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ROMAN CITY EMERGES IN ISRAEL

A massive amphitheatre, where Romans watched men battling lions 2000 years ago, dominates the extensive excavations at Beit Shean in the Jordan Rift valley. In front of the amphitheatre is the main street, called the Cardo, and the uncovered remains of shops, bath houses and private homes.

Israeli archaeologists believe that when excavations are completed, the ancient city, called Scythopolis by the Romans, will prove to be one of the most important cities in the Roman Empire.

ARCHAEOLOGY IN LESOTHO

P.J. MITCHELL

While archaeological research in South Africa extends back over more than a century to the pioneering work of researchers such as Gooch and Kannemeyer, relatively little fieldwork has been carried out in Lesotho, despite the known richness of its surviving San rock art and the relatively plentiful documentation that exists on the San hunter-gatherers who survived there well into the nineteenth century. It is not too difficult to see why Lesotho should have been neglected archaeologically until twenty or so years ago. As recently as 1960 there were very few professional archaeologists in southern Africa as a whole and their own research tended naturally to concentrate in those areas which were relatively easy of access. Lesotho itself has had no institutionalized archaeological presence of its own either before or after independence and has a very rugged, mountainous topography, particularly in the highland region; communications, especially all-weather roads, have been developed on any scale only since 1966. Furthermore, the general viewpoint of archaeologists, until fieldwork began there in 1969, was that the highland region had been a refuge for the Southern San, who utilized the area intensively only in the last few centuries as they were forced into ever more inaccessible areas by growing Iron Age and then European settlement in the surrounding parts of Africa.

As a consequence of these factors little archaeological research was carried out in Lesotho prior to 1969, and the work that was done was almost entirely undertaken in the western lowlands where Acheulean and Middle Stone Age material was reported by the Abbe Breuil on his visit to southern Africa in 1947 and later on by Van Riet Lowe. Various amateur archaeologists, notably Paul Ellenberger, recorded similar finds and others of Late Stone Age sites, attempting to relate them to what was known of South African archaeology at the time. The richness of the country's rock art received much greater attention, beginning in the last century with Orpen's description of paintings (complete with interpretations offered by his San guide Qing) from the rockshelters of Melikane and Sehonghong (see Fig. 1). Several writers, notably Victor Ellenberger, have also published accounts of the way of life and the final years of independence of the Lesotho San.

Not until 1969, however, was any archaeological excavation carried out in Lesotho or any archaeological fieldwork at all conducted in the highland region. In that year Pat Carter, now at Cambridge University, began a programme of research in the Qacha's Nek District of southeastern Lesotho which aimed to investigate the way in which the area's prehistoric inhabitants had exploited the landscape and the plant and animal resources that it offered. Excavations at five sites (over 300 others, many of them with paintings, were also recorded) revealed a

sequence of occupation reflected in a succession of Middle and Later Stone Age industries going back more than 75 000 years, with oral traditions relating to Melikane and Sehonghong documenting their continued use into the second half of the nineteenth century. Among other important findings, Carter's work demonstrates that some use was made of this high-altitude mountainous region even under the very cold, hyper-arid conditions of the Last Glacial Maximum, that pottery was in use at least as early as 1500 years ago (probably suggesting early contacts with Iron Age farmers in Natal) and that the tradition of painting on rockshelter walls is, at least, of a similar age (traces of paint on rock spalls at Sehonghong). Sehonghong proved to be of particular interest; it is the only site in Lesotho to have produced definite evidence of occupation by makers of the Late Pleistocene Robberg Industry (about 18-12 000 years ago), known elsewhere mainly from the southern and western Cape. Moreover, exceptional conditions resulted in the preservation of plant remains, mainly of various edible species (e.g. geophytes such as *Moraea* and *Watsonia*) which point, with other evidence, to a summer use of the site.

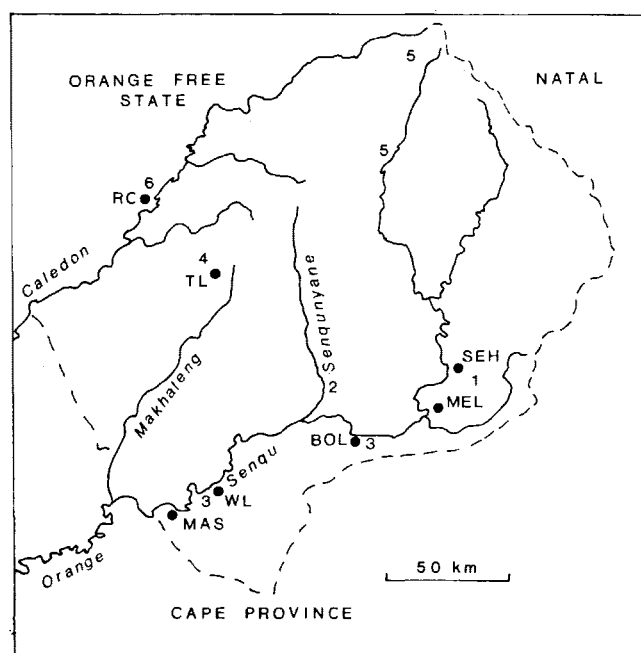


Fig. 1. Map of Lesotho showing sites discussed. Site names: BOL - Bolahla; MAS - Masitise; MEL - Melikane; RC - Rose Cottage Cave; SEH - Sehonghong; TL - Tloutle. Research areas: 1 - P.L. Carter; 2 - P. Vinnicombe; 3 - J.E. Parkington (Survey of Southern Perimeter Road); 4 - P.J. Mitchell; 5 - C. Thorp, J.D. Lewis-Williams (Phase I of the Highlands Development Scheme); 6 - B.D. Malan, P.B. Beaumont, L. Wadley.

Carter was particularly interested in investigating how prehistoric hunter-gatherer economies were organized, and he combined information from the plant and animal remains recovered from his sites with data on site temperature and aspect, and on local vegetation to propose models of landscape use under both glacial and interglacial conditions. The suggestion that people may have moved seasonally between the uplands of eastern Lesotho and more lowland areas in Natal, although open to reappraisal in the light of subsequent work, was taken up and examined, notably by Charles Cable in southern Natal and Manie Opperman in the northeastern Cape.

