



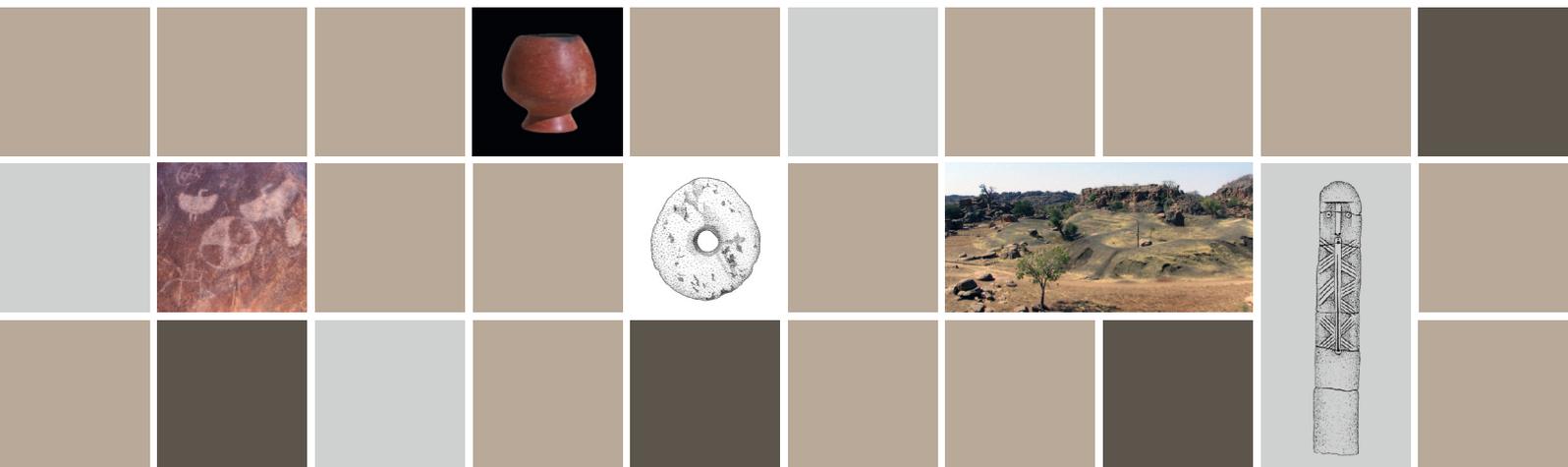
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Article outline

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and Technological Signature
of a Neolithic Population in Southern Africa

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Abstract

The Khoekhoe pastoralist populations of South Africa are well documented in historical sources. Their archaeological remains nonetheless seem to differ very little from those of contemporary hunter-gatherer groups. Based on the discovery of a probable kraal at Kafferskuitje (KFS 5), on the Vredenburg peninsula, and on a geomorphologic study of the alluvial terrace system of the Berg River, we suggest that Khoekhoe groups made selective choices in their settlement on the lower terraces located inside the meanders. If we follow this predictive model, the discovery of the site of Volstruisdrif (VSD) enables us to propose the hypothesis of an archaeological signature based on the diagnostic association of ceramic remains and distinctive lithic productions.

Keywords

South Africa, Khoisan, Khoekhoe, pastoralism, Neolithic, lithic technology, ceramics.

1 - Introduction

Is it possible to understand the lifeways of Khoekhoe pastoralists, a nomadic population in South Africa, through the sole intermediary of European sources? Would their historic depth then be limited to only a few centuries, those during which they were observed by Western peoples before their demise. These pastoralists – richly documented in the writings of the first colonists and voyagers who reached the area near the Cape of Good Hope starting in the late 15th century, and made famous under the name “Hottentots” – indeed disappeared in a rather brutal manner starting in the 18th century (Smith, 1993; Fauvelle-Aymar, 2002). Their descendants were then integrated into south-African society and were gradually replaced in our representation of indigenous populations in this part of the world by San hunter-gatherers (or Bushmen) only. These nomadic Khoekhoe pastoralist populations nonetheless played a very important, or even determinant, role in the Neolithization of southern Africa. They embody a form of socio-economic, and perhaps political, organization that must be taken into account in attempts to reconstruct the complex mosaic of situations that intervened between Bantu speaking agro-pastoralists and San hunter-gatherers.

Despite their importance, the demise of this population was so definitive that they ended up having no specific archaeological identity. Once their sheep and oxen herds were reduced to a few scarce bones, and their *kraals* (term designating both animal pens and human campsites) reduced to ashes, their material remains – a few pieces of flaked quartz and a few pot sherds most often found in small rock shelters or in association with large shell middens on the coasts – are easily confused with those of hunter-gatherers, so much so that their very existence has been questioned. For this reason, their study – perhaps like that of other prehistoric pastoralist populations in the world – presents a real challenge for our discipline.

The identity of these different populations – pastoralists and hunters – is the subject of recurring debate in archaeology and south-African history (for a synthesis of these issues, see Fauvelle-Aymar, Sadr, 2008). While for some authors, these groups are culturally clearly distinct (Smith, 1986; Yates, Smith, 1993), for others, the Khoekhoe and San represent two parts of the same cultural entity at different stages in its social organization or disorganization (Deacon, 1984; Schrire, 1992). This of course leads to opposing opinions concerning our ability to clearly distinguish these two populations in the archaeological record. These positions then give rise to very different scenarios to explain the origins of the pastoralist economy in this part of the world: if we are unable to define the cultural baggage specific to the populations by which it was practiced, it becomes impossible to go back in time based on archaeological remains to determine if the “historical” Khoekhoe are the descendants of the migrant populations that would have settled in the Cape region only a few hundred years before the arrival of European colonists, or of San populations that gradually adopted this economy as the diffusion of livestock and breeding practices extended over increasing distances. Though these two scenarios are opposed, they could operate together if we recognize that the two processes could have succeeded one another (Fauvelle-Aymar, 2004). The introduction of sheep starting at the beginning of our era could thus be the result of a phenomenon of diffusion within autochthonous hunter-gatherer populations (Sadr, 2003), and the Khoekhoe pastoralists could have appeared in the landscape of the Cape region later, during, or at the transition of the 1st millennium, perhaps instigated by the Bantu agro-pastoralist migration that occurred in the eastern part of Southern Africa.

