THE DIGGING STICK

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Rock engravings from the Bronze Age at Molteberg, south of Sarpsborg, Norway. The engravings are found on a horizontal rock overlooking an agricultural landscape. There are two more pairs of feet to the right. From a postcard published by Will Otnes, one of our members who lives in Norway. (See also page 9.)

THE ARCHAEOLOGICAL SETTING OF GENADENDAL, THE FIRST MISSION STATION IN SOUTH AFRICA

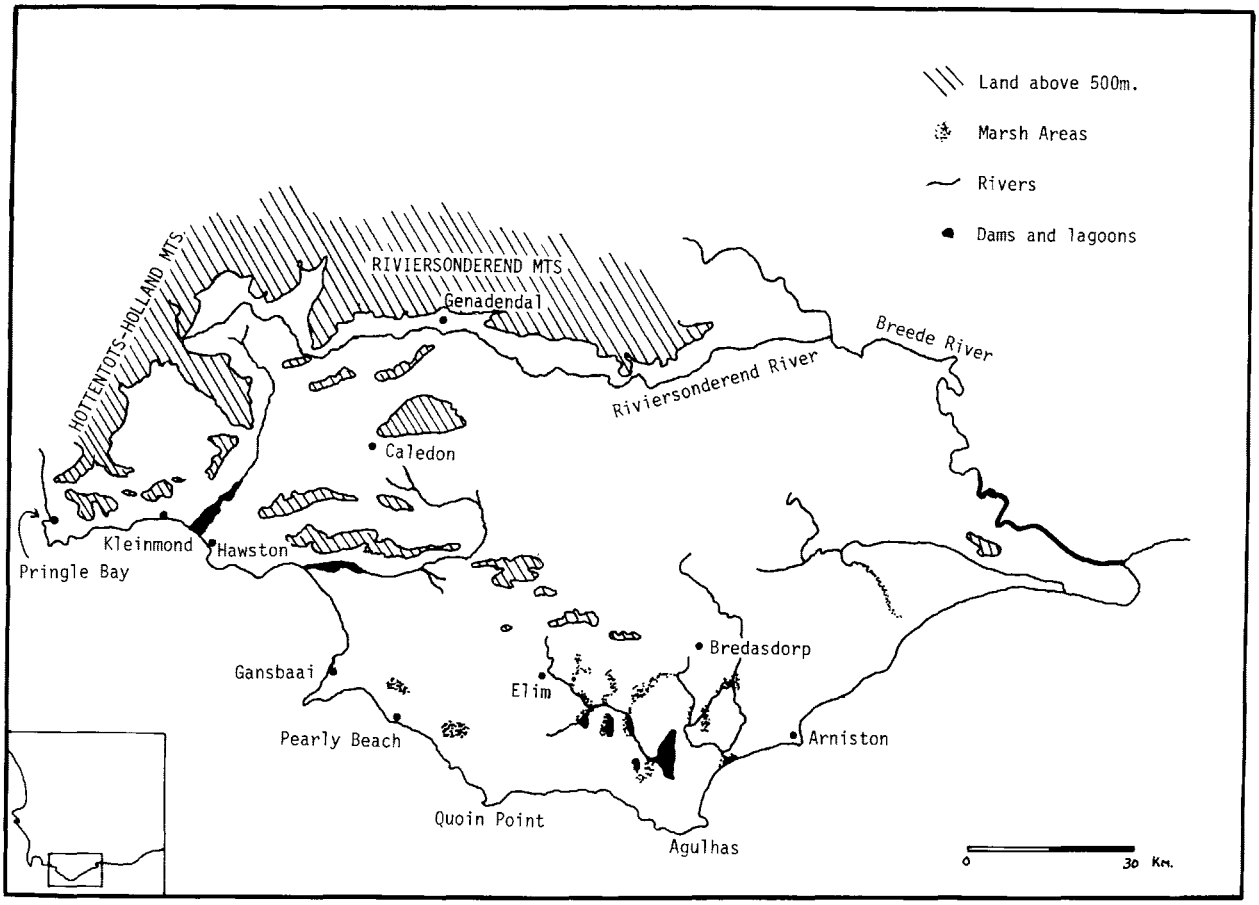
A.J.B. HUMPHREYS

Introduction

The mission station established in 1737 by George Schmidt near what is today Genadendal has the distinction of being the first such station in South Africa. Its purpose was, however, not simply to convert the local Khoikhoi to Christianity but, as Henry Bredekamp has recently pointed out, Schmidt had as one of his primary aims the complete religious and socio-economic transformation of Khoikhoi society in that area. As Genadendal is situated within the region occupied by the Chainoqua, Schmidt's efforts represent the first active European interference with the traditional lifestyle of a Khoikhoi group, as distinct from the straightforward two-way trading that had hitherto been the pattern of interaction between the Europeans and Khoikhoi. The latter activity may well have influenced Khoikhoi society but it did not involve deliberate attempts at transformation.

The Chainoqua area and Genadendal

The Chainoqua are one of several Khoikhoi groups identified in the earliest historical records. According to evidence summarised by L.F. Maingard and Isaac Schapera among others, the area occupied by the Chainoqua



Genadendal and other stations in the Chainoqua area have received a considerable amount of attention from historians such as Bernhard Kruger and Isaac Balie. Archaeologists, too, have been active in the Chainoqua area although Genadendal itself has not yet received specific attention. The purpose of this discussion is to examine the archaeological setting of Genadendal both before and after what Martin Hall has called the 'testimonial threshold'. The period before the testimonial threshold falls entirely within the domain of archaeology in that evidence of any events that occurred is recoverable only through the use of archaeological techniques. Once oral and written records begin to emerge, archaeology becomes one of several different approaches to studying the past of Genadendal. But despite the existence of a testimonial record, archaeology can provide a dimension that would otherwise be lacking, particularly if the written portion of the record is the product of only one of the parties involved in the interaction.

can roughly be described as the area around Cape Agulhas and inland to the Riviersonderend Mountains (Fig. 1). To the west were the Hottentots Holland Mountains and the Cochoqua, while to the east was the Breede River which divided the Chainoqua from the Hessequa.