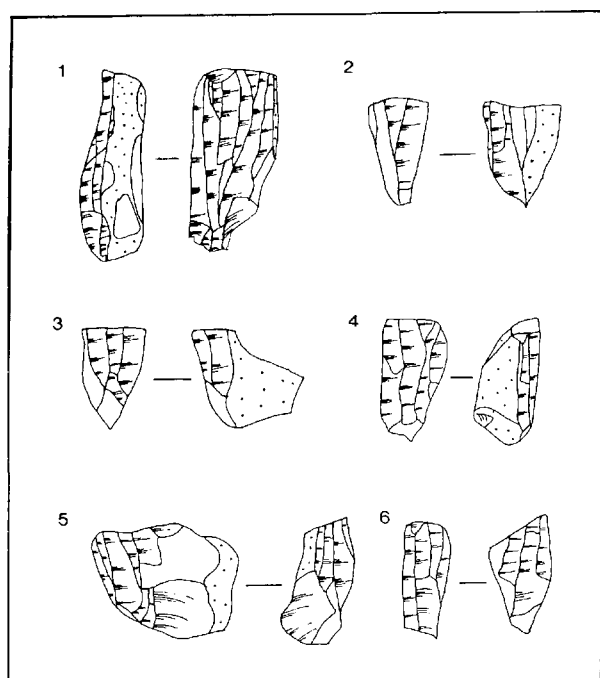


Fig. 2. High-backed bladelet cores from Tloutle and Sehonghong. 1-3 Tloutle, BC layer; 4-6 Sehonghong early microlithic assemblage (K9-5, K9-5, L8-4).

The only other archaeological project to have been completed to date in Lesotho had a narrower focus in so far as it was linked specifically to the impact on the archaeological environment of the building of the Southern Perimeter Road between Quthing and Qacha's nek along Lesotho's southern border. A team from the University of Cape Town, led by John Parkington, undertook a survey along the route in advance of the construction of the road. They made observations of several surface sites as well as carrying out limited excavations at two small rockshelters. Of these, Bolahla proved to have been only ephemerally occupied, but the site of Masitise provided evidence of a much longer history of use. Although no radiocarbon dates were obtained, comparison of the stone tool assemblages from Masitise with those from sites in South Africa indicates that occupation began in the mid-Holocene about 6000 years ago and continued through to recent centuries. Artefacts found at a nearby open site named Woodlot included several highly distinctive 'duckbill' scrapers with steep adze-like retouch along their sides which, again on the basis of comparisons with dated occurrences in South Africa, are probably 7-9000 years old.

Throughout the brief history of archaeological fieldwork in Lesotho the recording and study of San rock art has been well to the fore. This is perhaps only to be expected of a country estimated to have about 5000 individual painting sites. The unique testimony as to the meaning of some of the paintings at Melikane and Sehonghong recorded by Orpen in 1873 has been used more recently by David Lewis-Williams and others, in combination with the much fuller records on San mythology of Bleek and Lloyd (from northern Cape informants, also in the second half of the nineteenth century) and with contemporary ethnographic data, to develop a much richer understanding of the complex symbolism that permeates the art. Systematic recording of the surviving paintings in Lesotho, which continue to disappear at an alarming rate through natural exfoliation assisted by vandalism, has been the concern of Lukas Smits, formerly of the National University of Lesotho. His ARAL (Analysis of Rock Art Lesotho) project operated in several parts of the country, including the Southern Perimeter Road area, until 1986 and built up an extensive corpus of colour slides and sketches; in many cases, however, analysis and publication of these data have yet to be completed. Pat Vinnicombe also carried out surveys in the 1960s and 1970s of the rock art of the southeastern and eastern parts of Lesotho, and data from these contributed to the conclusions reached in her important work *People of the Eland*.

What of contemporary archaeology in Lesotho? Commencement of work on the Highlands Water Scheme has made necessary surveys to assess the impact of the project's road-, dam- and reservoir-building operations on both the biological and cultural heritage of the areas affected. As part of this, David Lewis-Williams has been supervising a survey of rock art sites, while Carolyn Thorp is undertaking survey and excavation work at other archaeological sites in the area under threat. At the moment this remains a relatively small-scale problem as far as archaeology is concerned. There are comparatively few sites in the Phase I and II areas of the scheme, but the planned extension of the project into the main Orange River Valley in Phase III will result in the loss of many more sites through flooding, road-building and other forms of damage. Although this is scheduled to be developed early in the next century it is important to recognise that a long-term, multidisciplinary project extending over several years will then be necessary if a significant part of Lesotho's (and southern Africa's) archaeological heritage is not to be lost.

My own work in Lesotho, which began with the re-analysis of the Middle and Later Stone Age sequence from the site of Sehonghong, has concentrated since 1988 on fieldwork in the western lowlands. This is an area previously neglected by archaeologists, although earlier work was carried out by Berry Malan and Peter Beaumont at the very important site of Rose Cottage Cave just across the border near Ladybrand, and is now being continued by Lyn Wadley and a team from the University of the Witwatersrand. My emphasis is therefore partly on the establishment of a local culture-

stratigraphic sequence for the Later Stone Age while also acquiring data on past environments and on hunter-gatherer economic behaviour for comparison with models advanced by Carter and Opperman for the Drakensberg highlands. In 1988 I concentrated on the excavation of a rockshelter at Tloutle near Roma. This site produced a Later Stone Age sequence featuring both an early Holocene assemblage that includes 'duckbill' scrapers previously reported in Lesotho only from surface sites such as Woodlot and, overlying this, a 'classic' mid-Holocene Wilton occurrence with segments and small thumbnail scrapers. Particularly exciting is the apparent presence, below the Holocene assemblages, of a small assemblage that includes several of the distinctive high-backed bladelet cores characteristic of the Robberg Industry (Fig. 2) and found also at Sehonghong and Rose Cottage Cave. In 1989 I plan to carry out further work here and at another site in the Roma area, and to undertake survey and excavation of other sites near Teyateyaneng further to the north.

