

CHAPTER 3 'THE MIGHTY SILENCE OF ALL THAT IS PAST'

UNRESOLVED ISSUES OF AGE

The question most frequently asked at rock art sites invariably relates to age and authorship: 'How old are the paintings or engravings, and who were the artists?' A straightforward reply is seldom possible, and the answer will probably be an estimated date within a time span of hundreds, or even thousands of years, and an inferred authorship. At Redan, this problem is exacerbated by the fact that the engravings have never been scientifically dated. Equally, no archaeological research has ever been conducted at the site. In the chapter that follows this problematic issue of dating is discussed. The hypothetical beginnings of visual expression, within the context of the Stone Age, are also addressed.

In a penetrating review of archaeological dating methods, the archaeologist Martin Hall (1996:111-126), defines modern concepts of time as 'a precisely measured system of years, months, days, hours, minutes and seconds ... that connects airline time-tables and electronic communications globally'. He points out that the idea of standardised time, known as 'Coordinated Universal Time', was only adopted in 1964 but that the concept of time is far more complex: '... the majority of the earth's population measures out the passage of days and years in far less precise cycles of seasons, sunrises and sunsets'. Hall emphasises that it is the task of the archaeologist to resolve these differences in the dimension of time, and determine a time scale for a particular site. In contrast to the scientists' concern for verifiable

dates, the artist and pioneer rock art copyist Walter Battiss (1948:236), expresses a more reconciliatory viewpoint.

The past of Southern Africa is the greatest silence in history, ... I have sensed the interpenetration of many silences, for there have been, one, the silence of the skies, and two, the valleys, and, three, the mountains, and four, the silence of the sub-soils. And to these must be added a fifth silence: the mighty silence of all that is past.

Because of these differences in the concept of time, the discipline of archaeology has developed its own chronological syntax through the years. Dating begins with excavation, and excavation enables the archaeologist to examine the strata (layers) that have built up. Stratigraphy occurs when a site has been occupied over a long period of time and layers are deposited containing the remains of human (and natural) activity. Stratigraphy observes the rule that older layers underlie younger layers, thereby establishing a relative chronology: 'One way of thinking of stratigraphy is as a technique for placing assemblages of artefacts relative to one another in the dimension of time' (Hall 1996:114). Stratigraphy is therefore a form of relative dating. Mason (1962:33) remarks that whereas European art may be dated by stratigraphic means, it is seldom possible in South Africa, because art objects are not usually found in archaeological deposits: 'It is therefore more difficult to date the art and associate it with particular races or cultures'.

Hall (1996:114-115) also describes how archaeological evidence can be used in association with geological, geomorphological and climatic sequences, to arrive at a relative date. Van Riet Lowe (1937) described and interpreted the Vaal River terrace deposits within a dating framework that was linked with major sea level changes; this pluvial hypothesis on which Van Riet Lowe based his dating is no longer accepted (Clark 1990:190-191). However, more recently, geomorphological evidence has assisted in establishing relative dates for the rock engravings at Driekopseiland in the Northern Cape (Morris 2004). Relative dating can also be achieved by comparing the attributes of artefacts themselves, referred to as 'seriation': 'Seriation rests on the propositions (often demonstrated to be true) that artefacts made at a particular time will have a number of features in common (their 'style') ...' (Hall 1996:116). Where there is no stratigraphic evidence, seriation or stylistic characteristics can assist in establishing a relative time frame. This grouping together of stylistic features, both intra-site (comparing engravings within a single site) and inter-site (comparing engravings from two or more separate sites), is essentially an art historical concept (Duro & Greenhalgh 1992:279). It can be particularly useful in establishing a relative time frame for rock engraving sites such as Redan, where there is no other evidence. This is elaborated upon in a following chapter.

Hall (1996:120) distinguishes between these techniques of relative dating, and the range of absolute dating techniques. The latter are also referred to as chronometric

dating techniques and he emphasises that they are not the same as calendar dates: 'Rather, they are age estimates which *refer* to a calendrical time-scale ...'. Most chronometric dating techniques rely on radiometric techniques; these techniques introduced in the 1950s have revolutionised dating (Hall 1996:121-126; Deacon & Deacon 1999:11-13). Of these techniques, the radiocarbon dating method is the most widely used in archaeological interpretations. Hall (1996:259) defines it concisely as 'a technique of absolute dating (q.v.) that makes use of the fact that the unstable isotope, carbon-14, decays at a steady rate with a half-life (q.v.) of 5730 years'. All living organisms absorb carbon-14 from the food they eat, and plants absorb it during photosynthesis. When an organism dies, the carbon-14 begins to break down 'at the known exponential rate of the C isotope', and it can be calculated when the organism died (Hall 1996:121). Radiocarbon dating can therefore only be carried out on the residues of organic materials such as bone, wood or shell, commonly found in the charcoal of ancient fireplaces, effectively ruling out radiocarbon dating for rock engravings. By using the radiocarbon dating technique, it can be estimated how long the C isotopes in the sample of organic material have been in decay; an exact calendar date is not possible. Radiocarbon dates are given as BP (years before the present), and the 'present' is taken as 1950 (when the technique was made available) (Hall 1996:122).

Radiometric dating is also an expensive and highly specialised field, requiring sophisticated laboratory conditions. The establishment of the CSIR dating laboratory under John Vogel in 1968 was a significant step forward and Vogel

assisted in most of the major dating programmes. In spite of these advances, limited success has been achieved in the dating of rock art. Recently the new accelerator radiocarbon techniques have been used to date paintings in the Natal Drakensberg (Deacon & Deacon 1999:165). Successful dating has also been possible in those rare instances where images have been painted or engraved on small, portable stones, and recovered from ancient occupation levels of excavated sites. Dating is made possible by analysing the charcoal in the occupation level. The most spectacular example of this nature was found in 2002, when a small portable stone was excavated in the Blombos Cave near Stilbaai in the Western Cape. This small piece of red ochre, with its carefully incised pattern of regularly spaced chevrons, has been dated 77 000 BP. This date effectively pushes back the period in which art is believed to have originated, from the Later Stone Age to the Middle Stone Age. This small engraving is presently not only the oldest dated example of a rock engraving in South Africa, but in the world (Henshilwood 2002). It pre-dates the small mobiliary slab that was retrieved by the McGregor Museum from the charcoal deposits at the Wonderwerk Cave near Kuruman in the Northern Cape, and dated 10 000 BP (Deacon & Deacon 1999:164).