On the basis of historical information, Janette Deacon has calculated the Chainoqua territory to have been of

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the order of 12 242 square kilometres, which makes it one of the largest Khoikhoi areas. The size of this area, combined possibly with its suitability for grazing, may be reflected in the fact that the Chainoqua (together with their more easterly neighbours, the Hessequa) were by far the largest suppliers of cattle and sheep to the Dutch colonists during the period 1662-1713.

Genadendal is situated on the northern edge of the Chainoqua area. On 23rd April 1738 Schmidt, together with 18 'Hottentots', settled at the foot of the Baviaanskloof. This was the beginning of Genadendal, although Schmidt himself never used the present name of the town nor the name of the kloof; he always referred to the place as Sergeants River.

The Chainoqua area before the arrival of Europeans
There is archaeological evidence of occupation of the Chainoqua area by San hunter-gatherers extending back thousands of years, but for the purposes of the present discussion the arrival of the Khoikhoi herders marks a convenient starting point. There is unequivocal evidence from at least two sites in the Chainoqua area which shows that sheep and pottery (generally regarded as representing the prehistoric arrival of Khoikhoi herders) first appeared around 2000 years ago. At the site of Die Kelders (near Gansbaai; see Fig. 1) the earliest occurrence of pottery and sheep is dated to about 1960 B.P. (i.e. Before Present). Corroboratory evidence is available from Hawston, about 5 km west of Die Kelders, where pottery and sheep have been reported between 1860 and 1900 B.P. by Graham Avery.

The impact of the arrival of domestic animals and a herding lifestyle on the indigenous hunter-gatherers in the Chainoqua area has yet to be elucidated but research on the Cape west coast by John Parkington and his colleagues has shown that the social and ecological impact of the appearance of domestic animals is visible in a number of different kinds of archaeological evidence. One of these is the rock art which is prolific along the west coast but is unfortunately confined to three painted sites in the Chainoqua area. There are, however, other archaeological patterns that should also be visible in the Chainoqua area. These have led to the suggestion that along the west coast hunter-gatherers were forced by the introduction of pastoralism to shift the focus of their settlement into the mountains where pasture was less attractive. In the mountains the hunter-gatherers concentrated on plant foods and small but abundant animals such as tortoises and dassies rather than the larger, more mobile game species which they had hitherto exploited. According to Bernhard Kruger, 'Bushmen' were known to be living in the mountains to the north of Genadendal at the time of Schmidt's arrival and so a pattern of interaction similar to that in the west might also have existed in the Chainoqua area, although this has still to be tested archaeologically.

The adaptation of the early herders in the region linked historically to the Chainoqua also requires more intensive research, although some hypotheses can be suggested at this stage. Research by Andy Smith, again along the west coast, has indicated that herders there might have followed a definite annual migration route geared to seasonal fluctuations in the availability of suitable grazing. Seasonal patterns in the Chainoqua area have been tentatively suggested by Graham Avery. He points to traditional evidence obtained from modern people living in the Elim area who recall migrating between Elim and Die Dam and Pearly Beach. Avery further suggests that the stone-walled fishtraps built at intervals along the rocky coastline were an innovation introduced by incoming herders to exploit marine resources at particular times of the year.

Identification of Chainoqua settlements also provides a particular challenge. It has been asserted that herders are by and large archaeologically 'invisible' but there is some historical evidence as to location of major Chainoqua settlements, and fieldwork at these localities might reveal archaeological traces. Genadendal itself was established at an existing Cahinoqua settlement and is, moreover, situated close to the mountains into which the hunter-gatherers retreated, so there is the prospect of studying group interaction in the immediate vicinity. There are rockshelters in the kloof above Genadendal which may preserve suitable evidence. George Schmidt mentions at least one occasion when 'Bushmen' took away the domestic stock belonging to a settlement located near that of Africo (about whom more information is given below).

The Chainoqua area after the arrival of Europeans
The period of herder/hunter-gatherer interaction lasted from about 2000 years ago until A.D. 1652 when a new element entered the equation - the establishment of the European settlement at the Cape. It would appear that almost immediately the Cape settlement had a 'magnet' effect on the Chainoqua and other Khoikhoi groups. The first Dutch contact with the Chainoqua took place on 14 November 1657 and, as has already been pointed out, the Chainoqua became one of the main suppliers of domestic stock to the Dutch. What is also sigificant is that within 20 years of their first contact with the Dutch the name 'Chainoqua' had begun to fall into disuse, and the people became known by the name of their chief, Sousa (or Soeswa, Soesoa, etc.). This must reflect important changes in the general organization of the Chainoqua which may or may not ultimately be identifiable in the archaeological record.

A significant crossing of the testimonial threshold occurred in September 1737 when George Schmidt, in the company of Africo and Kibido, two Khoi wagon drivers, set off for Africo's home. Africo apparently had considerable influence among the Chainoqua in the vicinity of a miltary outpost on the Riviersonderend River and this provided an opportunity for Schmidt to make contact with the people in the area. Schmidt immediately erected a borrowed tent next to Africo's hartbeeshuis which was located about half an hour's travelling time

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from the military outpost. It is interesting to note that Africo had a hartbeeshuis rather than a traditional matjieshuis like the rest of the people in the area. The spot became known as Hartebeestekraal, a centre to which the local Chainoqua were drawn once they realised that, unlike other Europeans, Schmidt had not come simply to obtain a few cattle and sheep from them.