It may be of interest to draw this account of Lesotho's archaeology to a close by indicating some of the major needs that remain to be met. On the research front one can point to several areas of the country, such as the Makhaleng and Sequnyane valleys, that have as yet been scarcely been examined archaeologically, as well as fields such as Iron Age or historical archaeology that are totally untouched. Foremost, however, among the problems that require a solution is the continued absence of a real archaeological infrastructure in the country. At present Lesotho also lacks a functioning National Museum which could act as a focus of archaeological re-

search, store excavated material and, of particular importance, serve educationally to bring the country's rich archaeological heritage more to the attention of its inhabitants. A longer-term goal must surely be for some Basotho students to receive a professional training to create the basis of an indigenized archaeology. It is to be hoped that steps toward the attainment of these objectives can be taken through the opportunities created by the development of the Highlands Water Scheme.

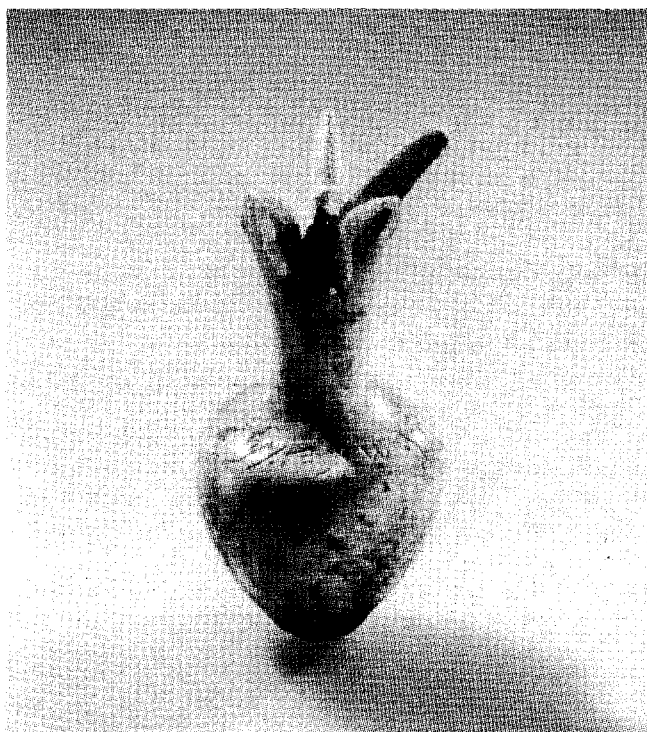
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NEWS FROM ISRAEL



Temple treasure comes home

A thumb-sized ivory pomegranate bearing the oldest inscription yet found in Hebrew, has been purchased by the Israel Museum for more than half a million dollars.

The pomegranate is the first sacred relic ever recovered from King Solomon's lost temple treasures. It was reportedly bought by a private individual for several dollars from an antiquities dealer unaware of its worth. The object was probably found around Jerusalem, either accidentally or in an illicit dig.

The tiny pomegranate, thought to have topped a sceptre carried by a temple priest, bears the inscription in Palaeo-Hebrew, 'Belonging to the Temple of the Lord (YAHWEH), holy to the priests'. It dates from the mid-8th century BCE, the time of Solomon's temple.

Because of its multiple kernels the pomegranate became a renowned symbol of fertility and has been a favourite motif of ancient Near Eastern art since the 3rd millennium BCE. It is frequently mentioned in the Bible and has been a prominent symbol in Jewish art of all periods.

BERT WOODHOUSE

Introduction

There are probably about 10 000 sites in southern Africa where there are paintings or engravings on the rocks. The paintings are in rock shelters or shallow caves, or on overhanging cliffs or boulders. The engravings are also found on slabs or boulders flat on the surface of the veld. The only reasonably comprehensive list of sites with relevant maps was compiled and published by the Archaeological Survey Unit of the University of the Witwatersrand under the direction of Professor C. van Riet Lowe in 1952. The work of recording additions to it is carried on by the Archaeological Data Recording Centre at the South African Museum in Cape Town and in various other museums in South Africa and Zimbabwe. A section of the Department of Archaeology at the University of the Witwatersrand now has a small staff devoted full-time to rock art recording and research.

Research Commences

The first step in the study of bees and honey as reflected in the rock art of southern Africa was taken by the German anthropologist Frobenius when one of his artists copied paintings at the site that he called Cinyati, not far from the Royal Natal National Park Hotel. The site is better known today as Ebusingata. Many of the paintings from the site were cut out on slabs of rock and are now in storage at the Natal Museum, Pietermaritzburg.

An artist's impression by Vera Lloyd of one of the Ebusingata paintings containing bees and ladders was printed on the cover of the *South African Bee Journal* for July/August 1970 when Robin Guy contributed a stimulating article based on a talk given to the second South African Beekeeping Congress. In that article he referred to a copy of a Bushman painting by James Walton and to work on the paintings being done by Harald Pager in the Cathedral Peak area which had been the subject of a popular article mentioning bees in 1969. That work subsequently resulted in the publication of the book *Ndedema*, named after the gorge in which Pager concentrated his efforts. It contained a most interesting section on bees and honey with many fine illustrations and comprehensive references. Robin Guy also raised the interesting question as to whether the Bushman painters were 'baiting' their caves with pictures of honeycombs under likely ledges in the same manner as honey farmers decoy a swarm into a hive by baiting it with a piece of old comb. Many subsequent finds make this very likely.

Guy and Pager each contributed an article to *Bee World* during the early seventies in which they added considerably to the number of relevant painting sites and also to ethnographic observations and Bushman folklore such as the ownership of bees' nests which could be inherited and the use of ladders for honey hunting. Pager even

produced a copy of a painting from Zimbabwe depicting the use of smoke when approaching a bee's nest. This has since been reproduced on many occasions. He also raised the question of the nests of stingless bees.