The McGregor Museum has always limited its activities to its provincial boundaries, and although these have changed over the years, the southern Highveld area of Gauteng has never been included. An exception was the inclusion of the rock engravings that occur in the Ottosdal area on the south-western border (Fock & Fock 1984:114-121). This area has since been incorporated into the North West

Province. Regrettably, this research did not extend to the southern Highveld area and to Redan, in spite of the remarkable similarity between Redan and many of the sites in the Northern Cape. The presence of this relatively small site, with less than 300 engravings, seems negligible compared to the huge number of sites and literally hundreds of thousands of engravings in the Northern Cape. The Rock Art Research Institute (RARI) of the University of the Witwatersrand continues to play a leading role in rock art research in South Africa. Preference has, however, always been given to researching rock paintings rather than engravings (but see Smith & Ouzman 2004). During the period 2000-2002 a degree of interest was shown and together with representatives from the Southern African Heritage Resources Agency (SAHRA), Redan was visited on several occasions. A site report was also drawn up and handed to the owner of the farm. No research programme is however forthcoming (chapter 2, part 2).

Before the rezoning of the provinces in 1995, there were three major rock engraving sites in Gauteng (formerly the Transvaal): Doornspruit in the Magaliesberg Valley, Bosworth near Klerksdorp, and Redan. The three sites are each less than two hours drive from Johannesburg. They have many characteristics in common. Klerksdorp (Bosworth) has since been incorporated into the North West Province. The Magaliesberg area has been included in major archaeological studies of both the Stone Age and the Iron Age (Mason 1962, 1986; Wadley 1986, 1989), but the rock engravings have not been the focus of a major research programme comparable to the work undertaken in the North West Province. However, the engravings of both

Doornspruit and Bosworth are widely admired for their aesthetic quality, and rubbings and photographs of the representational engravings of animals have appeared in several publications (Van Riet Lowe 1937; Mason 1962; Steele 1988; Dowson 1992). Since the introduction of the shamanistic approach in the 1980s, the non-representational engravings at the sites have also received attention (Dowson 1988). The engravings *per se* have never been positively dated.

The Bosworth site is exceptional in that numerous Stone Age artefacts are scattered amongst the engravings; these include Acheul handaxes and flakes and Middle and Later Stone Age flakes, showing that 'Stone Age people from at least fifty thousand years ago until very recent times made their artefacts on the same hilltop used by the engravers' (Mason 1962:341). Mason, however, cautions that the presence of artefacts at a rock engraving site can be misleading, and do not necessarily indicate the age of the engravings. Comparison of dateable artefacts with engraved lines may not give valid results, as large flakes and narrow engraved surfaces may weather at different speeds. Comparison of boulder surfaces and patination are equally misleading, as many different factors including the rock type, frost fracture, availability of moisture, drainage of surfaces, and the engraving technique, appear to affect the weathering process (Mason 1962:343, 347). It is also possible that images of identical age engraved on weathered boulder-crusts of different thicknesses may have misleadingly different appearances. The increased use of radiocarbon dating methods after the 1960s, led to more accurate dates, but dating remains problematic.

In spite of the problems associated with the chronology of rock art, dating has always been a major concern of the McGregor Museum. Since its inception almost 100 years ago, various methods and approaches have been used to establish a chronology of the rock engravings of the Northern Cape. In her classic study, Wilman ((1933) 1968:45-50) addresses some of the problems, and attempts to date the art based on the different techniques that were used, and on superimposition. She concludes that the variations of patina on the engraved surfaces is an untrustworthy indicator of age. Following in her footsteps, a succession of researchers attempted to date the engravings. A close relationship between archaeologists and rock art specialists has always been maintained at the McGregor Museum, ensuring some remarkable successes. Considering the paucity of archaeological information regarding Redan, and the consequent absence of an established chronology, the research results obtained for sites in the Northern Cape can be of significance for the dating of Redan. Inter-site comparisons can also assist in clarifying the remarkable similarity between Redan and many of the sites in the Vaal-Orange basin. In the 1970s site-specific geoarchaeological studies along the Riet and Vaal Rivers and in local pan deposits indicated that the oldest rock engravings of the Vaal-Orange basin are at least 4000 years old (Fock 1979).

Subsequent research focussed on the fact that the engravings at Driekopseiland occur in two main areas: the greater eastern part on an expanse of exposed glacial pavement, and a smaller western down-stream part (Morris 2004:11). The engravings in these two areas vary considerably in patination pattern, and also

thematically and stylistically. A study of the geological history of the area, particularly of the rate of bedrock exposure and riverine activity, revealed that the age of the engravings could be related to certain geological occurrences. On the basis of this evidence, it was estimated that the Driekopseiland engravings were executed c. 2500 - 2200 BP or after 1300 BP (Fock & Fock 1989:141; Morris 2004:12). In spite of the obvious geological differences between the rock surfaces, the engravings at Driekopseiland and Redan have much in common. Both occur in riverine settings and at both sites non-representational images far outweigh the representational images of animals.

A further refinement of radiocarbon dating was the development in the early 1980s of a new rock varnish age-determination technique, referred to as cation-ratio (CR) dating. CR dating is based 'on the empirical observation that, over time, the rock (or "desert") varnish coatings that develop on stable surfaces in arid and semi-arid environments experience differential leaking of major trace elements within its cation-exchange complexes' (Whitley & Annegarn 1994:192). This loss of trace elements can be calibrated against a numerical time scale, and can be used to provide the direct calibrated ages of rock engravings. This method was used for the first time in the late 1980s to date rock engravings in various areas in North America and Australia. Favourable results were also obtained from independent studies conducted in southern Africa (Whitley & Annegarn 1994:192). Subsequently, using cation-ratio (CR) dating, a project was launched to date the rock engravings at Klipfontein, west of Kimberley, in the Northern Cape. The

project was made possible with the support of a number of institutions (Whitley & Annegarn (1994:189-197).