Schmidt stayed at Hartbeestekraal until April 1738 when he moved to the spot now known as Genadendal. As part of his transformation strategy he became a strict disciplinarian and what he perceived to be the 'decadent' influence of the military outpost was one of the main reasons for his move to Genadendal. Once established at Genadendal, Schmidt behaved rather like a feudal landlord. Initially only he had a hartbeeshuis and his followers continued for some time to live in traditional matjieshuise. Although the traditional houses were to be phased out as part of his transformation of the Khoikhoi lifestyle, his first priority seems to have been preaching and teaching. Dagga houses only became the norm after about November 1740. He condemned as evil the traditional Khoikhoi lifestyle (as well as aspects of the colonial life). In an effort to cut contact with outsiders he banned from the valley any people who went to visit outlying settlements. He even forbade young men to use bows and arrows. Cattle and sheep grazing rounds were condemned as gross disobedience, partly because his gardens and land suffered in the process. Ultimately Schmidt was able to achieve one of his aims - the establishment of a new labour pattern based on permanent cultivation at Genadendal. Thus, by about 1742 Schmidt had succeeded in transforming the lifestyle of the Chainoqua under his immediate control, and the Genadendal community took on a unique character within eighteenth century Cape society.

Schmidt's transformation of the Chainoqua lifestyle does not by any means mark the end of archaeological interest in the area. Indeed, the colonial era provides unique opportunities for historical archaeology which is coming more and more to the fore in South Africa. Genadendal, as the oldest mission station in the country, thus provides the focal point for a multifacetted archaeological investigation which brings into play many of the specializations within the discipline - Stone Age archaeology through to colonial archaeology and hunter-gatherer through herding and colonial lifestyles. Now, as in the past, Genadendal is a fertile area, even if for slightly different reasons.

SUGGESTIONS FOR FURTHER READING

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AN EXTRAORDINARY TOOL FOR ARCHAEOLOGICAL EXCAVATION

J. DREYER

Manuals on field archaeology and archaeological methods, mainly from abroad, recommend various tools for excavation, ranging from pick and shovel to trowel and paint brush, depending on how delicate and important the finds might be. Normally the small diamond-shaped trowel is used by all archaeologists and is a part of daily life to such an extent that the instrument has become the symbol of archaeology. Nowhere, however, is it stated that improvisation is not allowed or experiments with other equipment are forbidden.

Recent excavations on a Late Iron Age living site near Winburg, in the Orange Free State, produced the well-preserved remains of huts of reed and grass with dagga plaster. The plaster had been baked hard when the huts burnt down, preserving the imprints of reeds and grass in the clay. Descriptions of a domed type of hut of perishable material, which was used by the Sotho people in pre- and post-Difaqane times, are found in the narratives of early missionaries and travellers.

Fig 1. An excavator at work in the initial stages of the experiment. From this experience it was learnt that a vacuum cleaner could be a very practical implement during excavations.

During the excavations it was attempted to find support for the idea that the huts on the site were the actual remains of the houses mentioned in the literature. While attempting to reconstruct these huts theoretically, it was argued that a domed structure would collapse within its own perimeter while the remains of upright walls of a cylindrical hut might spread to the outside and cover a larger area. It was therefore important to ascertain the extact limits of the debris as compared to the actual location of the hut. To expose the hut rubble, topsoil had to be removed. A trowel was used to loosen the soil and a brush was then applied to clean away the sand. This method proved unsatisfactory as the baked clay had to be swept repeatedly, resulting in the constant and destructive trampling of it under foot.

Fig. 2. A sample of the exposed hut dagga. Imprints of reeds and grass can be seen clearly.

At this point the idea of using a vacuum cleaner was postulated. An old retired domestic machine was called into service, powered by a generator borrowed from the farmer. The experiment proved to be most rewarding as the patches of hut dagga and floors could be cleaned perfectly for photography and plan drawing. The procedure used was to start at one side and then, by working backwards, expose the whole concentration of dagga without stepping directly on the clay.

From experience gained, certain problems were identified, e.g. that the type of machine using a paper bag is not ideal for the purpose so when the archaeology department bought its own machine, one using hoses for suction and outlet was selected. The additional expense of buying a generator was justified as it could also be used to power tools in the field and for lighting the working area and camp at night.

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SOME COMMENTS ON THE ORIGINS OF THE KHOIKHOI

L. JACOBSON

Mike Wilson's article in a previous issue of *The Digging Stick* on the origins of the Khoikhoi makes for interesting reading. I should, however, like to make a few comments on this topic which, although both important and fascinating, is still largely under-researched. The result is that the available data on prehistoric pastoralists is still very patchy, thus allowing for alternative scenarios. Future research, however, is likely to narrow the range of possibilities significantly.

I do not think it entirely valid to investigate the origins of pastoralists simply in terms of the historically known Khoikhoi, although they do provide a model for understanding pastoralist society. One can search for Khoikhoi origins legitimately enough, but to investigate the origins of pastoralism as such one needs a broader non-ethnic framework. Various lines of material evidence (e.g. pottery styles and ostrich eggshell bead size) suggest to me that one can distinguish between Early and Later Pastoralist or Herder phases, the latter dating from approximately 1200 A.D. I see the rise of the Khoikhoi (as historically known) dating from the Later period, although it should be mentioned that they were only one of several distinct groups of pastoralists (e.g. the Dama and possibly the Herero, both of Namibia) that appear to date from that time. Whether these phases resulted from migration or acculturation (or perhaps a combination of the two) knowledge of what these people looked like and what type of social structure they had will depend upon future research, including both theoretical and data-orientated approaches.

I also think that it is too early to judge the significance of the presence or absence of particular types of domestic animals at a site as there are too few known pastoralist assemblages analysed at present, as well as little understanding of their spatial context within a settlement, i.e. whether they come from living, communal, ritual or work areas. We also have to take into account the likely type of herd management practised by pastoralists with mixed herds and flocks, as well as the social behaviour directed towards these animals. For example, cattle and goats may be kept not just in separate herds but in quite separate camps in different areas because of different foraging requirements or even social practices. It is further possible that cattle were only slaughtered and eaten on special occasions. People also moved around the landscape, not just on a seasonal basis but for ritual or social reasons. There is no reason to believe that they would have had all their stock with them at all times. All

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these factors thus play an important part in determining the formation of bone assemblages and need to be considered when they are interpreted.