We must nonetheless recognize that the archaeological data currently available are not sufficient to significantly contribute to such a discussion. In particular, as noted by C. Arthur (2008), we lack information on the types of settlements most often described by western voyagers: *kraals*, which are open air camps that constituted the itinerant settlements of these pastoralist populations (figure 1).

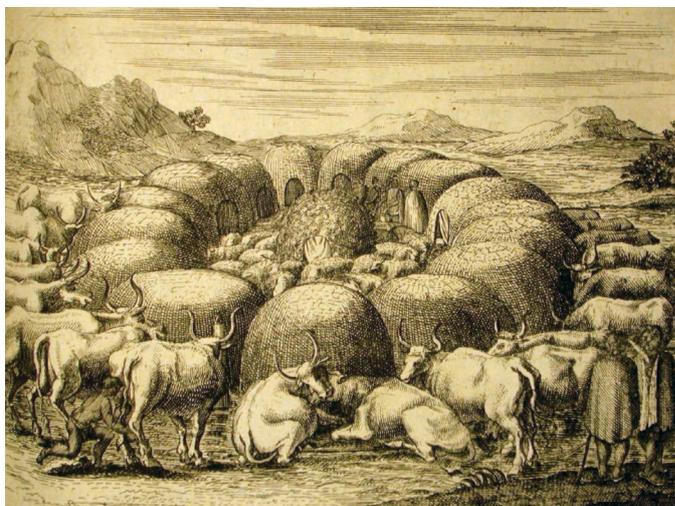


Figure 1 - An historical Khoekhoe *kraal* depicted by the illustrator of Peter Kolb's *Caput Bonae Spei Hodiernum* (1719). The habitation units, huts made of branches and woven mats, encircle a central space where the sheep and calves were kept.

On the contrary, most of the archaeological data thus far collected concern cave and rock shelter sites, or shell middens on the coast (Parkington, 2006). Like the research conducted in the Breede River sector (Arthur, 2008), our goal in organizing surveys between 2004 and 2006 was to search for traces of the Khoekhoe in the areas where they are historically documented, first on the Vredenburg peninsula, in order to return to the source of a rich archaeological record, and then on the banks of the Berg River (figure 2).

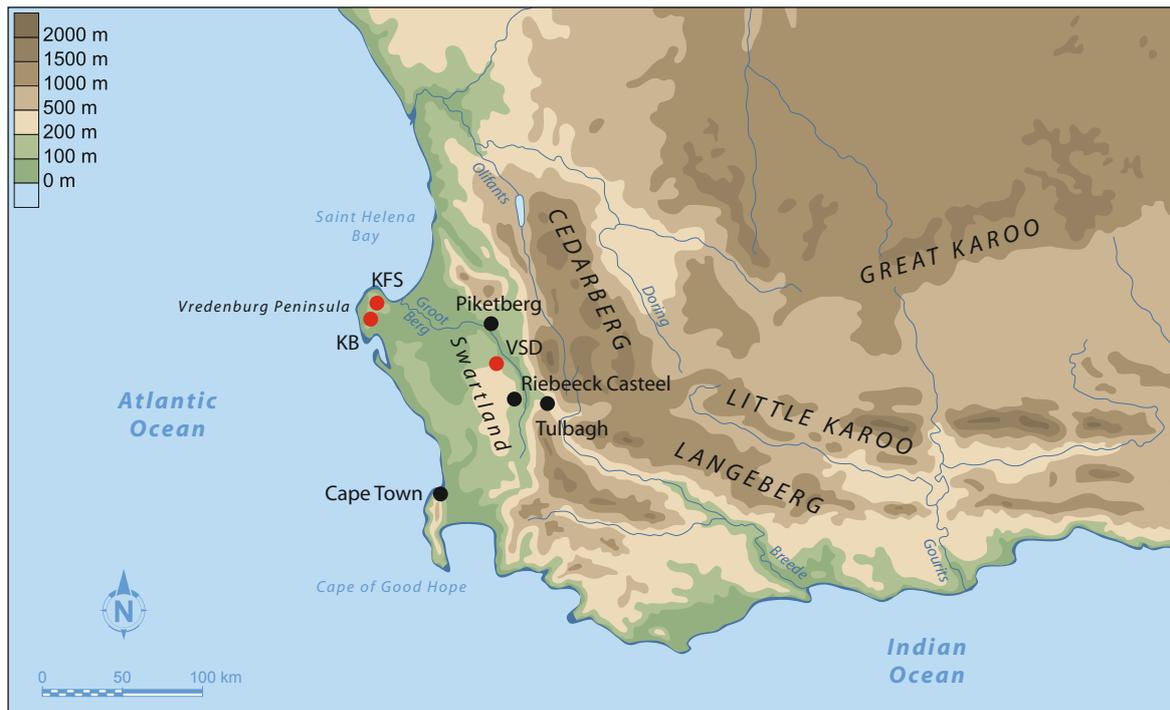


Figure 2 - Map of the sites mentioned in the text. KB: Kasteelberg. KFS: Kafferskuitje. VSD: Volstruisdrif (CAD: F. Tessier).