Two sites are situated on Klipfontein in close proximity to water sources: Bushman's Fountain and Shaw's Drift. At the latter, the engravings occur on outcrops of diabase on the banks of the Vaal River; non-representational images predominate (71%) (Fock 1979:110). Previously these engravings had been thought to be about 4000 years old (Fock 1979). Varnish samples were collected from 44 rock engravings. These were then divided into three groups according to stylistic characteristics: '... fully-pecked representational, pecked-outline representational, and pecked geometric (non-representational)' (Whitley & Annegarn 1994:194-195). The results of the analyses yielded dates from approximately 100 - 10 000 BP, with considerable overlap between the dates given for the three divisions. The non-representational engravings appeared to be the youngest with a time span of modern to about 8400 BP. The 'pecked-outline representational' engravings of animals appeared to be older, with dates ranging from 1200 - 9400 BP; this date is close to previously estimated dates of 1300 years for the same style at Driekopseiland (Whitley & Annegarn 1994:196). These dates for the two major rock engraving sites in the Northern Cape are assisting researchers in contextualising the art. However, in spite of these advances, authorship remains an unresolved issue (see Morris 2004:12-15 for detailed exposition of the complexity of socio-cultural relations during this period). Based on these latest calibrated dates obtained at Driekopseiland and Klipfontein, and given the similarity between the engravings at

these sites and at Redan, it can be surmised that the non-representational engravings at Redan were executed in approximately 8400 - 100 BP. This figure is however purely speculative, and will remain so until the necessary cation-ratio dating tests are conducted. This requires the intervention of an institution or authorised body equipped with both the expertise and the financial resources. The local museum, the Vaal Teknorama has always retained an interest in Redan, but does not have the capacity to initiate a research programme. The industrial nature of modern Vereeniging continues to dominate its prehistoric past.

THE ORIGINS OF VISUAL EXPRESSION?

When Redan was finally declared a national monument on 20 August 1971, the official description was predictably vague: 'Scientific value - These petroglyphs are a good example of abstract art during the Stone Age. The drawings probably had a ceremonial or mythological significance' (South Africa: Department of National Education 1971). This brief definition brings us no closer to identifying the people who were responsible, as the Stone Age covers a vast time span of 2.5 million years. During this vast time span, the Vaal basin, including the Vereeniging area, was populated by a succession of peoples. The first true humans, ancestors of modern man, lived here between 1 million and 500 000 years ago (Deacon & Deacon 1999:82). Their stone tools can still be found along the banks of the Vaal River. These Earlier and Middle Stone Age people were succeeded approximately 20 000 years ago, during the Later Stone Age, by a hunter-gatherer people who may have been the ancestors of the San (Smith *et al.* 2000:9).

It has always been maintained that rock art originated in the Later Stone Age approximately 20 000 years ago, and that it continued to be produced throughout the Iron Age, and until modern times (Mason 1962:331; Deacon & Deacon 1999:109). Since the discovery of the engraved slab of mobiliary art at Blombos Cave, yielding a radiocarbon date of 77 000 BP, these dates are now being questioned. It is now apparent that the unique human capacity for visual expression, this ability to give pictorial form to experiences and ideas, popularly referred to as 'art', goes back much further than was previously believed, and probably evolved slowly over hundreds of thousands of years. Traces of this evolving ability are present in the earliest artefacts found in the Vereeniging area. This evolution commenced in the Early Stone Age and continued throughout the succeeding Middle and Later Stone Ages, the Iron Age and historical times, culminating at some point in rock engravings. In order to determine the place of the rock engravings of Redan in this 'formal evolution' and establish a context and possible authorship, it is necessary to review the prehistory of the southern Highveld, against the broader backdrop of the Stone Age in southern Africa.

THE STONE AGE

The South African Stone Age was defined by Goodwin and Van Riet Lowe (1929); Van Riet Lowe's intimate knowledge of the Stone Age gravels of the Vaal River, including those in the Vereeniging area, proved invaluable and a three-stage division into the Earlier, Middle and Later Stone Ages, was proposed. Since the

advent of radiocarbon dating, the 1929 dating has been adapted, and the following time ranges for the Stone Age (and the succeeding Iron Age) in South Africa, are now accepted:

- Earlier Stone Age - 2.5 million years BP
- Middle Stone Age - 250 000 years BP
- Later Stone Age - 22 000 years BP
- Iron Age - 2000 years BP
- Historical times (Deacon & Deacon 1999:6)

The Stone Age refers to a time when the artefacts of a culture were predominantly made of stone. Artefacts were presumably also made of other less durable materials such as grass, wood and bones, but few of these have survived. Hall (1996:9) gives a concise description of the tool-making activities of Earlier Stone Age people: 'But it is apparent that starting from about 2 million years ago, our ancestors chipped off rough flakes from stone cobbles to make implements. Most of these were probably general purpose tools, used for hacking at animal carcasses that had been scavenged or hunted, or for digging up plant foods ...'.

EARLIER STONE AGE

Stone artefacts found at the earliest archaeological sites are called Oldowan, derived from the Oldowai Gorge in Tanzania. Oldowan artefacts occur from Tanzania to Ethiopia and from Malawi to South Africa. Since the 1960s the focus of Earlier Stone Age research has shifted to Sterkfontein and Swartkrans. A large number of

Oldowan-type stone artefacts have been positively identified at Sterkfontein, making it the oldest identified site in southern Africa: 'The Oldowan artefacts recovered ... date to the earliest Pleistocene between 1.7 and 2 million years - a reasonable estimate for the dating of the appearance of true humans in South Africa' (Deacon & Deacon 1999:77). The stone choppers found at Sterkfontein are made in quartz, chert and quartzite, materials that occur abundantly in the gravels of the nearby Blauwbank River. Oldowan technology is extremely basic, consisting of cores and flakes, with little retouch and no flaking according to predetermined patterns or designs (Mitchell 2002:54). This implies that the Oldowan artefact makers were not sufficiently developed cognitively to form a mental image of a specific design type. Deacon and Deacon (1999:77) aptly describe this earliest technology in southern Africa as 'a starter-level stone toolkit that reveals little control over design ...'. Mason (1962:153) points out that the rich hunting grounds about the confluence of the Vaal, Klip and Suikerbos Rivers is an easy three-day walk upstream, down into the quiet valley of the Blauwbank River and its caves at Sterkfontein. He further argues that the stone tools found by Van Riet Lowe in the 1930s in the gravels near Amcor in the Vereeniging area, are probably of the Oldowan type: 'The gravels have been reworked at various times and contain artefacts of different ages but the 100' (30 m.) gravels at Amcor, discovered by C. Van Riet Lowe are regarded as the locality most likely to preserve some of the earliest stone artefacts in the Transvaal' (Mason 1962:107). The probability of a population of Oldowan artefact-makers living in the Vaal area is confirmed by Deacon and Deacon (1999:77): 'In South Africa, artefacts that may be Oldowan

have been reported from the gravel deposits of the Vaal River and elsewhere'. Basic Oldowan technology persisted until 1.4 million years ago. It opened the way for the invention of new tools and new methods of working, and for the progressive refinement of form beyond the point of maximum efficiency, towards a perception of form for its own sake.