The key to understanding the origin and spread of pastoralism among the peoples of southern Africa will lie in a deeper understanding of the relationship between pastoralists and hunters, and the role that stock might have played in transforming these interactions into new lifestyles.

Pastoralists had been part of pre-colonial southern Africa for some 2000 years or more. Considering the complexity and dynamism of the Iron Age record for the same time period, perhaps we have been adopting a far too static and simplistic scenario for the origins and development of pastoralist society.

One final point should perhaps be considered. I, in common with many other writers, have always used the terms herder and pastoralist interchangeably. Do they, in fact, mean the same thing, or do they have specialist meanings? Does pastoralism imply a precise socioeconomic term, whereas herder simply describes an activity which may even be indulged in by non-pastoralists?

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ADVENTURES IN THE PAST

VALERIE WARD

To test the planning of our new gallery 'Story of People in Southern Africa' (working title), the Natal Museum presented a children's Easter holiday programme 'Adventures in the past'. This is the first time the departments of Archaeology, Ethnoarchaeology and Education have combined resources in an education programme.

Our aims were:

1. To experiment with ideas to fill the gaps in the school syllabus relating to southern African history, particularly the pre-colonial period;
2. To provide a learning process which would be enjoyable and stimulating;
3. To learn from reactions to our efforts.

We had 40 children aged 6 to 12 years old for two hours a morning on each of four consecutive days. The two-hour period was broken into segments of slide talks, film shows, discussions and activity.

On the first day we dealt with evolution, starting with What is a mammal? and going on to Man's nearest relatives and the fossil record. This was followed by a film on the activities of chimpanzees. The children then compared anatomy using slides, skeletons, and themselves. They knuckle-walked, and moved like kangaroos and ostriches around the main gallery, much to the puzzlement and amusement of the museum visitors. Brachiating on a bar was the exciting final activity for the day.

A very enthusiastic group met us next morning. Here we dealt with hunter-gatherers: who they were, where they lived, how they made tools (a demonstration was included), and how we find out about the hunter-gatherers. An excavation had been set up; a grid was laid, it was excavated, the children sieved and sorted. The excavation findings helped complete a jigsaw puzzle which, when complete, gave us a picture of the hunter-gatherer way of life. This activity was followed by a film on the Kalahari hunter-gatherers. After this we 'hunted' a poster of a rhino, using bow and arrow (Prestik-tipped). At the same time we had traditional hunter-gatherer music playing. The 'piece de resistance' on this morning was the scraping of a fresh black wildebeest skin using stone tools. Not all children worked on it, others did so reluctantly and some with enthusiasm!

Early farmers were featured on the third day. We discussed wild and domestic plants and animals, farming, food preparation, iron smelting and smithing, and pottery. Using archaeological and ethnographic material, the children ground sorghum on, with and into traditional artefacts. The porridge was then cooked (in a microwave to speed it up) and eaten. Again some children

were reluctant to try it, but having done so, thoroughly enjoyed it. This was followed by an iron-smithing demonstration in the musem yard.

On the fourth morning we had a quick re-cap. Then the children were given clay to make any object of their choice which they felt would be important to a hunter-gatherer or a farmer. Traditional firing techniques were explained using slides as we could not carry out the procedure. However, the children were shown the kiln in which their models were to be fired during the holidays and were asked to fetch them after the holidays.

We then formed them into two teams and quizzed them on what we had covered during the programme. This was followed by the children making and playing with hunter-gatherer toys. This activity closed the four-day programme. The children were issued with 'fun' certificates of participation.

Reactions to this programme were very positive. Parents were enthusiastic and appreciative. One mother remarked that she had been instructed to ignore the children's story books and look for books on human fossils when she went to the library - this from a seven-year-old! Another parent of a seven-year-old noticed her son systematically attacking each rock in the garden in an effort to make stone tools. He also tried making a fire with two sticks but resorted to a match to cook his supper of carrots and spinach. He normally refused to eat the latter but has now been converted. A nine-year-old wanted to take the wildebeest skin home to finish scraping it. Most of the ground sorghum was 'stolen' by the children to take home. Some children brought in home-made bows, arrows and quivers to show us. One parent is framing the certificates given to his two sons for their bedrooms.

We charged a very small fee for the course but some of the parents gave as much as twenty times the asking price as a token of appreciation. The programme was obviously a great success and enjoyed by the children and all of us.

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WESTERN CAPE BRANCH

A Branch outing to Gifberg (Vanrhynsdorp) described by Leon van Heerden.

Having all congregated at the Clanwilliam Motel, we left for the second meeting point a few kilometres past Klawer where we took a gravel shortcut to Gifberg Pass. On the way there one of the drivers got carried away by the spirit of the place, with the result that his car performed some sort of trance dance and ended up on the embankment. Fortunately, no serious damage was done and we could all proceed again.

In the Gifberg Pass there is a little oven, made inconspicuous by grass that grows right up to it. The oven has the curious shape of an igloo - unlike the sort of oven that you would imagine people usually build. I understand from Mr Jan Huisamen of Kleinplaas that this oven was built in 1913 by a Mr Spreet for the purpose of baking bread for the workers who were building the old road (which can still be seen).

Three neighbouring farms, Taaibosdam, Hottentotsfontein and Ribboksfontein, were visited that afternoon. On Taaibosdam the rock art consisted mainly of monochrome human figures, hand prints and finger dots. Blades and other lithic waste were found inside and outside two of the shelters, which also contained a reasonable layer of deposit. The rock art at Hottentotsfontein was much the same as that at Taaibosdam.

The Ribboksfontein shelter was definitely the best. Much of the surface of the huge overhang (facing approximately northeast) is badly weathered and crumbling into a fine powder. There are also large areas that are not as badly affected, although seasonal water seepage has damaged some of the paintings on these better surfaces. The dominant colour is red but a few figures in black and black-and-red are still visible. Hand prints and finger dots are also present.