2 - Kafferskuitje 5: a *kraal* on the Vredenburg peninsula

We began our inquiry with an analysis of the site of Kafferskuitje 5 (KFS 5), previously identified by one of us (K.S.) during a systematic survey conducted in 1991 and 1992 on the Vredenburg peninsula (Sadr *et al.*, 1992; Sadr, Gribble, 2010), near the famous site of Kasteelberg. This latter site, located on a small granite relief overlooking the nearby sandy plain, yielded to A. Smith, who conducted research here, numerous remains of prehistoric occupations, and in particular, the remains of large occupations during the last two millennia. Belonging to this latter chronological phase, the sequence of the Kasteelberg B (KBB) locus constitutes one of the main references for the introduction of a pastoralist economy (in this case based on sheep) in this part of southern Africa. This site was one of the first to yield elements (ceramic and lithic remains, ostrich egg shell beads, etc.) enabling a more precise definition of the archaeological identity of pastoralist populations (Smith, 2006). Nonetheless, this occupation situated at the foot of a rock outcrop in a tangled heap of boulders, differs significantly from the descriptions of *kraals* found in the literature. As we shall see below, the site KFS 5 more closely corresponds to this type of site.

KFS 5 is a large open-air settlement located at the mouth of a small valley containing dispersed marine shells brought in from the nearby coast, indigenous pottery and lithic artifacts similar in many ways to the artifacts of the levels attributed to the 2nd millennia of our era found at KBB. A German pot sherd (of the Bartmann type) dating to the first half of the 17th century concords with the radiocarbon dates (mostly concentrated within the 14th to 17th centuries) obtained from shells, thus confirming that the site was occupied at the junction of the pre-colonial and colonial periods, during the period for which there is evidence (historic records) of the presence of Khoekhoe pastoralists in this region. In addition, our interpretation of KFS 5 as a true *kraal* is supported by the identification of a large spread of vitrified cow or sheep dung that appears to indicate the location of an animal pen (Fauvelle-Aymar *et al.*, 2006).

With KFS 5, we thus have one of the first sites on the Western Cape that appears to correspond to a *kraal* from the so-called “contact” period. As we will discuss below, KFS 5 thus contributes to defining the archaeological signature of a “historical” pastoralist population. Nonetheless, the integration of these archaeological data with written sources remains limited since KFS 5 is located in a geographic zone that was not precisely described by Europeans until the early 19th century. We thus decided that it would be necessary to make our observations in the zones with the most historical documentation. To do this, the second step of our work consisted of conducting a survey along the Berg River (figure 3). The choice of this zone, whose landscape was often described in the 17th and 18th centuries because it was then one of the main routes taken by the settlers toward the inland regions, was also useful for challenging the model proposed by A. Smith, according to which the Khoekhoe would have moved seasonally between the coast and the fertile plains of Swartland (figure 4; Smith, 1984).

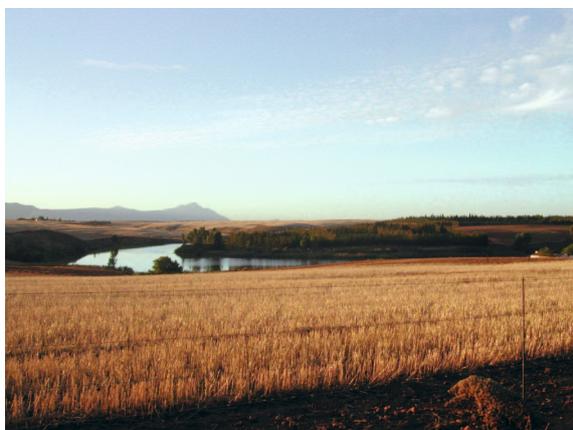


Figure 3 - View of the Berg from the area near Volstruisdrif (VSD) and Toorkrans (photograph: F. Bon).



Figure 4 - The Swartland plains near the Heunigberg massif (photograph: F. Bon).

3 - Historical context and archaeological environment of the Berg River

Several accounts from the late 17th century or early 18th relate, with more or less precision, the expeditions conducted in the surroundings of the Berg River and the encounters made with indigenous groups. Some authors, such as J. Danckaert in 1660 or P. van Mierhoff in 1661, describe their meetings with Sonqua (or Soaqua) groups in different places, while others speak of the presence of “Hottentots”. While the former do not appear to have possessed animals and could thus be considered as hunter-gatherers (Parkington, 1984), the latter were evidently nomadic

pastoralists, with whom the Europeans sought to establish contacts in order to acquire part of their livestock. Several *kraals* are thus mentioned, such as those of the *kaptein* (the Dutch name for the indigenous chiefs) Goereman somewhere along the banks of the Berg between Heunigberg and Misverstand (according to the account by Governor S. Van der Stel in 1685-1686; figure 5), or that of *kaptein* Bootsman, first near the Vier-en-Twintig-Riviere (“twenty-four rivers”), then a bit later downriver from the confluence of the Berg and the Matjiesrivier (according to the text by J. Starrenberg in 1705; accounts of these voyages in Mossop, 1927; Thom, 1952-1958; Valentyn, 1971).

This historically well documented zone was thus well adapted to testing our ability to identify the tangible archaeological remains of these pastoralist populations. A similar enterprise had in fact already been attempted around twenty years ago by T. Hart (1987) who conducted a survey with the same objective – to identify the remains of Khoekhoe settlement in the zone where their presence is historically documented. However, he himself admits that he failed due to the relative scarcity of archaeological remains that could be attributed to the Late Stone Age (LSA) in general and to the pastoralist populations in particular (Hart, 1987).



Figure 5 - Map of the Cape colony, published in 1726, shows the state of knowledge at the time of the voyage of Governor Van der Stel in 1685-1686. All of the Khoekhoe groups then known by the Dutch are indicated. Curiously enough, the hydrographic system of the Berg is duplicated on the map, indicating that at least two sources of information were consulted and combined. Nonetheless, despite these errors, the survival until today of the toponyms shown on this map allow us to precisely localize some of the places in the field (Valentyn, 1971; CAD: F.-X. Fauvelle-Aymar).