The next perceptible change in stone tool technology, the Acheulean, took place in South Africa approximately 1.5 - 0.3 million years ago. At Sterkfontein the crucial factor in this change was the ability to strike large flakes, leading to the manufacture of bifacially worked handaxes and cleavers. These tools were made by *Homo erectus*, who obviously had a greater mental ability than his ancestors: 'The toolmakers could see the finished tool in their minds before they started ... and were able to communicate so successfully that the handaxe became a standard tool form ...' (Smith *et al.* 2000:7). Biface stone industries are termed Acheulean from the site of St. Acheul in France. Acheulean stone industries invariably occur in riverine areas where there is an abundant supply of water to drink, game to kill, and smooth pebbles for the manufacture of artefacts (Mason 1962:115). Deacon and Deacon (1999:81) suggest that the Acheuleans were 'terrain specialists', giving preference to valley bottoms or wetlands productive of animal and plant foods. The fertile valley of the Vaal River in the Vereeniging area proved an ideal terrain for Acheulean tool-making. Mason (1962:115) argues that at times of flood, or when a meander changed, the river moved its gravel to new positions and overwhelmed many Stone Age camping places and included their contents in the gravel: 'In meandering

across the wide flood-plain near Vereeniging the Klip and the Vaal moved masses of pebbles, mainly derived from Ecca sandstone, and dumped them on the inside curve of bends in the river course'. Extensive archaeological excavations in the area between Van Riet Lowe's Duncanville site and Redan, and at Waldrift, Klipriviersberg and Three Rivers, yielded a large number of stone artefacts. In the early 1950s S.F. Le Roux (1951), a teacher and independent researcher in Vereeniging, reported finding a number of Acheulean stone tools at Taaiboschspruit on the Klip River.

Present evidence suggests that a vast sector of the human record, covering the middle stages of the Acheul, is missing from the Transvaal sequence as we know it today, unless the fresh series from Klipplaatdrif, excavated in 1960, or the Acheulean series S.F. le Roux found at Meyerton on the Klip River, belong to this stage. (Mason 1962:159)

Acheulean stone industries are found in many parts of the world and although they are not made of the same raw material, they are invariably made according to the same design: 'The bifaces made and used on the banks of the Vaal River have the same design, even though they are not made in the same raw material, as those found in Egypt and Morocco, southern Europe and India' (Deacon & Deacon 1999:79).

Typical Acheulean tools range in length from 100 - 200 mm or more, and are called bifacial because they are flaked over both faces and present a symmetrical

appearance. Elongated and pointed bifaces are classified as handaxes, and the typical almond-shaped bifaces found in abundance along the Vaal River, are termed cleavers (Deacon & Deacon 1999:79). Unlike the rough-hewn Oldowan-type stone tools, Acheulean tools are shaped and finished according to a preconceived pattern or style and are characterised by an increasing symmetry. This striving to go beyond the primary level of function and to make things according to preconceived ideas, is defined by the authors as 'style':

These mark the beginnings of style: making things according to rules about what to make and how to make them. Being bound by rules, determined by a collective appreciation of what is right and proper, is what Glynn Isaac considered to mark the difference between proto-human and human behavior. Style goes beyond the primary level of function, as it involves choice in the way different kinds of artefacts are made. Choice involves the mind: for this reason the making of bifaces is significant as a window of the mind of the ancients. (Deacon & Deacon 1999:79; see also Mitchell 2002:71)

Mason (1962:155) makes the pertinent observation that stone is an inorganic material, and that a degree of abstract thinking is necessary for its manipulation. He suggests that the habitual use of stone by hundreds of hominid generations, assisted in their cognitive evolution: 'Stone artefacts, then, became the main vehicle for the expression of evolving human ability in the materialist sense ... The stone artefacts preserve a detailed record of the developing human mind reflected in improved symmetry and beauty of finish'. The art historian and philosopher Herbert Read

(1965:66) also reflects on this progressive refinement of shape and asks: 'Why, out of the shapeless chaos of sticks and stones, or out of the handy and useful objects which were the first tools of primitive man, did form progressively emerge until it surpassed the utilitarian purpose of the shaped object and became a form for the sake of form, that is to say, a work of art'. The Acheulean stone artefacts that Mason retrieved near Vereeniging in the Vaal-Klip valley may not be true 'works of art', but their symmetry and form is undeniably pleasing to the eye, presaging the symmetry of the images that would be engraved many hundreds of thousands of years later on the rock surface at Redan.