On the Sunday all the sites visited were within walking distance of the Kleinplaas homestead. The Gifberg River has cut a ravine that joins the Doring River some seven kilometres south and, walking down this ravine, one cannot help but wonder how many shelters with rock art one is walking past (that afternoon a group from the University of Cape Town Archaeology Department found nearly 20 more rock-art sites on the farm!). Every now and then someone would disappear to check out a possible shelter so that when part of the group vanished nothing suspicious was seen in it. Then our 'leading lady' called from somewhere behind a thicket of bushes for the rest of her 'subjects' to come and look. "What does it look like?" someone asked, not quite sure if he should waste his energy crawling up the slope through the bush just to see some more hand prints and finger dots. This was definitely the climax of the weekend. The centre of attraction was two groups in bright yellow and red. One consisted of ten figures walking in single file and the other, a group of at least 21 figures, described by some as depicting a bed scene, with the figures lying next to each other, some under karosses with their belongings near their heads.

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EARLY TOMBSTONES IN THE JOHANNESBURG AREA AND PARTS OF THE TRANSVAAL AND ORANGE FREE STATE

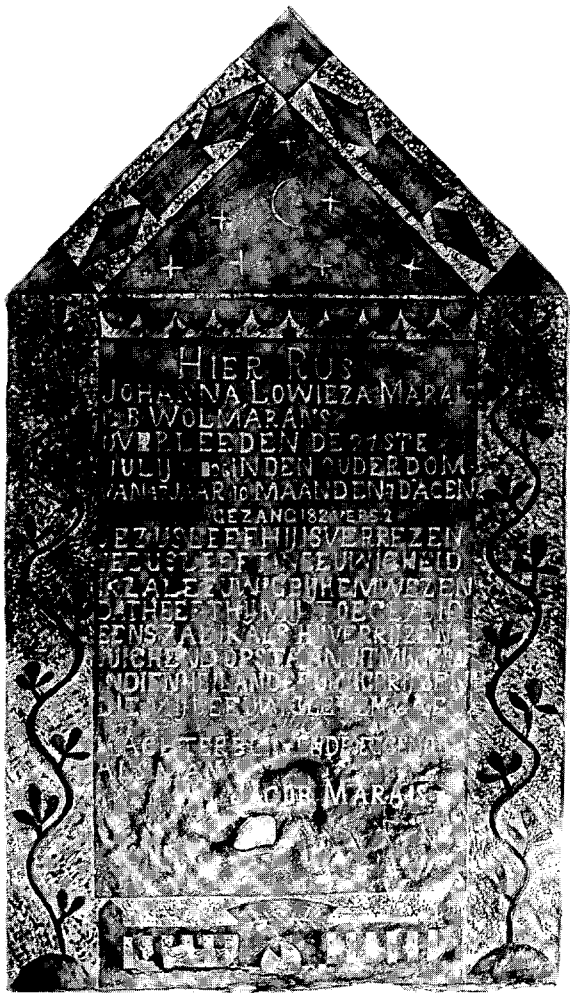
R.H. STEEL

During a foot survey of the Klipriviersberg, south of Johannesburg, on behalf of SACCAP in 1981, Mrs J. Mason and I found the graveyard of the Marais family on the farm Rietvlei No. 17. We were unable to obtain any oral history of the Marais family but a short history may be found in the Bloubos self-guided trail - *self-geleide wandelpad*, published by the Co-ordinating Committee for Community Open Space, Civic Centre, Braamfontein. Our own findings showed that the Marais family were well established on the farm Rietvlei with a solid house, wagon shed and a walled orchard which was irrigated from the Bloubosspruit running through the valley.

The tombstones were made of dark slate and because of the texture of the slate it was not possible to photograph them. It was therefore decided to take rubbings of them, using rice and carbon paper, a method that I believe has not been used before in the Johannesburg area. There were three well preserved headstones and two broken ones. The best engraved headstone, that of Johannes Marais (born 1814 - died 1893), depicted a church with its steeple and a weather vane. The next headstone was that of Johanna Marais who died in 1896, aged 47 years, 10 months and seven days. Still later was that of Martha Madalene Berg nee Marais who died in 1903. The inscriptions on the headstones are in Dutch.

The headstones may have been made in Heidelberg, for during a subsequent visit to the old Kloof cemetery just north of that town I found a number in the same style and time period. The oldest burial in the cemetery was that of Johannes Frederick Deysel, who died in 1901, *ou der dom van 84 jaar, 8 maande, en 20 dagen*, thereby giving the year, month and day in the same style as that of Johanna Marais. Moreover, the Heidelberg headstones were made from dark grey to brown slate, written in Dutch and generally almost identical to those at Reitvlei.

There were, however, other headstones in English which may have been due to the fact that a Scottish garrison was stationed there between the 1880s and early 1900s. One headstone was in memory of J.J. Mills, Manager, Ramalo G.M. Co., who died at Heidelberg on 1 February 1891, aged 47 years, thereby showing early evidence of gold mining in that area. Another interesting headstone, although not in slate, was that of Thomas William Fannin, surveyor of Dargle, Natal, who laid out the town of Heidelberg shortly before his death on 19 December 1865. (For those who are keen on Iron Age pottery this old cemetery is well worth a visit for incised or decorated pots are cemented into many of the graves.)



The engraver and maker of the headstones, if he be the same person, seems to have worked in the Heidelberg - Johannesburg area for about nine years, and could have moved on to other parts of the Transvaal and Orange Free State as I have seen headstones of the same shape and style in Jakobsdal near Zeerust. These were mainly on children's graves, dating to the early 1910s. The children, it seems, died at the same time in some epidemic. Another headstone in the same style was on the farm Doornkom No. 418 in the Swartruggens area, and yet another at Ifafi in the Pretoria area. There are many more in and around Johannesburg, and in the Orange Free State a good example may be found on the farm Goedgelegen which belonged to the Uys family.

While I was in Swartruggens I was told that the headstones may have been made by a Scottish mason, who also helped to build churches. If this is so, he must have made a good living out of the dead!