The importance of bees and honey in the life of rock painters of the Later Stone Age was rapidly realised. In 1974 Pager contributed an article to the *South African Bee Journal* based on a paper presented to the Federation of South African Beekeepers Associations at Pretoria in the previous year. It dealt with the magico-religious implications of the paintings and presented some statistical findings that gave bees and allied subjects third place in a table of importance of subjects in the paintings based on their superimposition on other subjects. First place was taken by eland and second by mythical creatures - usually half human/half animal. This table was based on paintings in the Drakensberg area where a large proportion of Pager's research was carried out.

In spite of this considerable literature, in the July 1975 issue of the *American Bee Journal* a Belgian, M. Achilles Gautier, wrote about an Indian rock painting of honey hunting and said 'they are, together with their Spanish colleagues, the only primitive people who bequeathed to us a picture of daily life, when honey was only to be found in the bush'.

Research Continues

Shortly after his 1974 paper Pager published a second book, *Stone Age Myth and Magic*, in which he further amplified his previous work. The following year, after a visit to rock paintings in Spain, he pointed to certain similarities between paintings at Altamira and those in Zimbabwe which suggested the probability of honey-hunting during the European Ice Age.



Fig. 1. A copy of a rock painting from Ebusingata showing a man carrying honey.

During this active period both Guy and Pager talked with me from time to time, particularly about the paintings at Zombepata in Zimbabwe which I had photographed - with some puzzlement - in 1969. One of my photographs had been used by Guy in his article in *Bee World* and subsequently another was published in my book *Bushman Art of Southern Africa*. In 1982 I published a review article in *Lantern* which provided a summary of the state of knowledge and opinion on rock paintings of bees and honey at that time. I also added some further sites in Zimbabwe, Lesotho and South Africa, together with an engraving site from SWA/Namibia and I raised the question, 'Is honey ever toxic?', arising from situations described in both ethnography and folklore. In fact I was soon able to answer that question from chance reading of how the Argonaut Butes nearly 'missed the boat' as a result of being prostrated by eating Colchian mountain honey. I also discussed the use of the !goin !goin or bull roarer to simulate the buzzing of bees, the drinking of bee wine or beer and dancing. (The term !goin !goin represents the Bushman name for a bull roarer ie a simple aerofoil on the end of a string which, when whirled around the head, makes a roaring sound. The exclamation marks represent a particular kind of click made by smartly snapping the tongue back from pressure against the highest part of the roof of the mouth.) Subsequently, my book *When Animals were People* included a chapter on bees which was based on the article in *Lantern* with some additions. By then I had learned that bees visiting certain types of euphorbias could result in toxic honey.

Register of Bee-related Rock-art Sites

In 1984 my wife and I had the privilege of visiting the International Bee Research Association in the UK and of meeting Dr Eva Crane who was enthusiastic about the rock-art resources of southern Africa relevant to bees and honey. When she visited Africa we were able to arrange for her to visit some sites and we co-operated in the initiation of an international survey by means of a questionnaire to be sent to rock-art enthusiasts who were likely to be interested. In southern Africa the response has shown that Zimbabwe has at least 157 sites - which is presumably what one would expect as a consequence of the appropriate vegetation. South Africa has so far produced a total of 14 sites of which seven are in the Cape Province, three in the Orange Free State, three in Natal and one in the Transvaal. It should be mentioned that fieldwork on rock paintings in the Transvaal generally lagged behind that in other provinces and it is highly likely that other sites wait to be recorded, particularly in well-wooded areas such as the Waterberg. Botswana has produced one site so far, as have Lesotho and SWA/Namibia. The project continues.

Some Additional Sites

Sites that have been thoroughly dealt with by description or illustration in the literature quoted are not dealt with in the following list unless some notable new feature has come to light.

It has been established that there are many sites awaiting detailed examination in Zimbabwe. The painting from the Concession area reproduced in my *Lantern* article is only one part of a major frieze which appears to contain several swarms of bees together with somewhat rectilinear honeycombs. At a nearby farm there is a large version of the classic catenary curves together with another version of the honeycomb theme. At a site called Gwandgwadza in the Mrewa district there is a further variation on the honeycomb theme and when I was there in 1984 there was a single-sided wooden ladder available for scaling the rock face. The site contains many burials.

At virtually the other end of the subcontinent is the Tunnel Shelter in the Uitenhage district, which I visited as long ago as 1967 under the guidance of enthusiast Ludwig Abel and members of the Mountain Club. Here I photographed paintings depicting what I now know to be the classic catenary curve, as well as a lively dance. In 1980 in the Brommer Cave I saw similar curves, without the dance but depicting bees.



Fig. 2. A copy of a rock painting from Eland Cave in the Natal Drakensberg showing the catenary curves of a honeycomb in the wild.

In between Concession and Uitenhage is Aliwal North. There, on the banks of the Orange River, is a truly virtuoso display of honeycomb painting together with paintings of domestic animals, including a perfectly preserved picture of a pack animal - presumably depicting a Hottentot on the move. One of the honeycomb patterns at this site is virtually identical with a painting on the farm Mooimeisiesfontein in the Transvaal Waterberg.

In the Western Cape at the site Kraaisbosberg is a painting somewhat similar to that of the bee's nest at Cullen's Wood near Elliot which I recorded in my *Lantern* article but it introduces a new element into the discussion. It has handprints painted close by. This may well indicate ownership which was such an important aspect of the Bushman customs relating to honey sites.

At the site Aberdeen near Harrismith there is a painting which was reproduced in *Art on the Rocks* which we thought at that time might represent a layer of strato-cumulus clouds. It can now be recognised as another example of honeycomb and not far away, in the Fouries-

burg District, is a rather different version together with bees. It is in the same shelter as a painting of a comet and a rain snake - obviously a very important place - probably for rain-making.