MIDDLE STONE AGE

Approximately 25 000 years ago these early Acheulean stone industries with their characteristically large bifacial handaxes and cleavers, were replaced by the smaller artefacts of the Middle Stone Age. Unlike the Acheul people who restricted their activities to the relative safety of riverine valleys, the people of the Middle Stone Age were widely dispersed throughout South Africa, and lived in open camps on hilltops and in caves (Deacon & Deacon 1999:94). Mason (1962:233) suggests that the Earlier Stone Age people were forced to abandon their valley bases by Middle Stone Age people, and settle in less productive areas, leading to their extinction. The nature of this change from ancestral Earlier Stone Age to descendant Middle Stone Age is not fully understood. Mason (1962:233) draws parallels with Eurasian prehistory and suggests that this cultural change may have been accompanied by a 'biological change from Neanderthaloid to *Homo sapiens* in both

areas'. Fossil remains of humans excavated at a number of Middle Stone Age sites, particularly at a number of sites in the Cape Province, have revealed the remains of anatomically modern people (Mitchell 2002:73). The question that is inevitably asked is whether these anatomically modern people who lived 100 000 years ago possessed matching cognitive skills, and the capacity for modern behaviour. Deacon and Deacon (1999:102) state unequivocally that 'the indications are that Middle Stone Age people did think like us'. A list of criteria for recognising modern cognition is given: family foraging groups; strong kinship ties, active hunting and ability to manage plant food resources; reciprocal exchange of artefacts; capacity to communicate by the use of symbols such as body paint. Mitchell (2002:103-104) expresses some reservations and emphasises that the Middle Stone Age is vastly under-researched and is hampered by an extreme scarcity of evidence. He argues that firmly dated evidence is necessary in order to confirm 'southern African beginnings of the more fundamental rearrangement of human behavior evident worldwide after 40,000/50,000 BP' (Mitchell 2002:106).

In his assessment of evidence for a Middle Stone Age in southern Africa, Mitchell (2002) overlooks Mason's extensive research of Stone Age sites in the transVaal (see Glossary in Mitchell 2002:431). This is possibly due to the fact that since the 1960s radiometric dating methods have advanced considerably, and in recent years the focus of Middle Stone Age research has shifted to the Cape Province to sites such as Klasies River, Boomplaas, Die Kelders, and Howieson's Poort (Mitchell 2002:81). Mason's detailed research is however important for the purposes of the

present study. Of the ten Middle Stone Age sites he excavated, three are within the immediate environs of Johannesburg, and within a radius of approximately 100 km from the Vereeniging area: Aasvoëlkop (Northcliff); Primrose; and Linksfield. Mason (1962:283) identified two groups of Middle Stone Age cultures in the transVaal; the Pietersburg and the Sangoan cultures. Although the Sangoan artefacts display different proportions in individual classes and are generally smaller, the two cultures are broadly similar. Mason (1962:283) suggests that earlier generations transmitted their methods to later generations who made small changes in the traditional pattern, and that this process originated in the Vaal-Klip valley and spread to the rest of the province. He refers to the Van Riet Lowe archaeological site in Vereeniging as the possible source: 'So far as we know at present, the earliest flakes and cores showing resemblances to the main Pietersburg artefacts were made during the earlier stage of the Acheul Culture as we see it represented at Klipplaatdrif'. Close examination of the hundreds of stone artefacts retrieved on the banks of the Klip River and other sites, show that over a period of approximately 20 000 years, small additions and improvements were made, marked by a progressive decrease in size, greater symmetry, and refinement of shape and finish. These changes can be broadly summed up as follows: a change in proportion of different classes; decrease in length and reduction in the range of length variation; increase in the use of faceted platforms; increase in the use of the bifacial technique; increase in secondary preparation (re-touching); and an increase in the variety of rocks selected, and the use of finer grained rocks (Mason 1962:279). These changes are aptly described by Mason in precise geometrical

terms as bipyramidal, pyramidal, quadrilateral, circular, cuboidal, elliptical paraboloid, triangular and irregular (Mason 1962:274).

In order to make these smaller, more efficient and geometrically conceived tools according to a preconceived plan, a mental image must be formed, implying a degree of cognitive development. Read (1965:70) refers to artefacts world-wide, and describes this process as a 'formal evolution' and emphasises that for long periods of time these changes were motivated by a striving for greater efficiency, but gradually acquired an aesthetic component: 'There can equally be no doubt that the search for efficiency led imperceptibly to forms which were not only efficient, but also, for our modern sensibility, beautiful'. Mason (1962:236) found large amounts of haemetite fragments and ochre at several Middle Stone Age sites, including many that had obviously been rubbed, and had probably been used as body paint, acquiring both a decorative and symbolic function. Deacon and Deacon (1999:102) confirm the general use of red ochre in Middle Stone Age communities, and point out that the colour red is universally of symbolical significance, especially in rites of passage like birth, initiation, marriage, and death and burial. Mitchell (2002:103) weighs up the evidence pointing to the emergence of art and ritual, and concedes that the widespread use of red ochre at Middle Stone Age sites, suggest its use as a means of body decoration. He argues that the evidence for ritual behaviour is limited and ambiguous, but that new research at for example Bloubos is, 'challenging the view that the anatomically modern people ... displayed significantly less complex kinds of behavior than humans living after 40,000/50,000 ago'. Since

these words were spoken, Blombos Cave has indeed yielded some remarkable finds, including the engraved slab of ochre dated 77 000 BP. The precise meaning of this slab will probably always elude us (see also Lewis-Williams & Pearce 2004:25). However, its carefully incised geometric pattern is incontrovertible evidence of symbolic behaviour in early man, the capacity to express an idea or experience in pictorial form. This capacity would become more pronounced in the Later Stone Age.

LATER STONE AGE

The change from the Middle Stone Age to the Later Stone Age was characterised by technological innovations; it took place in most parts of South Africa approximately 20 000 years ago. Deacon and Deacon (1999:108, 117) argue that the results obtained from at least thirty Later Stone Age sites in the southern and Eastern Cape provide as complete a record of this change as is available anywhere else in southern Africa. This comprehensive research was undertaken by a number of different researchers and included paleoenvironmental research and modern dating methods (Deacon & Deacon 1999:114-126). By comparison, the southern Highveld seems poorly researched (Mason 1962; Wadley 1989). In spite of this discrepancy, a careful sifting of the facts reveal a remarkably similar pattern of change throughout southern Africa. This transition is concisely summed up by Mitchell (2002:107) as the 'replacement of Middle Stone Age stone-working traditions by Later Stone Age (LSA) microlithic technologies and the first unambiguous, widespread signs of symbolic activity in the form of art and jewellery'.