The method he employed, however, which consisted of surveying a sample of test zones with no previous geomorphological analysis of the landscape, could partly explain this result. In contrast, the approach that we applied in the two surveying sessions realized during the months of April 2005 and 2006, was based on a preceding description of the geomorphological conditions that could have dictated the settlement choices made by these populations across the landscape, as well as an understanding of the factors influencing the preservation of their remains. The zone that we selected was essentially the same as that of T. Hart, consisting of the portion of around twenty kilometers where the Berg runs along, from the west, the Heuningberg massif, between the Vier-en-Twintig-Riviere to the south, and the Matjiesrivier to the north (figure 6).

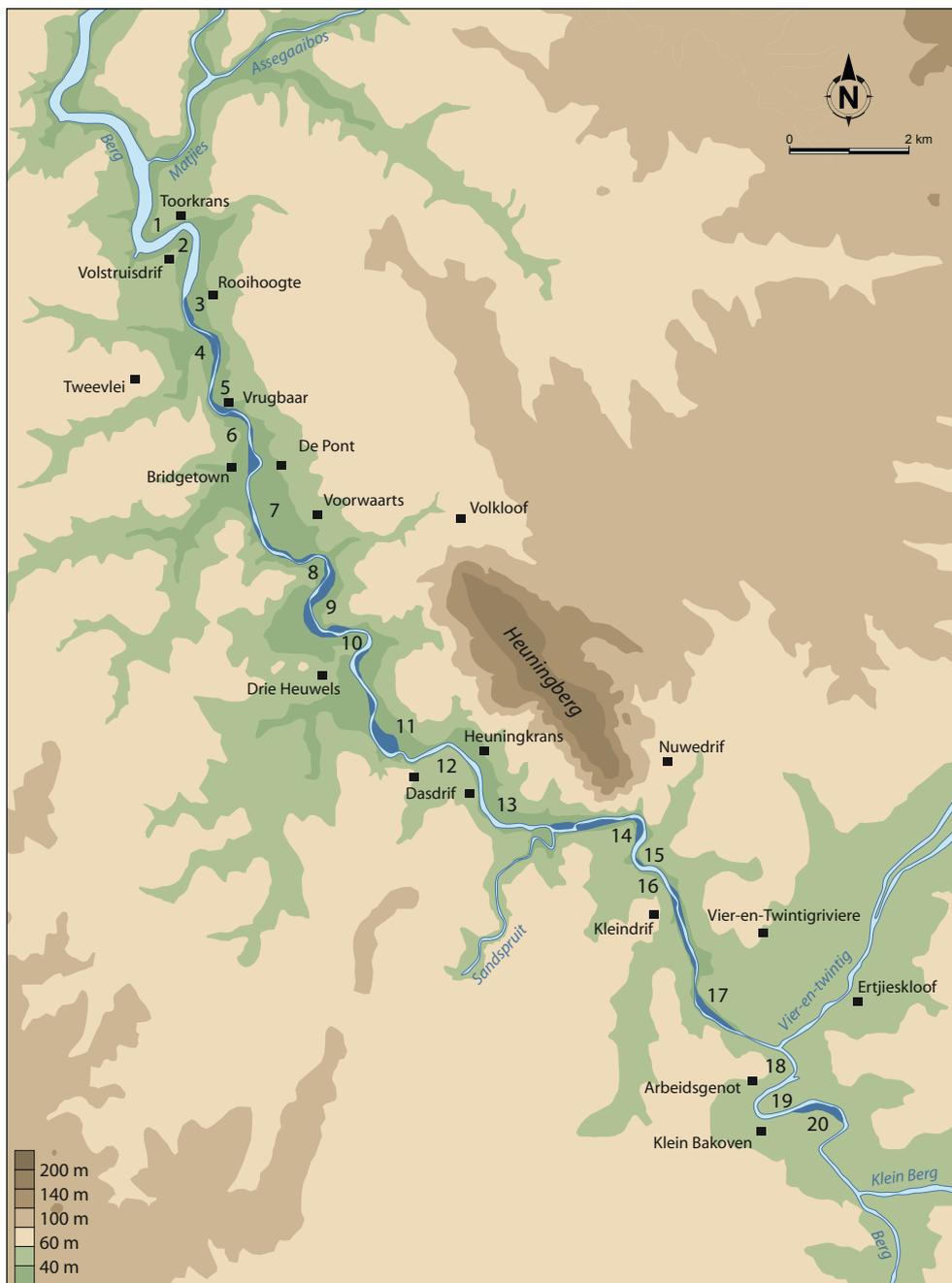


Figure 6 - Topographic map of the sector of intervention along the Berg (CAD: F. Bon).

4 - The alluvial terraces of the Berg: geomorphologic description and archaeological contents

Our study enables us to describe a system of alluvial terraces that includes three main levels.

- The oldest level corresponds to a wide alluvial terrace overlooking the current bed of the Berg from 30 to 40 m above (T3). Consisting mainly of gravels, it is largely composed of quartz and quartzitic sandstone pebbles in a reddish, sandy-clayey matrix produced by the alteration of the *Malmesbury shales* that form the main geological substratum of the Swartland. This high terrace is strongly dissected by erosion and is significantly altered.
- The intermediary level (T2) is much less visible. This terrace, whose rare bands are located around 20 meters above the river, forms occasional small breaks of slope that are partially hidden by colluvial formations, some originating from the T3 superstratum.
- The visibility of the low terrace (T1) is variable in different sectors. While it is poorly visible in the straight parts of the valley, it forms large sandy, well preserved, plateaus in the convex banks of meanders, 5 to 15 meters above the current bed of the Berg. These morphologies, characteristic of rivers with meanders, are nearly always found along the studied portion. The sediments are composed mostly of sand and correspond to channel bar deposits accumulated as the meanders were widened.