The underground nest of the stingless bee with its narrow tunnel entrance was described and illustrated by Fletcher and Crewe in a scientific paper in 1981. There is a relevant rock painting at Ruchera Cave in the Mtoko district of Zimbabwe and in 1912 Junod described the honey from such a nest as being powerful medicine, with the right to dig it up being restricted to certain people. A casual encounter in the Africana Museum about two years ago resulted in my being told by a young Pedi man of how he and his companions had dug up similar nests a few years previously. He described them as being 'like footballs full of honey'.

This description reminds me that there are, regrettably, no paintings that can positively be identified as illustrating the drinking of honey beer or honey wine which is often referred to in the ethnographic literature on the Bushmen and Hottentots. It seems likely, however, that the gourds illustrated in the famous painting at Diana's Vow in the Rusape district of Zimbabwe may be calabash containers of honey beer or wine rather than pumpkins as Frobenius described them. They all stand erect as though containing a precious liquid and elsewhere I have described the scene as more like a 'beer drink' than the 'death of a king' which was the previously suggested explanation for the scene.

Ebusingata Revisited

The story of the Ebusingata site as I know it is rather complicated but worth recording. When copied by the Frobenius team, the paintings were still in situ and probably in a reasonable state of preservation, as can be judged from the reproduction of several sections of the frieze. Large sections were cut out in 1947 for exhibition on the occasion of the visit to the Drakensberg by the British royal family. They were exhibited in a little museum in the grounds of the Royal National Park Hotel for several years and were subsequently transferred to the care of the Natal Museum where for some time they were in storage in an old munitions store. Now they are in store in the museum where I recently had the opportunity, by courtesy of the Director and staff, to photograph them, and especially the elephant-man surrounded by bees. These have been beautifully copied in black and white and reproduced in *Stone Age Myth and Magic* by Harald Pager.

A visit to the Ebusingata site, now in KwaZulu, resulted in my wife's identifying another very interesting bee painting. A man apparently bleeding from the nose, often a sign of relationship with the 'trance dance', is carrying a pile of honeycomb held on the flat of his up-turned hand in the manner of a waiter carrying a tray. He is surrounded by bees - as well he might be if an actual event was depicted or used as a model. The nose bleed may, however, indicate that the painting is a symbol for a desirable situation.

It is a pity that, at present, we do not know how all the bee paintings at Ebusingata were related. Only a visit to Frankfurt-am-Main to examine the Frobenius copies can resolve that problem - it might be an interesting and fruitful (or honeyful!) exercise.

Acknowledgements

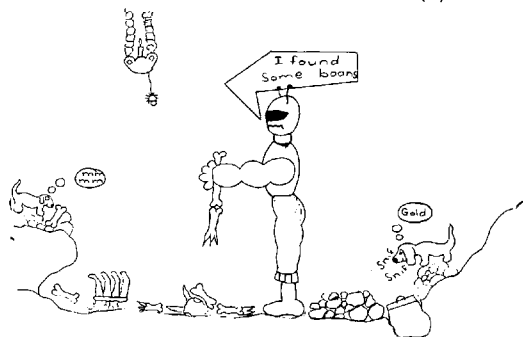
I am grateful to Robin Guy for discussion over a period of many years, and for sending me relevant slides from time to time. The death, in 1985, of Harald Pager deprived this study of a leading participant. Dr Eva Crane has been most helpful. Thanks are recorded to the Anglo-American and De Beers Chairman's Fund for financial assistance with current fieldwork in the eastern Orange Free State which, among other things, is adding to information on bee-related rock art; and to my wife, Shirley, for typing and for discussion of the Ebusingata paintings.

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Patinas have always exerted a fascination for archaeologists, particularly before radiocarbon dating had become commonplace. The thickness or different colouring of the patinas found on many stone artefacts, particularly those from surface sites, was thought to be an indication of relative age. Goodwin wrote a lengthy paper on the subject for a Wenner Gren conference which he attended in 1959 shortly before his death. In it he describes various types of surface alteration to stone, as well as the use of patination as a dating method by the archaeologist. It is of interest to note here that he was careful enough to warn that other techniques should be used alongside patination, acting essentially as checks. (He also used the memorable phrase 'statistics prove nothing'.) Although his chemical understanding of patinas was not complete, as he was limited to the then current knowledge of the subject, his paper is still most instructive. Today, however, new techniques of analysis have resulted in a much better understanding of the subject. The new impetus to these studies was given by R.I. Dorn, who has produced the most detailed work on patinas yet and who has developed the method of cation-ratio dating (CRD). This method is eminently suitable for dating the numerous surface artefact scatters and engraving sites in southern Africa.

Patina does not result from natural rock being weathered; it is a growth or accumulation of dust, clay minerals and organic material which has been deposited on the stone surface from a combination of airborne fallout of dust, lichen development and precipitation.

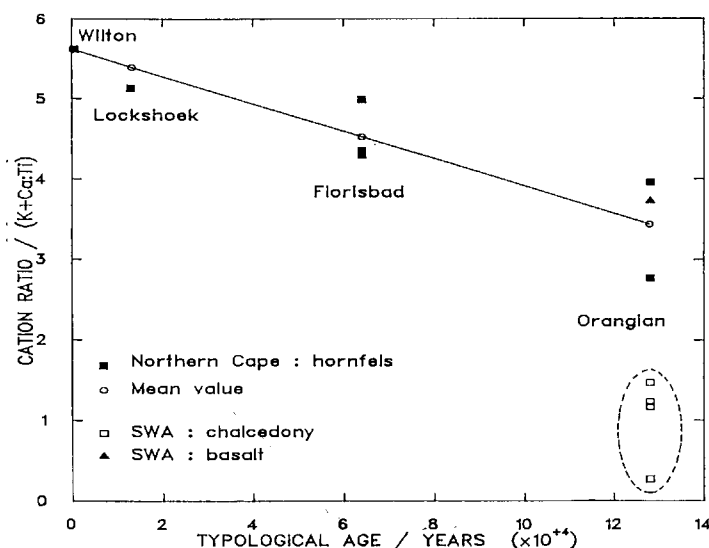


Figure 1: The correlation between the cation-ratio and estimated typological age (in years) of a sample of stone artefacts from the northeastern Cape Province and Twyfelfontein in Namibia, showing variable results for different raw materials.