Later Stone Age people were nomadic groups who lived by collecting plant-foods and by snaring and hunting animals; stone tools were an indispensable part of their hunter-gatherer lifestyle. Mason's (1962) research revealed that after the Acheul and Pietersburg people of the Middle Stone Age disappeared from the southern Highveld, they were replaced by a new group, the Smithfield people, named after the town in the Free State where their artefacts were first found. Mason (1962:326) suggests that Smithfield people may have been related to a Central African group that migrated southwards before 10 000 BP. Some reached the Free State where they settled; from this base they made sporadic but persistent hunting trips into other areas. Smithfield people were probably attracted to the grasslands and the abundant game of the Vaal; they settled in caves and open sites and rapidly multiplied (Mason 1962:229; 328; 301). Within less than 9000 years their stone artefacts changed from massive tools of approximately 100 mm to minute tools, 15 mm in length. These microlithic tools are scattered throughout the southern Highveld, including the Vereeniging area. As early as 1905 the Vereeniging pioneer T.N. Leslie, reported that he had collected numerous small implements made from agate, jasper and chert, from two sites on the banks of the Vaal River, approximately three miles from central Vereeniging (Leslie 1926:867-868). The Smithfield stone culture has since been sub-divided and the earliest stage is now known as the Oakhurst Complex (Deacon & Deacon 1999:155).

Subsequently Mason excavated thirty Smithfield sites in the former Transvaal. At Zewenfontein on the Jukskei River near Johannesburg he found that Smithfield people had camped near a dyabase dyke; the free-standing boulders were used as anvils and numerous small quadrilateral and irregular flakes were struck. These flakes were retouched before being used as scrapers and pounders. The grinding technique was discovered and grinding stones were used to refine the minute bone-tipped arrows, and to make ostrich eggshell beads (Mason 1962:113). Deacon and Deacon (1999:110) make the interesting observation that this 'miniaturisation' of artefacts through time, parallels the progressive change in size of modern artefacts such as the computer and camera. A further innovation was the introduction of tools fixed to handles with mastic, and the shaping of stones into symmetrical stone balls. A perfectly rounded and smoothly polished stone ball with a diameter of 6 mm was retrieved by Mason at Zewenfontein. Identical stone spheroids have been reported from diamond diggings along the Vaal River, and many have been retrieved at Stone Age sites. Leslie (1926:868) reported similar finds from the Vereeniging area: a number of stone spheroids varying in size from 30 mm to 12 mm were found when the foundation of the New Wire Works was dug at the turn of the previous century. Their present whereabouts is not known. These solid stone spheroids should not be confused with the bored stones also found at many Later Stone Age sites. They are identical in appearance, but while the bored stones served a practical purpose as weights for digging sticks, the purpose of the solid spheroids remains a mystery. Both these classes of artefacts display a high degree of workmanship; both are also undeniably pleasing to the eye.

Innovation in the Later Stone Age included both functional items and ostrich eggshell beads and pendants; these items, referred to by Deacon and Deacon (1999:111) as 'decorative items', occur in large numbers at Later Stone Age sites in the Cape Province. Boomplaas Cave in the Cango Valley yielded a large number of these items, including tortoiseshell containers, and ostrich eggshell flasks engraved with simple geometric shapes. The creativity of these early cave-dwellers was not limited to these decorative items; a number of small painted slabs, one of which clearly depicts an ostrich, were retrieved from various small pits in the cave. Its position in the cave suggests that it may have fulfilled a specific symbolic function (Mitchell 2002:178). These examples of *art mobilier* are dated to c. 2000 BP, placing them in the final phase of the Later Stone Age (Deacon & Deacon 1999:121-123).

Nothing comparable to this painting of an ostrich was retrieved from the Later Stone Age sites that Mason (1962) excavated in the former Transvaal. However, Olieboompoort Cave in the Waterberg area (since incorporated into the Limpopo Province), dated c. 870 - 150 BP, yielded some finds which correspond closely to those excavated at sites in the Cape, including a large number of finely-crafted microlithic tools executed in both stone and bone (Mason 1962:313-320). Preference was given to fine-grained materials such as chalcedony, chert, quartzite, agate and quartz; quartz crystals found at the site may have been collected as ornaments. At Olieboompoort Cave Mason (1962:320-322) retrieved not only

beads, but remnants of ostrich eggshell pendants decorated with rows and circles of symmetrically placed small indentations. Mason remarks that these 'engraved designs provide a tenuous link with painting and engraving on rock'. These incised fragments are particularly reminiscent of the pecked engravings of Redan. Of interest also are the grooved stones found at the site. These are made from flat slabs of sandstone, and have three or four grooves with an average width of 5 mm. These grooved stones were probably used in the manufacture of beads and arrow points; upper grindstones were probably used for grinding ochre and haematite for body paint. Mason (1962:328) points out that bone and shell artefacts, identical to those found at Olieboompoort, were still being made in the Central Kalahari in the 1960s. He concludes:

There can be little doubt that the Smithfield people of Olieboompoort Cave eight hundred years ago were ancestral to some present-day Bushmen. We have seen that G. Silberbauer found bone and shell artefacts, identical to the Olieboompoort specimens, being made and used by Bushmen in the Central Kalahari today. These Bushmen of 1960 are following artefact designs used by their Western Transvaal ancestors of A.D. 1200.

The concentration of decorative artefacts retrieved at this site suggests that Olieboompoort must have been a centre of creative and symbolic activity during the Later Stone Age.

Mason's research did not reveal mid-Holocene dates (the Holocene is the most recent geological time period, about 10 000 years ago), and it was always assumed that this period was absent from the transVaal (those parts of South Africa lying north of the Vaal River). However, research conducted subsequently by Wadley (1986, 1989) revealed mid-Holocene levels at a number of sites in the Magaliesberg area, including Jubilee Shelter. This site is unusual in that it has a long occupation sequence with assemblages of both Middle Stone Age and Later Stone Age: 'The site of dates between 64 900 and 3100 BP is unequivocal evidence for occupation in the southern Transvaal in the mid-Holocene' (Wadley 1986:59). Wadley (1989:49) suggests that the relative scarcity of mid-Holocene dates in the transVaal may have been caused by drier and warmer conditions in the interior, and a subsequent influx of hunters to the better-watered coastal and escarpment areas of southern Africa. The Oakhurst level yielded a large number of finely crafted beads, shell and bone pendants, and an eggshell fragment decorated with an engraved geometric design and bone shafts with engraved zigzag and parallel lines. Mason's interpretation of the Later Stone Age is largely based on the description and classification of artefacts. Wadley (1989:42) argues that this approach is restrictive, and that social relations, particularly social relations of production, must also be considered. This information is obtained by studying the ethnographic and historical accounts of the descendants of Stone Age people, the modern San. The seasonal movement between camps and the exchange and manufacture of gifts, of the modern San of the Kalahari, is identified by Wadley as a key factor in defining and interpreting social relations of production of the Later Stone Age people. This forms the basis of the