Comparisons with the data associated with other rivers in the Cape region (Theron *et al.*, 1992) indicate that T3 was formed during the Pliocene, before the hydrographic system was incised due to the uplifting of the entire region – the old alluvial deposits thus being found in perched positions. The scarcity of alluvial terrace remains during the Quaternary can then be explained by the narrowness of the valley, as well as by a relatively modest incision. In fact, with the exception of the insides of meanders, the different alluvial levels were successively eroded by the Berg (as is the case of terrace T2), and only the latest deposits (T1), probably dating to the last cold phase of the Quaternary, were locally well preserved.

Everywhere that we made observations, T3 is associated with industries attributable to the Early Stone Age (EAS), which T. Hart had already reported in abundance (figure 7 a-b). Middle Stone Age (MSA) remains are much less numerous, on the other hand: though Levallois productions (most often made from a coarse-grained silcrete) were sometimes found in association with T2, the erosion of this latter explains the scarcity of industries attributable to this period. Finally, from our first identifications of T1, we observed that it contains concentrations of artifacts attributable with certainty to the LSA.

This observation was made in the following manner: along the 20 km portion defined as a test zone, the concave parts of seven meanders were studied from a geomorphologic and archaeological perspective; in six cases, T1 was highly visible and in all cases, it contained LSA industries distributed across surfaces of over 10 000 m² and contained large artifact concentrations (table 1). This geomorphological analysis thus permitted us to identify a context yielding numerous indications of LSA occupations, evidently representing a preferential settlement pattern near water courses and on the inside of meanders covered by the sands of the low terrace. Regardless of this positive result, however, it remains to be seen whether we can identify the LSA phase and the populations with which these remains are associated.



Figure 7 - Early Stone Age lithic industries associated with T2 (Ertjieskloof, 7a) or T3 (Toorkrans, 7b) (photographs: F. Bon).



Table 1 - Inventory of the surveyed meanders and zones along the Berg.

Meander (cf. map figure 6)	Toponym	Archaeological observations	Presence of T1	LSA occupation indices	Surface covered by the LSA occupation indices
1	Toorkrans	1980' (T. Hart) ; 2005-2006	yes	yes	> 10 000 m ²
2	Volstruisdrif	2005-2006	yes	yes	> 10 000 m ²
3	Rooihoogte	1980' (T. Hart)	?	(T. Hart)	
4	Tweevlei	not surveyed			
5	Vrugbaar	1980' (T. Hart)	?	(T. Hart)	
6	Bridgetown	not surveyed			
7	De Pont-Voorwaarts	not surveyed	yes		
8	Drie Heuwels 1	2005	yes	yes	> 10 000 m ²
9	Volkloof	not surveyed			
10	Drie Heuwels 2	2005	yes	yes	> 10 000 m ²
11	Heuningkrans A	not surveyed			
12	Dasdrif	not surveyed			
13	Heuningkrans B	not surveyed			
14	Kleindrif B	2006	yes	yes	> 10 000 m ²
15	Nuwedrif	not surveyed			
16	Kleindrif A	not surveyed			
17	Vier-en-Twintigriviere	not surveyed			
18	Arbeidsgenot	2006	no	no	
19	Ertjieskloof	2006	yes	yes	> 10 000 m ²
20	Klein Bakoven	not surveyed			

All of the archaeological contexts concerned have abundant industries in white or smoky veined quartz, associated with the flaking of quartzitic sandstone pebbles. The flakes made from these raw materials are rarely retouched. Depending on the sector, we nonetheless observe some significant differences:

- the production of blades and/or bladelets in fine-grained silcrete sometimes accompanies the two productions described above; when it is present, this production makes up most of the retouched pieces (mostly retouched blades and bladelets, scrapers and adzes);
- while the production of flakes from quartzitic sandstone displays little variation, the quartz productions show much clearer differences. These latter are mostly realized on an anvil, but their execution is associated with two different modalities, resulting in very different cores and flakes (figure 8). Each of these modalities is accompanied by its own type of hammerstone: either classic specimens (in terms of volume), or flat hammerstones, identical to the anvils themselves (figure 9).

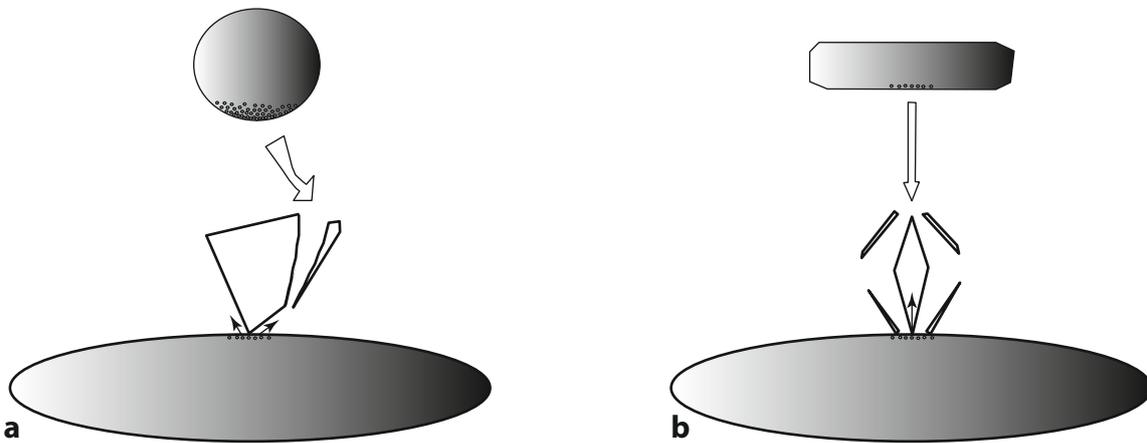


Figure 8 - Quartz exploitation modalities observed in the industries of the LSA sites surveyed along the Berg (CAD: F. Bon).



Figure 9 - Anvil-flat hammerstone, VSD sector Aa, square 1 (photograph: F. Bon).

