOT, R. A. *A Cape Traveller's Diary, 1857*. ed. P. Lewsen. Craighall: Ad. Donker, 1984.
- (ii) *Papers*
- ARCHER, T., "In Search of Fort Grey", *Coelacanth* 13(2), Oct. 1975.
- BEZUIDENHOUT, P. J., "Forte en Verdedigingswerke op die Kaapse Oosgrens 1806–1836", *Militaria* 15(4) 1985.
- BROWN, A., "The Ciskei, A Vanishing Frontier: The Case for Historical Archaeology", *Coelacanth* 24(1) June 1986.
- HARINGTON, A. L., "Sir Harry Smith", *Military History Journal* 3(1) June 1974, pp. 24–30.
- HOFMEYR, G., "Fort Murray", unpub. article, Kaffrarian Museum, FORTS File: M.
- PEIRES, J. B., "Sir George Grey versus the Kaffir Relief Committee", *Journal of Southern African Studies* 10(2) April 1984.
- PEIRES, J. B., "The Late Great Plot", *History in Africa* 12 1985.
- SCOTT, J. B., "Forts and Posts in the Eastern Cape", *Looking Back* 11(3) 1971.
- TAYLOR, M., "St. Luke's Mission", *Coelacanth* 7(1) April 1969.
- TYLDEN, G., "Notes on the Eastern Frontier of the Cape Colony in the Middle of the Last Century", *Africana Notes and News* 17(6) 1967.
- VERNON, G. N. and ARCHER, T. M., "Fort Pato", *Coelacanth* 22(1) April 1984.
- (iii) *Theses*
- BERGH, J. S., "Die Lewe van Charles Pacalt Brownlee Tot 1857". University of Stellenbosch, PhD thesis, 1977.
- DE VILLIERS, C. B., "Die Administrasie van Brits-Kaffraria". University of Cape Town, MA thesis, 1933.
- HOFMEYR, G. S., "King William's Town and the Xhosa, 1854–1861. The Role of a Frontier Capital during the High Commissionership of Sir George Grey". University of Cape Town, MA thesis, 1981.
- SCHKOLNE, W., "Military Operations of Sir George Cathcart". University of South Africa, MA thesis, 1947.
- SCOTT, J. B., "The British Soldier on the Eastern Cape Frontier 1800–1850". University of Port Elizabeth, PhD thesis, 1973.
- SETON, B. E., "Wesleyan Missions and the Sixth Frontier War 1834 to 1835". University of Cape Town, PhD thesis, 1962.
- STIENY, H. P., "Brits-Kaffraria, 1853–1866". University of Cape Town, MA thesis, 1926.

D. Miscellaneous

(i) *Kaffrarian Museum Files*

- Forts A—C.
- Forts D—H.
- Forts I—L.
- Forts M.
- Forts N—S.
- Forts T—Z.

(ii) *Maps and Plans*

The following is a selection of maps and plans utilised at the Kaffrarian Museum:

- W 576: Fort Cox, 1848
- W 577: Fort Glamorgan, 1848
- W 578: Fort Murray
- W 579: King William's Town, 1848
- W 580: Line Drift, 1853
- W 658: Fort Waterloo
- W 6760: Skeleton Map of the Eastern Frontier . . . and of British Kaffraria . . . 11 March 1858.

The following selection was consulted at the Cory Library for Historical Research:

- MP141 & 282 : Sketch Map of British Kaffraria, 1851
- MP317 : Sketch Map Showing Positions of Ordinance and other works in British Kaffraria
- MP276 : Plan of War Department Property at Dohne Post, 1873
- MP267 : Plan of War Department Property at Chumie Post, 1873
- MP261 : Plan of War Department Property at Fort Glamorgan, East London, 1880
- MP294 : Plan of War Department Property at Fort Jackson, 1873
- MP271 : Plan of War Department Property at Fort White, 1873
- MP281 : Plan of War Department Property at Keiskamma Hoek, 1873

APPENDIX A: GLOSSARY

abattis	—	defensive fence made of branches of trees.
bastion	—	projecting part of a fortification.
breastwork	—	breast-high defensive wall.
fosse	—	ditch or trench surrounding a fortification.
gorge	—	the neck or rear entrance of a bastion.
lunette	—	larger projection from fieldwork than a redan, with two faces and two flanks
parapet	—	earth or stone defensive wall.
rayon	—	area around a fortification reserved for the use of the military.
redan	—	projecting part of fieldwork with two faces forming a salient angle.
redoubt	—	square or polygonal fieldwork without flanking defences.
sutler	—	camp-follower who sells provisions to the troops.
tambour	—	circular defensive work.

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DE WINTER, B. 1969. Plant taxonomy today. *S.Afr.J.Sci.* 65 (8): 229–242.

JUBB, R. A. 1967. *Freshwater fishes of southern Africa*. Cape Town: Balkema.

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