dispersal/aggregation model and offers an explanation for the concentration of artefacts with a decorative and symbolic connotation like those found at Jubilee Shelter and Olieboompoort. During aggregation periods kin-related households gather together for a variety of secular and ritual activities, from marriage brokering to initiation ceremonies and trance-curing dancing. Decorative items such as beads and pendants are manufactured and exchanged as *hxaro* gifts; beads are also worn during the communal trance dancing, thereby acquiring a further symbolic meaning: 'Aggregation is central to the maintenance of social relations, because it provides the means through which people can gain access to social, religious and economic resources' (Wadley 1989:43). She further remarks on the similarity between Jubilee Shelter and Olieboompoort, and describes them both as typical aggregation sites. Wadley's conviction that the social behaviour of modern San can be used to reconstruct the social behaviour of Later Stone Age communities has been questioned (see Barnham 1992:44-51). The use of ethnographic analogy would become more prominent after the 1980s and eventually lead to a much publicised academic debate. Ethnographic analogy is a useful tool where no other means of obtaining data is available.

Millions of years were required for the evolution of stone implements. Pictorial symbolisation is immeasurably more complex than the creation of a stone tool. We can therefore assume that the engravings on the rock face must have been preceded by a lengthy evolutionary process. Could these fragments of jewellery incised with simple geometric patterns, found at sites such as Olieboompoort and Jubilee Shelter,

the beautifully crafted stone spheroids, and the use of bodily paint be the precursors of the rock engravings found on the southern Highveld? Unfortunately there is a huge lacuna in our knowledge of this evolutionary process; modern San do not engrave or paint on rock, and they have no recollection of an ancestral rock art tradition. Further afield at Wonderwerk Cave near Kuruman in the Northern Cape, more tangible evidence of this evolutionary process has been found. A number of small, deliberately broken dolomite slabs with incised engravings dated c. 2500 BP, were recovered from the Oakhurst level at Wonderwerk Cave. One slab is covered with notched lines in a fairly haphazard manner; it has been suggested that this may indicate a notational system (Mitchell 2002:98). The hindquarters of a zebra are engraved on a second slab. On a third slab a line of interlocking chevrons have been carefully incised (Beaumont & Vogel 1989:73-81). These geometric configurations are remarkably similar to the designs engraved on the *art mobilier* found at Blombos Cave. Of significance to the present study is the fact that the two mainstreams of pictorial form, the representational and the non-representational, occur together in one stratigraphic layer and appear to have developed coevally. This important point will be elaborated upon in a following chapter.

In a brief reference to the occurrence of both representational and non-representational engravings at Later Stone Age rock art sites, Wadley (1989:50-51) points out that during the Oakhurst phase of the Later Stone Age (12 000 BP), a large number of decorated artefacts were produced, including 'abstract engraved designs', and that 'ladder', 'chevron' or grid designs are well known on open-air

rock engravings, either on their own or in conjunction with naturalistic animal (and occasionally human) depictions. She suggests that the 'Transvaal open site rock engravings are possibly contemporaneous with Oakhurst because there is a regular contiguity of Oakhurst tools and rock engravings ...'. This is an obvious reference to two sites in her research area, Doornspruit in the Magaliesberg area, and Bosworth near Klerksdorp. Bosworth is exceptional in that numerous stone implements are scattered amongst the engravings, from Later Acheul hand axes to Middle and Later Stone Age flakes. These stone tools are not necessarily contemporaneous with the engravings, but they do testify to the fact that Stone Age people made their artefacts here from at least 50 000 years ago until very recent times (Mason 1962:341). Mason describes the problems associated with the dating of rock engravings and refers to European engravings of dates on the rocks at Bosworth. He emphasises that visible weathering can be misleading and is not necessarily a reliable indicator of age; he suggests the following time frame for Bosworth:

Thus it is likely that the earliest possible date of the engravings at Bosworth is the earlier part of the Later Stone Age approximately ten thousand years ago. The most abundant Later Stone Age artefacts at the site belong to the Earlier Smithfield Culture, which may have flourished ten thousand years before the present. The engravings may have been done at this time, or later, but it is unlikely that they are as recent as the last paintings which date to the late nineteenth century A.D., for we have seen that the engraved dates '1800' and '1884' are considerably fresher than any of the earlier engravings at Bosworth.

A superficial comparison between Bosworth and Redan reveals many similarities: both sites occur in grassy areas close to water sources; at both sites the engravings have been executed with an identical pecking technique; and at both sites non-representational imagery outweighs the representational. The possibility that the Bosworth site and Redan are contemporaneous, and that the engravings were executed by people of the same cultural grouping within the same time sequence, cannot be discounted.

THE EXPIRING STONE AGE

In the late Holocene hunter-gatherers moved into shelters such as Fort Troje and Kloofendal Shelter, that were much smaller than any previously occupied (Wadley 1989:49). Evidence suggests that bands were smaller because of environmental stress, and that the strain on local resources may have been exacerbated after the arrival of Khoekhoe and Bantu-speaking stock owners (Wadley 1989:46-48). Faunal remains at these sites indicate that subsistence patterns changed and that preference was given to smaller animals such as lizards and crabs. Micromammalian evidence from Jubilee Shelter also points to reduced grass cover possibly caused by overgrazing in the area after 1860 BP (Wadley 1989:49). After c. 1300 BP formal tool-making declined. The restricted mobility of the hunter-gatherers may also have led to a decline in aggregating in the traditional way; without aggregation social relations with other groups and the possibility of meeting *hxaro* partners would have declined sharply, leading to small, isolated bands:

'Perhaps Jubilee and many of the tiny sites were the last refugia for the hunter-gatherers in the Transvaal' (Wadley 1989:49). Mason (1962:330) describes the final days of the hunters and their departure back across the Vaal: '... and there European travellers found their broken descendants in the early nineteenth century. There was no place for Stone Age life in the new Africa'.