3 cm
(1/1)

The industry dominated by quartz debitage using Modality B (figure 8) turns out to also be the one in which the blade-bladelet productions in silcrete are the least numerous, thus confirming the existence of two distinct technological facies (table 2). Other material features, such as the frequency of ceramic remains, support this observation. Now, as we will see in the example of Volstruisdrif (VSD), the criteria that allow us to distinguish it from all of the other contexts explored along the Berg are exactly those that indicate its similarity to KFS 5.

Table 2 - Industrial features recorded in the main sites surveyed along the Berg, compared with the artifacts of KFS 5.

	KFS 5	VSD Aa (square 1 and surroundings)	VSD Ab (square 3 and surroundings)	Toorkrans Aa Ab	Drie Heuwels 1	Kleindrif B	Ertjieskloof
Quartz production > other stones > silcrete	×	×	×	×	×	×	×
Retouched tools in silcrete	×	×		×	×		×
Quartz production Modality B > A	×	×					
Quartz production Modality A > B			×	×	×	×	×
Significant bladelet production in silcrete			×	×	×	×	×
"Classic" hammerstone	×	×	×	×	×	×	×
Flat hammerstone / anvil	×	×					×
Groove recycled as a hammerstone / anvil	×	×					
Flattened bored stone	×	×		×			
Narrow groove ("canoe shaped")	×						
Wide groove ("boat shaped")				×	×		

5 - Volstruisdrif: a Khoekhoe *kraal* on the banks of the Berg?

The site of Volstruisdrif has all of the topographic features described above. It is located on the inside of a narrow meander (meander 2 of our study sector; figure 6) composed of a band of sand (figure 10). Here, terraces T3 and T2 are highly eroded, but the industries attributed to the ESA and MSA, as well as the laminar productions in silcrete reminiscent of the earliest phases of the LSA, are contained in colluviums dispersed across the slope overlooking the sandy terrace T1. It is at the foot of this slope, where the topography is horizontal, that most of the archaeological remains attributable to the LSA were found.



Figure 10 - View of VSD from Toorkrans, on the bank opposite the Berg (photograph: F. Bon).

As in all of the other contexts, these remains are composed of abundant white or smoky quartz objects, along with flakes and cores in quartzitic sandstone (figure 11). However, their association here with numerous pot sherds led us to make a more detailed survey, which revealed two spatially distinct archaeological components (figure 12).

- One part of the site (sector Ab, or square 3 and its surroundings) yielded an industry very similar to those in the other contexts explored along the Berg, except for the presence of ceramic artifacts, which elsewhere remain scarce or are absent. We thus find a quartz production of the Modality A type, accompanied by a significant proportion of blade-bladelet industries in silcrete, with the other stone instruments being limited to “classic” hammerstones (without counting the ubiquitous production of flakes from quartzitic sandstone pebbles).
- Approximately fifty meters to the south-east (sector Aa, or square 1 and its surroundings), the density of ceramic remains increases, while the composition of the lithic industry changes: silcrete products become less numerous and the quartz production is mostly of the modality B type. Several anvil and flat hammerstones are associated with the latter (figure 13), including specimens corresponding to the recycling of polishers/ grinding stones or *grooves* (figure 14). One fragment of a flattened *bored stone* completes the assemblage (figure 15).

Figure 11 - Flake core in quartzitic sandstone, VSD sector Aa, square 1 (photograph: F. Bon).