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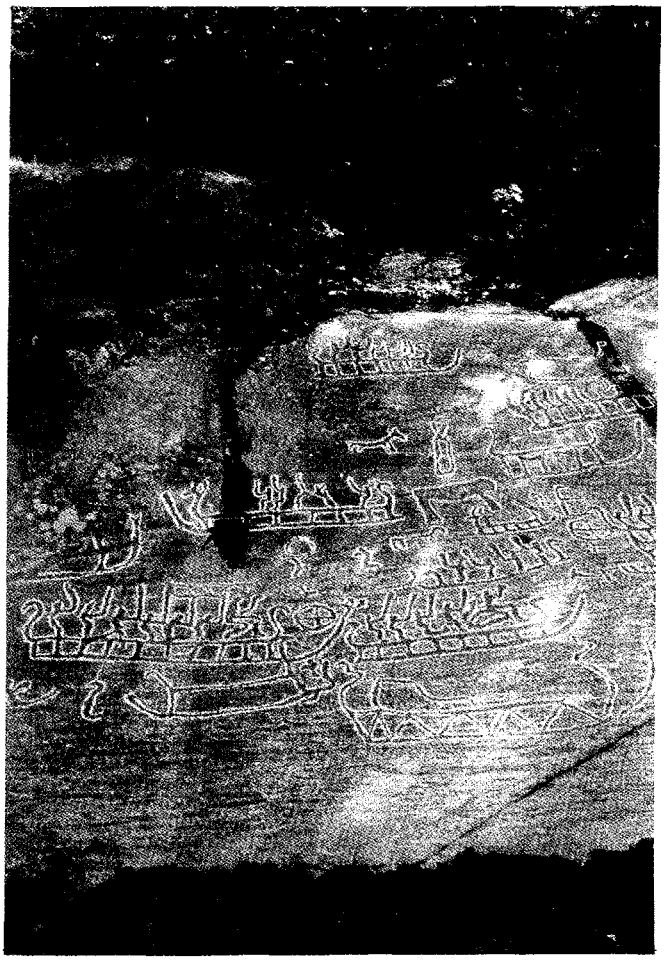
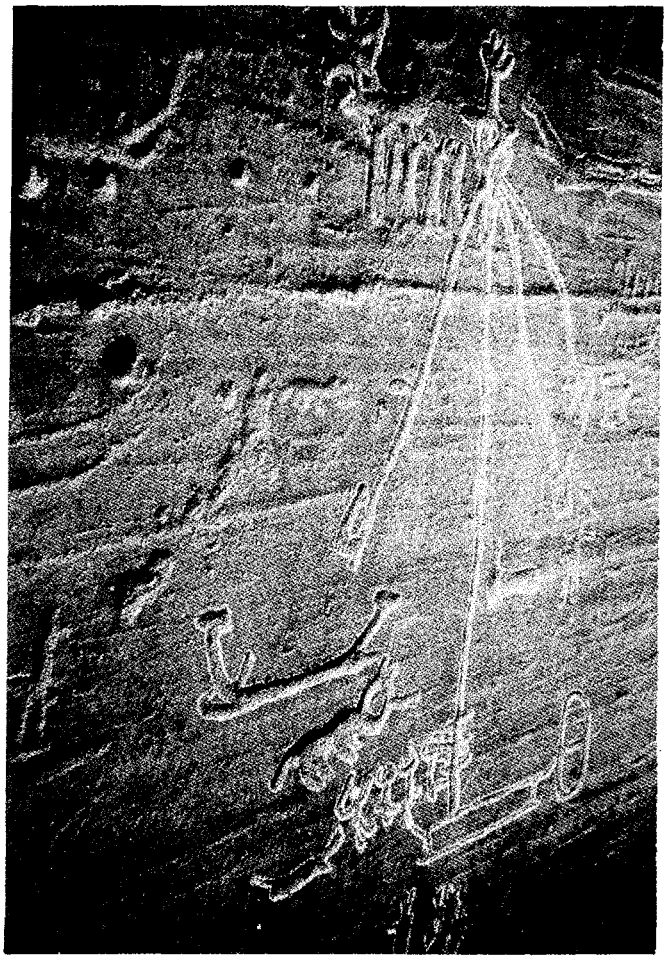
SYMBOLS FROM THE BRONZE AGE
(1500 - 500 B.C.)
Two more postcards published by Will Otnes. The information below is from the backs of the cards.

The left-hand picture shows the left half of an engraving at Kalnes Agrigultural College, northwest of Sarpsborg, Norway. It was found when a cow stumbled and tore off the moss in 1958.

The right-hand picture is of engravings at Lilla Gerum, Tanum, Bohuslan, Sweden. This unique carving, called 'Runohällan', probably shows a roundabout. Three men are rotating on ropes around a tall pole. To the right, one is falling down. Such a custom existed in Mexico when America was 'discovered'. The Spaniards called it Volador - flying man. The acrobats showed great courage, and many of them lost their lives. The famous Swedish maypole may be a descendant of this old custom.





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FIELDWORK: TEL BETH SHEAN ARCHAEOLOGICAL PROJECT

Beth-Shean was one of the most important cities in biblical times. Its superb location at the junction of the Valley of Jezreel and the Jordan Valley turned it into a key spot along the northern international and local roads crossing the land of Israel. Previous work at the site revealed important remains from the Proto-historic, Canaanite, Roman and Byzantine periods.

The current excavations will be under the direction of Professor Amihai Mazar of the Hebrew University of Jerusalem, assisted by an experienced field staff. The focus of the dig will be on Canaanite levels of the city where remains of a temple from the 16th century B.C. were discovered last season.

Interested students and other volunteers are encouraged to join the expedition for at least two weeks. Educational programmes will include lectures and tours of archaeological sites in the region. Academic credit in field archaeology is possible through the Hebrew University if enough students participate.

Full room and board will be at Kibbutz Nahum near Beth-Shean at a subsidized price of 50 U.S. dollars per week.

Those interested should please contact Prof. Amihai Mazar, Beth Shean Project, The Institute of Archaeology, The Hebrew University of Jerusalem, 91905 Israel.