The cations (pronounced cat-irons) measured are calcium (Ca), potassium (K), and titanium (Ti). As K and Ca are more soluble than Ti they are removed more readily from the patina over time. Thus, assuming a fairly constant accumulation of patina and an equally constant leaching rate, the ratio of Ca plus K divided by Ti gives one an index of age. This means that we can obtain a relative age from just the indices and thereby classify sites as older or younger, along a continuum. If, however, one can calibrate some of the indices with known ages then a curve (known as the cation-leaching curve) can be derived and samples of unknown age can be 'plugged into' the curve and dates in years can be determined. One of the added attractions of the method is that the techniques we use for the analysis of the cation ratios are not destructive when used on small or easily-transportable samples; only a representative sample of the patina on large heavy boulders, on which engravings have been incised and which cannot be taken to the laboratory, thereby keeping damage to a minimum.

Our own work at present has involved testing the cation ratios determined from artefacts against their approximate absolute age based on typological comparisons with dated specimens. From the results obtained thus far (Fig. 1) it is clear that we are one big step closer to obtaining dates for surface artefacts and, more importantly, for rock engravings. CRD will, above all, be most important for understanding the age and chronology of the latter, particularly whether these were produced in bursts of activity, which could possibly be linked with periods of social or environmental stress, and will thus enable this branch of rock art to move out of its present ahistorical impasse.

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* State Museum, Windhoek: now McGregor Museum, P.O. Box 316, 8300 Kimberley:

⁺ National Accelerator Centre, 7141 Faure.

IMPRESSIONS OF A CONFERENCE

PETER B. BEAUMONT

The 1989 biennial conference of the Southern African Society for Quaternary Research (SASQUA) was held in Durban between the 1st and 4th of February. The 60 or so members who attended the conference represented an amazing variety of disciplines, ranging from elitist practitioners of the 'exact sciences' to the hoi polloi of geologists, geographers, zoologists, botanists, archaeologists and others. What draws them together is a common interest in the mechanics and manifestations of climatic change over the past few million years, and how these have affected, and continue to affect, the fragile web of life on earth. To that worthy end we all gave our full attention (it rained most of the time) to about fifty papers and posters ranging over topics as diverse as the recent Orange River floods, manganese nodules on the sea bed and the 'biogeography of the Pseudodiaptomidae'.

There were, to my mind, three exceptional contributions, with my first prize going to the presenter of our Invitation Address, Dr Nicole Petit-Maire, Director of Research at the Quaternary Geology Laboratory of the CRNS at Marseille. She gave a rivetting talk, illustrated by spectacular slides, outlining over two decades of intensive studies by herself and others in North Africa. It was shown that the Sahara was drier, dustier, and a lot larger about 18 000 years ago, as a result of a more vigorous atmospheric circulation induced by expanding ice sheets that reached down in Europe to the latitude of London at that time. In complete contrast, during the period of maximum warmth at 6000 BC, that same region supported up to 100-km-long lakes replete with crocodiles and hippopotamuses. The savanna setting teemed with animals, including man who painted and engraved scenes of himself and his cattle that still survive. That climatic metamorphosis was caused by a northward expansion of the summer-rainfall belt (the Sahel), which has ever since been in retreat. It is, however, possible that this cooling trend will, at least for a century or so, be countered by the 'greenhouse effect', so much discussed these days, which could cause a recurrence of the 6000 BC scenario within the next five decades.

Running Dr Petit-Maire a close second was a 90-minute evening lecture to SASQUA and the Natal Branch of the South African Archaeological Society by Professor Phillip Tobias of the Anatomy Department of the University of the Witwatersrand. In this address he outlined the history of SASQUA and then proceeded to his recent research into the genesis of language - that most human of attributes. His analysis of ape-man (australopithecine) fossil brain casts shows that a perceptible enlargement of certain cortical areas directly linked to the capacity for speech (Broca's and Wernicke's areas)

had already taken place some three million years ago, thus leading him to believe that language has a similar antiquity.

Such a viewpoint is, however, incompatible with that of American scientists such as Crelin, Lieberman and Laitman, who have produced solid evidence that the executive organ of speech (the vocal tract and, more particularly, the larynx or voice box) only attained a configuration capable of producing speech as we know it by 4-300 000 years ago. Certain findings I made a decade ago (they are still being mulled over) strongly support this latter postulate, and my evaluation of the present data is that the variety of sounds generated by early hominids grew *pari passu* with social needs, but that the genesis of speech comparable to that produced by all living peoples only took place with the appearance of early *Homo sapiens* in Africa at about 500 000 years BC.

Equally fascinating were his comments on a recent re-investigation by himself and others of the famous approximately 2.5-million-year-old Taung skull, the type specimen of *Australopithecus africanus* that was described with inimitable prescience by his predecessor Professor Raymond Dart in 1925. These new studies reveal that this specimen shares numerous features with the subsequent *Homo habilis* and *Australopithecus robustus* lineages. These are not shown by earlier *Australopithecus africanus* forms (like Mrs Ples), thereby indicating that the Taung skull probably represents mankind's most direct and ultimate ancestor. How ironic that this long-neglected locality should now be shown to preserve a crucial timespan not represented at any other site and no wonder that Professor Tobias has initiated further fieldwork there over the past few years in the hope of finding further remains bearing on a pivotal event in human history.