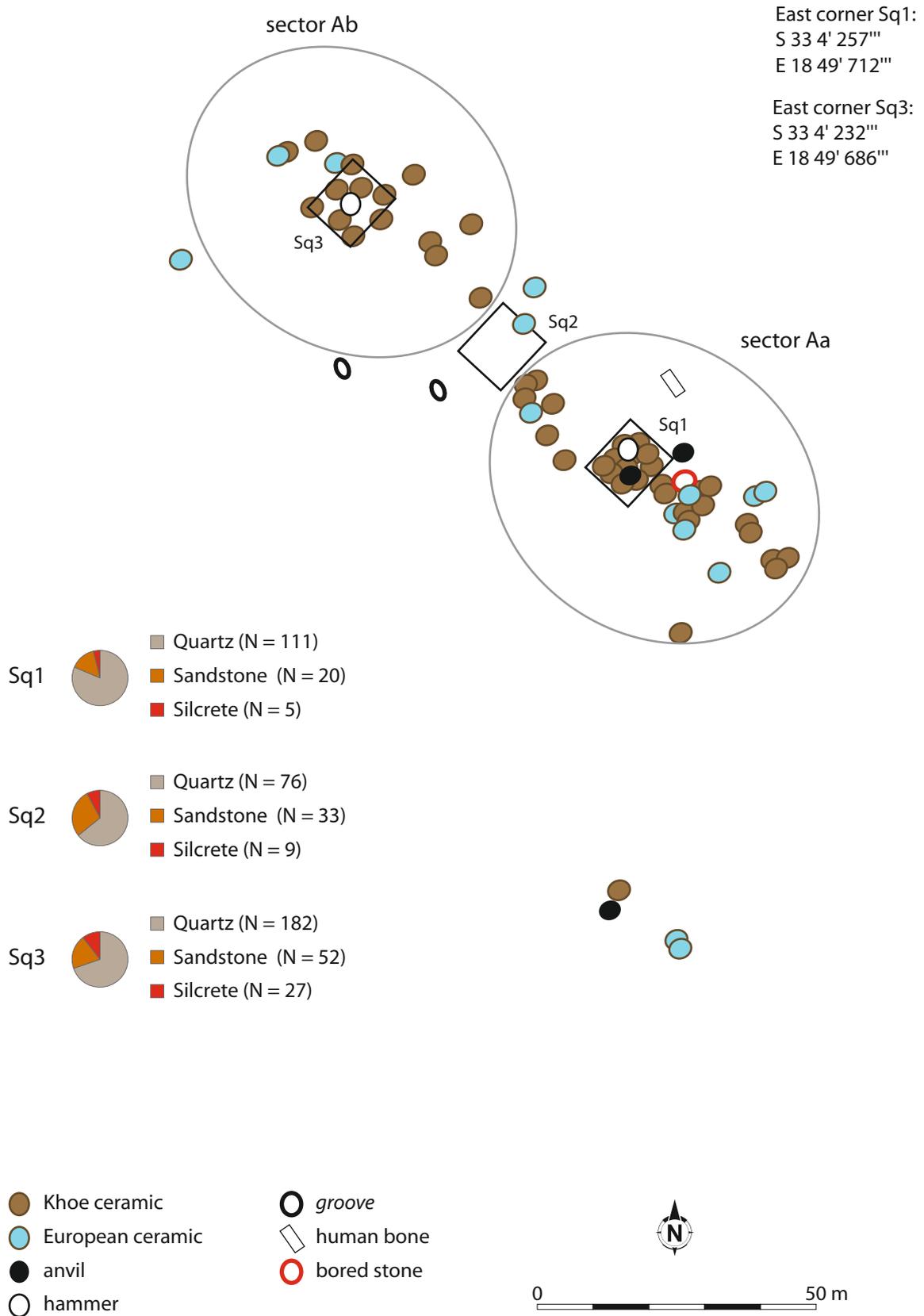


Figure 12 - Distribution map of the artifacts at VSD, and the different sectors studied (CAD: F. Bon).



Figure 13 - Anvil-flat hammerstone, VSD sector Aa
(photograph: F. Bon).



Figure 14 - A *Groove* recycled into a flat hammerstone-anvil, VSD sector Aa (photograph: F. Bon).

3 cm
(1/1)

Figure 15 - Fragment of a flattened *bored stone*, VSD sector Aa (photograph: F. Bon).



As we have just described, the ceramic remains are more numerous in this latter zone (around 30 sherds distributed over approximately 500 m²). All of the sherds have a thin wall, which is characteristic of the pottery of the LSA in southern Africa (Sadr, Sampson, 2006). Among these sherds, we observe the presence of a lug typical of the production of the 2nd millennium CE (figure 16; Sadr, Smith, 1991). The remains of a line of dots imprinted above the lug, meaning at the junction of the neck and the shoulder of the pot, enable us to associate this piece with the “Lugged Incised” (LINC) type, from the middle of the 2nd millennium EC (Sadr, Sampson, 1999). The only other diagnostic piece is a fragment of an edge with a thick lip rounded toward the outside, a type of lip that is found mainly in pottery assemblages from the middle of the 2nd millennium. The other elements consist of undifferentiated sherds with no decoration, even if several are covered with a wash of red ocher.

Figure 16 - Indigenous pottery and limpets, VSD sector Aa, square 1 (photograph: F. Bon).



This combination of these features shows many similarities between this part of the site of VSD and that of KFS 5. For the lithic industry (table 2), we can emphasize the use, in association with the same dominant modality of quartz reduction (modality B), of shaped hammerstones / anvils, some of which correspond to the recycling of grooves (figure 17).

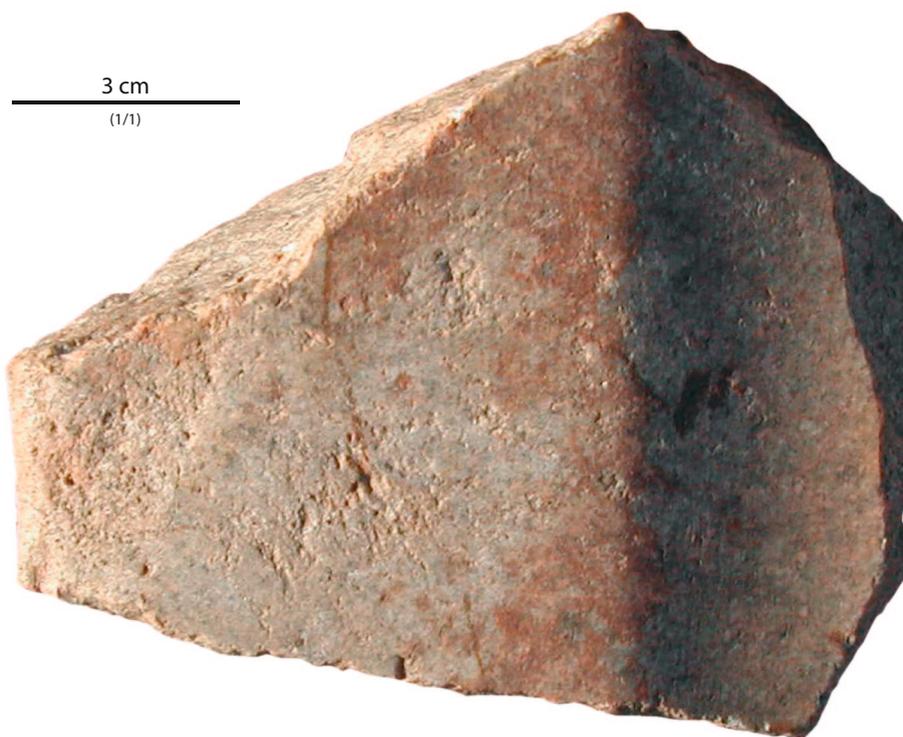


Figure 17 - A Groove recycled into an anvil-flat hammerstone, KFS 5 (photograph: F. Bon).

In addition, a geographic relationship between the VSD site, located inland, and the coastal zone is suggested by the presence of marine shells (of the *limpet* type: *Scutellastra argenvillei* or “patella”; figure 16). We should nonetheless note that the only dated shell gives an age of 4460 ± 80 BP, or 3370-2900 cal BC (Beta-204535), which appears to be far too old relative to the rest of the artifacts. We can nonetheless propose the hypothesis that “old shells” were collected and transported over such a long distance. If we accept this possibility, it would support the hypothesis of a nomadic itinerary between the coast and the plains of the Swartland, compatible with the model proposed by A. Smith (1984).