FROM CANNIBALS ... TO CANNONBALLS

Following are outlines of the talks given at a one-day lecture series organized recently by the Western Cape Branch.

MODERN PEOPLE AND ANCIENT CANNIBALS

H.J. Deacon, University of Stellenbosch.

All living people belong to the same zoological species, *Homo sapiens*. Our species could be termed polymorphic, meaning many types, to describe the variations in facial features, body forms, skin colour and the like, found in different geographical areas. Impressive though these differences are, all living people share a common ancestry. Where and when did the ancestors of modern man live? This is a question that is being answered by new discoveries in various parts of the world and particularly in a cave near the mouth of the Klasies River on the Tsitsikama coast.

A number of very fragmentary and sometimes burnt human fossils have been excavated from the thick deposits at Klasies River. The oldest layers of this archaeological site date to 120 000 years ago and the human fossils from the oldest and next oldest layers are complete enough to show they belong to modern kinds of people. Remains of modern people almost as old are known from Israel on the northern margin of the African continent, but similar fossils in Europe are much younger. The Klasies River finds suggest an African origin for modern people, with early dispersal out of Africa as far as the Near East but not to more distant parts of the Old World.

Human fossils that are 100 000 years old are rare in South African archaeological sites. One reason is that the dead were either not buried or were rarely buried at places where people lived. The human fossils from Klasies River are not from burials because they carry telltale signs of cannibalism. While it is important to the archaeologist to explain how fossils came to be preserved in sites, in this case it is even more important that the fossils have a modern morphology.

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EVIDENCE FOR THE EARLIEST USE OF FIRE AT SWARTKRANS: A REVIEW.

Andrew Sillen, University of Cape Town

The ability to make stone tools and to control fire is generally associated with being human. Stone tools provided early humans with an advantage over other animals in the form of weapons and cutting implements. The appearance of stone tools in archaeological sites in Africa between about 2,5 and 2 million years ago is well documented. Fire also provides people with an adaptive advantage in the form of protection as well as other benefits, including warmth, light, a focus for social interaction and heat for cooking. Until recently, however, archaeologists have had difficulty in finding unequivocal evidence for the use of fire by early humans.

For many years, the oldest evidence for human control of fire was considered to be 500 000-year-old ash layers and burnt bones in the Zhoukoudian Locality I cave near Beijing in China. However, there is now uncertainty as to whether human-made fires created the ash layers and it seems that many of the bones were blackened by manganese staining rather than fire. Similarly, 1,4-1,5 million-year-old baked clay patches and fragments from sites in Kenya are not considered indubitable evidence for human-made fire as they could have been formed by veld fires.

During recent excavations at the Swartkrans cave near Krugersdorp in the Transvaal, Dr C.K. 'Bob' Brain, Director of the Transvaal Museum, recovered blackened bones from a layer called Member 3 which dates to 1.5-1 million years ago. Dr Brain and I undertook analyses of the chemistry and histology (structure of the tissues) of the bones to determine whether they had been blackened during burning. The results were published in the British journal *Nature* in December 1988.

To find out what happens to the structure of bone tissue during burning, hartebeest bones were heated to various temperatures and their structure was examined microscopically. It was found that bones heated to between 300 and 400°C showed overall darkening and an accentuation of the lamellar structure. The blackened bones from Swartkrans Member 3, unlike other fossil bones from Swartkrans, also showed this structure. In addition, measurement of the carbon, hydrogen and nitrogen content of the blackened bones indicated that they had been blackened by charring rather than manganese. It seems that the bones were blackened at temperatures between about 300 and 500+°C, which are typically reached in campfires made from stinkwood, the most common tree in the vicinity of the cave today.

Of the 59 488 fossil bone fragments from Swartkrans Member 3, 3270 are considered to have been burnt. Identifiable fragments included bones from antelope up to the size of a wildebeest, as well as pieces of zebra, warthog, baboon and even *Australopithecus robustus*. Although no remains of early species of *Homo* were found in Member 3, *Homo* was found in earlier layers and is presumed to have been present in Member 3 times also. No discrete hearths were found but the blackened bones were scattered throughout Member 3 and indicate that fire was a regular event during the accumulation of this layer.

These burnt bones are the oldest known direct evidence for fire in the archaeological record. However, they do not tell us whether australopithecines or the early *Homo*, or both, used the fires, nor their purpose. Was the first South African braaivleis held at Swartkrans over a million years ago, or were the fires simply used for warmth, or for protection?

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RESOLVING THE PAST

John Parkington, University of Cape Town

In looking through our archaeological 'telescope' at the past we obviously want to achieve maximum resolution. Unfortunately, our large sites are often so blurred and overprinted by re-occupation and re-use that the individual events of the past are hard to resolve. We often have to resort to very general statements that refer to cumulative or aggregated events that may not have had any historical reality. In the Dunefields excavation near the Verlorenvlei mouth we have chosen a site to dig precisely because it is insubstantial and likely to reflect a single episode with a set of related events.

Our excavations are designed to map the brief occupation and reveal the details of camp life on the western Cape coast some 700 years ago. The distribution of fireplaces and dumping areas, the qauntities of food waste and the numbers and locations of artefacts lead us to suggest a mid-winter visit, lasting about three weeks, by some 25 people.

In this short presentation I describe how we are trying to reconstruct the sharing patterns of the camp occupants, the duration and timing of the visit and the reasons for choosing the particular location and, after a short stay, for leaving it. Our suggestion is that, because the site was never re-occupied, no overprinting has taken place and thus that the events related to the visit are readable from the archaeological record. Effectively, this allows us to resolve not only time and space, but also person - that is to say, we can refer to the kinds of individuals who camped at the site, collected the shellfish, made the stone tools and left the potsherds. Highly resolved sites such as this are widespread around our coasts but unfortunately very vulnerable to destruction and damage. They are more valuable than we used to think.