Third, but perhaps only because cerebral overload was setting in, was the final talk on our agenda, an admirably illustrated Presidential Address by Professor Tim Partidge, a research associate at the Transvaal Museum, on the Cenozoic evolution of the southern African landscape. He began with the fragmentation of Gondwanaland during basal Cretaceous times (about 140 million years ago) that led to the emergence of Africa as a separate entity with an outline similar to that which it has today. Since then the subcontinent has been remarkably stable, geologically speaking; the dominant surface process has been erosion, leading eventually to the formation of a landscape of very low relief, known as a peneplain (or pediplain). The sediment loss caused by erosion leads to progressive lightening of the land mass which, in turn, results in eventual uplift of the land, thereby initiating another cycle of erosion, planation and

uplift. Geomorphological studies, begun by Dixey and King, and continued by Partridge, have resulted in the identification of an 'African' surface dating from the early Cretaceous to Oligocene times, a 'post-African I' surface of Miocene to mid-Pliocene age and a final 'post-African II' surface uplift of about 2000 m that commenced in the late Pliocene and extended into the Quaternary. Uplift, when it occurred, was often uneven, with some areas raised more than others. This has caused the formation of 'basins' separated by axes of

uplift which have been evoked to explain quirks in our present drainage patterns (a matter of particular interest to geologists seeking the sources of alluvial diamonds).

After that epic tale I sneaked off to show a colleague the environmental setting of Border Cave, with my last vivid recollection of SASQUA 1989 being a busload of delegates, about to leave on an excursion, staring out of rain-splattered windows with that same hopeless look that one sees in sheep being led to the slaughter.

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BOOK REVIEWS

HARBISON, P. 1988. *Pre-Christian Ireland. From the first settlers to the early Celts*. London & New York : Thames and Hudson.

This is the 104th volume in the popular series 'Ancient Peoples and Places' and the publishers are to be congratulated on the consistent standard of the books. Peter Harbison is well qualified to write a book on Irish prehistory as he has had wide experience in the field and is currently chairman of the National Monuments Advisory Council.

The subject of this book is the archaeology of prehistoric Ireland, up to the arrival of Christianity in the fifth century AD. The author has succeeded in the difficult task of presenting an interesting and full account of the first 10 000 years of Irish prehistory without boring the reader. He has summarised the present state of research, taken into account the most recent findings and moulded them into a readable and informative volume.

The book is divided into six chapters: Introduction; The search for the first settlers; Farmers and megalith builders; The rise of metal working; A golden age; The Celtic Iron Age. The chapters are by no means of equal length but this is not a mere whim on the part of the author, but rather represents a true reflection of the knowledge available. Thus, chapters three and four account for approximately half of the total number of pages.

Irish Christians have always been fascinated by their own prehistory and in the eleventh and twelfth centuries an effort was made to reconstruct it in the *Book of Invasions*. It was, however, only in 1699 when Edward Lhuyd visited Ireland that there was a more accurate record of Ireland's antiquities. He provided the first written account of Newgrange, one of the country's best known ancient monuments. In the 1830s real progress was made when detailed surveys were carried out. Unfortunately there was no pressure to preserve the finds that were located, and many of them were destroyed in the name of progress. Many other well-known people have worked in Ireland at one time or another and the late

Oliver Davies was one who left his mark in the country. In 1932 he worked with Estyn Evans on a series of excavations of the northern megaliths. This work had a two-fold benefit: it led to a greater interest and understanding of Irish megaliths and brought about a generation of trained excavators.

Pre-Christian Ireland is the first full-scale survey of Irish prehistory aimed at the general reader in more than a decade. It looks at the human settlement of pre-Christian Ireland from the beginnings to the arrival of St Patrick in the fifth century AD. It combines the works of earlier generations of archaeologists and the results of research of the last twenty years to produce a readable record of Irish prehistory. The latest ideas on the astronomical significance of the megalithic tombs and the social implications of the Bronze Age are combined with the results of recent major excavations. The question of when the Celts first arrived in Ireland is also examined but, perhaps for some, the answers provided will be insufficient.

As is usual with this series, only a select bibliography is provided but it has been designed to provide reference to adequate additional reading material should the reader wish to pursue the subject further. There are two minor points in early chapters which may cause some confusion. Sometimes the author uses 'years ago', sometimes 'years BC' and sometimes 'radiocarbon years BC'. On occasion metric and imperial measures are mixed - sometimes with the other equivalent provided in parentheses, but mostly without. These are small points but they do distract, especially as they are so easily rectified in the editing process.

Generally this book will give readers a good, if superficial, understanding of the subject and should make a welcome addition to the bookshelves of those interested in Irish prehistory.

W.J. van Rijssen, South African Museum, P.O. Box 61, 8000 Cape Town.

"HANDS-ON" HISTORY TEACHING AT THE AMSTERDAM BATTERY, CAPE TOWN

UTE A. SEEMAN

In November 1988 I undertook to excavate a small part of the Amsterdam Battery in the Cape Town docks as part fulfilment of the requirements for my B.Sc. (Hons) degree in archaeology at the University of Cape Town. The excavation would not have been the success it was without the enthusiastic participation of volunteers from the Archaeological Society, friends and family and especially Standard 7, 8 and 9 students from the Diocesan College, Rondebosch, and Table View High School, Table View, and their teachers.

While researching and organizing the excavation a couple of weeks earlier, I had spoken to Dr Dan Sleight from the Teachers' Training Centre, Mowbray, who had researched the Amsterdam Battery up to 1795. He advised me to contact several Cape Town High schools as he felt the need for history students to experience 'hands-on' history/ archaeology.

It is realised today that history teaching in our schools need not be restricted to the dry repetition of facts and figures, the teaching of the fortunes and battles of rulers and great men, and the politics involved. Nearer to our own interests may be how ordinary people lived, what their houses looked like, what they ate, how they dressed and how they spent their days.

I found that the Amsterdam Battery was an ideal site to involve high school students in unravelling their own past, in this case 18th and 19th century Cape Town, its harbour, the military establishment around Table Bay and generally the historical forces leading up to the planning and building of the fort in 1781. We dug through the modern 20th century level (when a major renovation took place) down to the 1780s' building phase and we uncovered quite a number of architectural features and artefacts. All the while we discussed and speculated about the different time periods. At first the students expected to find treasures in the form of gold coins and such like but as the excavation progressed they were happy to collect whatever remains there were in the form of glass, ceramic and porcelain fragments, food remains (mostly bones), iron, building materials, clay pipe stems, uniform buttons, cartridges and two tickets. By-and-by the students learned about glass and bottle

manufacture, to distinguish between ceramics and porcelain, about rifles and muskets, uniforms and a lot of other material evidence that people had left behind.