This cultural, and perhaps geographic, link between VSD and KFS 5 suggests that the former may at least partially (sector Aa) correspond to a settlement attributable to the same populations as the latter: according to our conclusions for KFS 5, these would be pastoralists, even if the absence of faunal remains at VSD prevents us from confirming this assertion.

If we accept this hypothesis and we reconsider the questions that served as the starting point of this inquiry, can we go as far as to consider that VSD is one of the *kraals* recorded by the written sources on the Berg, in other words, those of Goereman or that of Bootsman? It is obviously not that simple! Even if we could precisely date the remains found at VSD, which is far from the case, it would be illusory to then attempt to materialize the historical accounts in this way. A few elements nonetheless suggest that this installation is indeed contemporary with the colonial period.

In sector Aa of VSD, a fragment of a Dutch clay pipe bowl of the Gouda type, attributable to the early 18th century (figure 18), could thus constitute evidence of the contacts and exchanges so often described between European colonists and African populations. In the iconography of this period, pipes in horn or clay, materials relics of the addiction to tobacco so often attributed to the colonial Khoekhoe, have almost become a visual emblem of the “Hottentots” (figure 19). We should also note the presence of a few sherds of European ceramics at VSD (figure 20), though their dating is more indicative of the later establishment of the first farms, starting in the 19th century.



Figure 18 - Dutch tobacco pipe, VSD sector Aa (photograph: F. Bon).

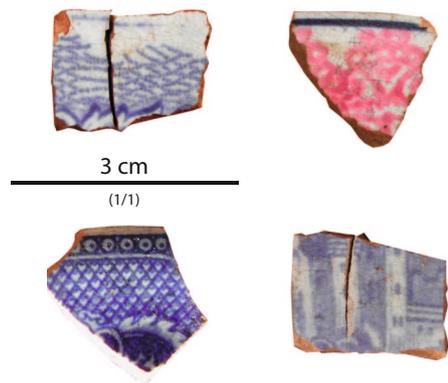


Figure 20 - Sample of European ceramics, VSD sector A (photograph: F. Bon).



Figure 19 - Watercolor from the end of the 18th century (ca. 1780) showing *strandlopers* or “beach skimmers”, who were degraded Khoesan living on the margins of the Cape colony society. The illustration shows a sample of the material culture of the group: huts of weaved mats, whale bone, ostrich eggs, bows and arrows, shells on the ground. The man seated on the left is smoking from a cow horn; the man in the center is holding a clay pipe (this illustration accompanies the account of the voyages of R.J. Gordon, edited by Raper, Boucher, 1988, pl. 52).

6 - Conclusion and perspectives

We believe that the confrontation and integration of data collected at all of these sites, meaning all of the elements that link KFS 5, VSD and KBB, contribute to the definition of an archaeological facies attributable to the Khoekhoe pastoralist populations. Though there are many similarities between pastoralists and hunter-gatherers, this result strengthens the archaeological identity of the former, building on propositions already made by several authors in this region (Smith *et al.*, 1991; Bollong *et al.*, 1997) and elsewhere (Beaumont, Vogel, 1984; Sampson, 1986; Beaumont *et al.*, 1995; Parsons, 2007, 2008). Let us be clear, nonetheless, that in the domain of lithic industries, the technical criteria underlying our arguments concern more than just the relative proportions of raw materials and end product categories (quartz flakes / silcrete bladelets), which could have been interpreted not as the signature of several contemporary populations, but as a chronological (Sadr, Gribble, 2010) or functional (Schrire, 1992) variations within the same population. One of our main criteria is the different methods, or modalities, used to make tools from quartz. Even if this is a common denominator in most of the late LSA of the Western Cape, our objective is to go beyond the notion of “unformal” so often applied to these productions by revealing distinct skills and ways of working this material. Our analysis thus stresses the importance of axial flaking on an anvil and the instruments (flat hammerstone / anvil) that are associated in sites such as KFS 5, VSD and KBB (Rivat, 2006). Future research will tell us whether or not a feature that could appear to be a simple technical detail actually represents a “true” technological signature of the south-African pastoralist Neolithic. It will also be useful to continue analyses of instruments such as *grooves* (figures 21, 22) and *bored stones* (figure 23; Sadr, Fauvelle-Aymar, 2006; Morin, 2006; Sadr, Gribble, 2010), which might also prove to be clear material signatures.

To achieve this, it is necessary to increase our knowledge and to gather more examples that will enable us to link larger geographic spaces and a greater depth of time. Only then will archaeology be able to contribute to the question of the origins of the Khoekhoe pastoralist populations. In view of this enquiry, VSD provides us with not only its industrial signature, but also a predictive model of settlement in the landscape. It will be particularly interesting to test the validity of this model on a larger scale and, with this goal in mind, we can already underline that similar observation have been made on the banks of the Breede (Arthur, 2008) and the Orange (Smith *et al.*, 2001) rivers. In addition to other recent discoveries (Jerardino, Maggs, 2007), these *kraals* located on the banks of rivers and streams can enrich a typology of sites that will enable us to imagine the landscape from the perspective of the practices and behaviors of these pastoralist populations, rather than solely through the regard of western travelers.

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Figure 21 - Fragment of a *groove*, large model ("boat shaped"), VSD sector A (photograph: F. Bon).



Figure 22 - Fragment of a double *groove* double, narrow model ("canoe shaped"), KFS 5 (photograph: F. Bon).



Figure 23 -Sample of flattened *bored stones*, whole and broken, KFS 5 (drawings: J. Morin ; photographs: F. Bon).

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