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ZIMBABWE RUINS AND VENDA PREHISTORY

Tom Huffman, University of the Witwatersrand

For many years Africanists have been interested in the relationship between the Zimbabwe culture and the Venda people in the northern Transvaal. This interest exists because Venda royalty used to live in stone-walled settlements similar to Great Zimbabwe, and the Venda language is known to be a unique amalgamation of Sotho-Tswana and Shona, the language of the Zimbabwe people. Furthermore, Venda oral histories indicate that many groups of people came from Zimbabwe.

According to these oral histories, the present ruling dynasty, the Singo, established the Venda nation in the late 17th century by conquering various independent chiefdoms (such as the Mbedzi and Lembuthu), who themselves had moved in earlier. The interpretation of these traditions varies enormously: some Africanists believe that the Singo introduced the present Venda language and way of life, while some believe both features were already present and others even doubt the truth of the conquest.

To help solve this debate, ISMA (The Institute for the Study of Man in Africa) hosted an archaeological investigation into early Venda history. First, Jannie Loubser established a culture-historical sequence by excavating some 20 sites ranging from the 14th to the 19th centuries. He found, through detailed ceramic analyses, that Shona and Sotho-Tswana speakers merged during the 15th century to form the Venda language.

Secondly, Edwin Hanisch and I analyzed the size and spatial layout of known Zimbabwe ruins in the northern Transvaal. Some of these ruins are associated with the Mbedzi and Lembuthu and therefore show that societies based on class distinction and sacred leadership - the essence of Venda culture - were present in the area well before the Singo. In addition, the similar size of these capitals shows that the pre-Singo chiefdoms were all equally powerful. The capital of the Singo, in contrast, was considerably larger, and was therefore part of a much greater chiefdom.

The archaeological investigation thus demonstrated that while the Singo did not introduce a new language or culture they did unify the nation.

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RAISE THE PUBLIC INTEREST, OR HOW TO THROW A FUSE IN THE POWDER ROOM

Bruno Werz, University of Cape Town and South African Museum of Cultural History

The archaeological future of the waters around South Africa is in many ways uncertain. Over the last few years several people have started to realise that shipwrecks in these waters are potentially important sources of information about the past. This information is unique to the maritime record and cannot usually be found in sites on land. Various projects have shown that much information can be gleaned from properly executed fieldwork and research under water, but until recently no effort was made to stimulate maritime archaeology in South Africa.

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To date, work on shipwrecks has been done only by sports divers and salvors, whose activities do not reach the required level of scientific enquiry. Some of these people are only interested in financial gain. Consequently, a great deal of important data have been destroyed accidentally or even deliberately. On the other hand, the majority of sports divers and salvors are keen to improve the situation. It is suggested that this could be achieved through communication and co-operation between all involved, namely the sports divers, salvors, academics, institutuions and the general public. This pragmatic approach seems to be the only way at present to protect shipwrecks as part of the cultural heritage, to collect scientific data and to keep everyone involved pacified.

There is an urgent need for improved legislation, better control over wreck sites, a research programme, pilot projects, conservation and documentation facilities and, especially, support from the general public. Without this, no steps can be taken to improve the present situation and, if this is allowed to continue, the unlimited potential of maritime archaeology in South Africa is destined to founder.

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FROM THE *THE BULLETIN*

Volume I Number 3, July 1946

Articles in this number were as follows:
H.B.S. Cooke. Ape-man to archaeologist. 'The approach of a zoologist to archaeology is simply described by a palaeontologist on the staff of the University of the Witwatersrand.' Dr Cooke, a founder member of the Society, has continued to play a prominent role in African palaeontology and to visit Africa for research and family reasons, although he has been resident in Canada for many years.

Instructor Commander H.S. Gracie, R.N. The shell mounds of Simonstown. 'Like Mr Bateman's paper on Saldanha Bay, this gives an example of the sort of survey any amateur could undertake. Those interested should write to the Secretary, who will advise on a division of our coastline between members willing to form a team.' Nowadays, anyone who finds a site is advised to take notes and preferably photographs (not bring back examples!), and then to inform their local data recording centre (addresses were given in *The Digging Stick* 5(2) last year).

A.J.H. Goodwin. Earlier, Middle and Later. 'The orginator of our South African prehistoric terminology outlines the broad basis of the three great periods we recognise.' The effect of Goodwin's legacy is still strong, more than 40 years later, as is clear from the latest number in the *Goodwin Series*.

Dr C.H.T.D. Heese. Waste matter and leavings. 'A pioneer of South African archaeology gives us his views on the enjoyment that can be got from a careful study of waste products of man's early techniques.' The suggestion that archaeologists should study all the material left behind by prehistoric peoples and not just what Heese termed museum specimens has long been followed, to good effect. Indeed, waste material is now within the realm of the museum specimen!

NEWS FROM ISRAEL

EVIDENCE OF TABOO CULT IN ISRAEL

The Hebrew Bible frequently mentions standing stones as a cultic form to be firmly avoided. The remains of just such a cult have been recently uncovered at Hartuv, near Beit Shemesh on the road from Tel Aviv to Jerusalem.

Looking like a poor man's Stonehenge, the row of metre-high stones was found by a team headed by Prof. Mihai Mazar of the Department of Archaeology at the Hebrew University of Jerusalem and Prof. Pierre de Miroschedji of the French Research Centre in Jerusalem, in an excavation financed by the U.S. National Geographic Society. Believed to be part of a 5000-year-old cultic centre (at first open-air and later incorporated into an indoor Canaanite temple) the stones offer visitors a rare view of the transitional stage from nomadism to settlement in agricultural villages.

Archaeologists know very little about this early Bronze Age period, 3000 years B.C.E., when writing was just beginning in Mesopotamia and Egypt. It was during this time that agricultural villages were being established throughout the country. These were unwalled villages that some centuries later gave way to fortified sites as nations learned the art of war.

Some time after they were erected, the stones at Hartuv were included in an architectural complex some 500 square metres in size. Archaeologists believe that the complex, in the centre of the village, may have served important civic as well as religious functions.

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