As the Amsterdam Battery is such a large site and only a very small portion was excavated, not much damage could be done by inexperienced volunteers. Besides, the students were very enthusiastic and willing to be taught proper excavation methods and to help in every aspect of the work. They found that they contributed in a practical and meaningful way to our understanding of historical Cape Town. It made history come alive in as much as they found that real people had lived at the fort who ate, drank, stood guard, watched sailing ships go by, repaired carts in the workshop, shod horses, cleaned their rifles and built ordnance stores.

I found that about 8 to 10 days at the end of the term in November/December is the ideal time for groups of students to help with an excavation. If I have the opportunity to carry on with the work at the Amsterdam Battery I shall certainly approach high schools again and try to extend this teaching and learning experience. It is valuable not only to the students but also to archaeologists, who recognize the need for a wider public awareness of their work and the results thereof.

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NEWS ITEM

The Silver Medal of the University of Pretoria was recently awarded to Bert Woodhouse. In making the presentation, the Principal, Professor D.M. Joubert, said that the medal was normally presented to an artist on the occasion of a major retrospective exhibition of his work. In this case, however, it was on the occasion of an exhibition of photographs of rock art prepared for display overseas. The photographs were part of the collec-

tion made by Bert Woodhouse in company with Neil Lee over the past thirty years. In accepting the medal, Bert Woodhouse said that he did so on behalf of the unknown artists who had contributed so much to the artistic and cultural heritage of southern Africa.

A handsome catalogue, in English, Afrikaans, French and German, and with several colour plates has been produced.

GEORGIE RAUTENBACH

Many members, old and young, will have fond memories of Georgie Rautenbach and it is with great sadness that we record her passing away in January of this year. Georgie came to South Africa as a young teacher, and subsequently married a farmer from the Clarens district where she developed a long-standing interest in the archaeology and palaeontology of the area. She was responsible for the excavation of many fossils, including the dinosaur *Massospondylus*. Her interest led to a long association with Dr James Kitching of the Bernard Price Institute at Wits who visited the farm where he found important remains of an advanced mammal-like reptile *Tritylodon*. Georgie was an active member of the Transvaal and the Western Cape branches of the Society for 26 years. She published two papers in the *Bulletin*, on a Later Stone Age Shelter in the Clarens District, O.F.S. (1967) and on Carved stone objects from Bethlehem district (1973). She took on the task of organizing and curating archival material of the Society until she became too frail to travel alone. During this time she wrote an article in the *Newsletter* on the Archaeological archives - a project for the future (1979). Our thoughts go to her family.

Graham Avery

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ISSUES

EDITORIAL COMMENT

Letters have been received from Mr A.R. Willcox, Dr C.A. Hromnik and Mrs H.M. Dreyer, complaining that Council appears to be trying to determine what members may read archaeologically, as a result of an item that appeared in last year in *The Digging Stick*. This is very far from the truth, and some clarification is clearly necessary. The invitation to bring to our attention books, about whose contents (whether information or interpretation) members were in doubt, was meant as an offer of help by providing an informed opinion, through the pages of *The Digging Stick*. In other words, members are invited to offer a book for review if they so wish.

It must be pointed out, however, that books intended for school libraries and as text books should be viewed in a different light from general interest books for the public. In the latter case, one can agree with the correspondents that everyone should have the right to put forward their views. School books, however, appear generally to be treated as unassailable truth by the uninitiated. It is, therefore, imperative that a balanced and up-to-date assessment of the data be given in such books. If, in the opinions of those best qualified to judge, this has not been done then they have a duty to attempt to rectify the matter. The Society's programme of education in matters archaeological constitutes another side of this same policy.

Pollen grains chart the past

Fossilized pollen grains from olive, oak, walnut and 132 other types of tree have been recovered from the bottom of the Sea of Galilee, and are telling the story of the lake's past 5000 years.

The tough-coated pollen, contained within a 12-foot core sample taken from the lake bed by archaeometrist Uri Baruch of the Hebrew University of Jerusalem, were trapped in the lake sediment deposited over millennia. The oldest of the grains are, according to radiocarbon dating, 5500 years old.

Among the upheavals of history that the pollen charts are the olive industry of ancient Israel, the agricultural decline of the area under the Romans, the destruction of trees for charcoal for the fuel trains of World War I, and modern Israel's energetic afforestation efforts.

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NEW PUBLICATIONS

British Museum Publications:

Robins G. & Shute C. 1987. *The Rhind Mathematical Papyrus*. 61 pp. 24 colour plates. paper back. ISBN 0-7141-0944-4. R48.60.

In a series entitled 'Reading the Past' (each volume is 64 pages and in paper back):

Chadwick, J. 1987. *Linear B and related scripts*. ISBN 0-7141-8068-8. R24.75.

Davies, W.V. 1987. *Egyptian hieroglyphics*. ISBN 0-7141-8063-7. R29.70.

Dilke, O.A.W. 1987. *Mathematics and measurements*. ISBN 0-7141-8067-X. R24.75.

Page, R.I. 1987. *Runes*. ISBN 0-7141-8065-3. R24.75.

Walker, C.B.F. 1987. *Cuneiform*. ISBN 0-7141-8059-9. R24.75.

In a series entitled 'Exploring the Roman World' (both volumes have 240 pages and are hard cover):

Keay, S.J. 1988. *Roman Spain*. ISBN 0-7141-2043-X. R98.35.

Potter, T.W. 1987. *Roman Italy*. ISBN 0-7141-2042-1. R70.50.

Duckworth:

Garland, R. 1987. *The Piraeus*. 280 pp. hard cover. ISBN 0-7156-2159-9. R 154.75.

Goss, V.P. 1987. *Early Croatian Architecture*. 248 pp. hard cover. ISBN 0-7156-2149-1. R101.00.

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