As this chapter indicates, the dating of rock engravings remains problematic. However, based on the calibrated dates obtained recently for Klipfontein and Driekopseiland in the Northern Cape, and given the similarity between these sites and Redan, it can be surmised that the engravings of Redan were executed approximately 8400 - 100 BP. These dates coincide closely with the dates suggested by Mason (1962) almost fifty years ago for the rock engravings at Bosworth, which is within a few days walking distance from Redan. This places the non-representational engravings of Redan mid-way between the Later Stone Age and the Iron Age. This ability to conceptualise and execute an abstract idea or experience in pictorial form, did not develop overnight but probably evolved slowly over many hundreds of thousands of years. In order to further substantiate the inferred age of the engravings at Redan, and establish their place in this 'formal evolution', it was necessary to include a survey of the Stone Age. This included the development of stone artefacts, decorative items, and the earliest forms of visual expression such as the use of pigments for bodily decoration. There are many missing parts in this evolutionary development; works executed on impermanent materials, obviously did not survive. In spite of this hiatus, it can be assumed that,

imperceptibly, and over a period of time, these activities led to the discovery of pictorial form. As the survey of the Stone Age progressed, a clear 'pattern' emerged: a striving towards symmetry and geometrically conceived form, and the progressive refinement of shape beyond the point of maximum efficiency, towards a perception of form for its own sake - the 'work of art'. This unique human capacity also manifested in the Vaal-Klip valley.



Figure 23. *Non-representational rock engravings from Klipfontein, Northern Cape (photo: A. Arnott).*

Figure 24. *Non-representational rock engraving from Klipfontein, Northern Cape (photo: A. Arnott).*



Figure 25. *Non-representational rock engravings from Driekopseiland, Northern Cape (photo: A. Arnott).*

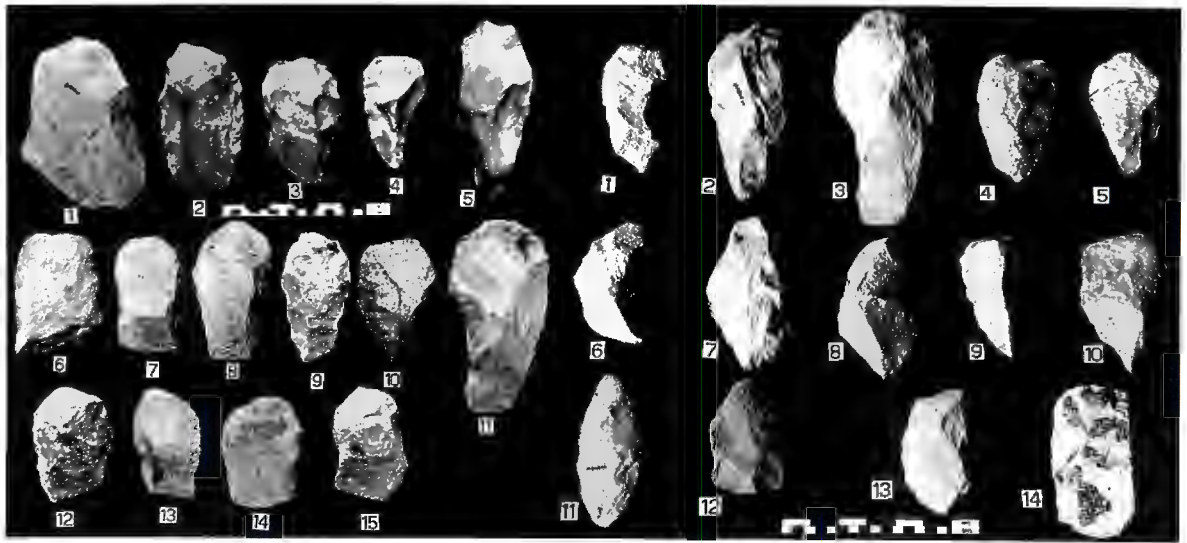


Figure 26. *Acheulean stone artefacts from Taaiboschspruit, Vereeniging (Vaal Teknorama).*

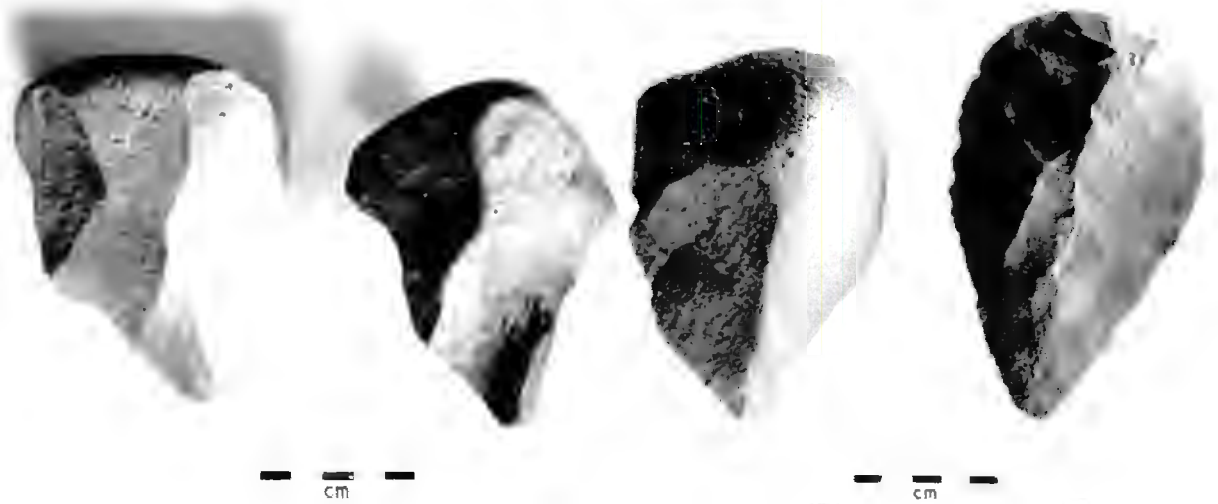


Figure 27. *Acheulean stone artefacts from Klipplaatdrift, Vereeniging (Mason 1962:pl. 68, pl. 123).*

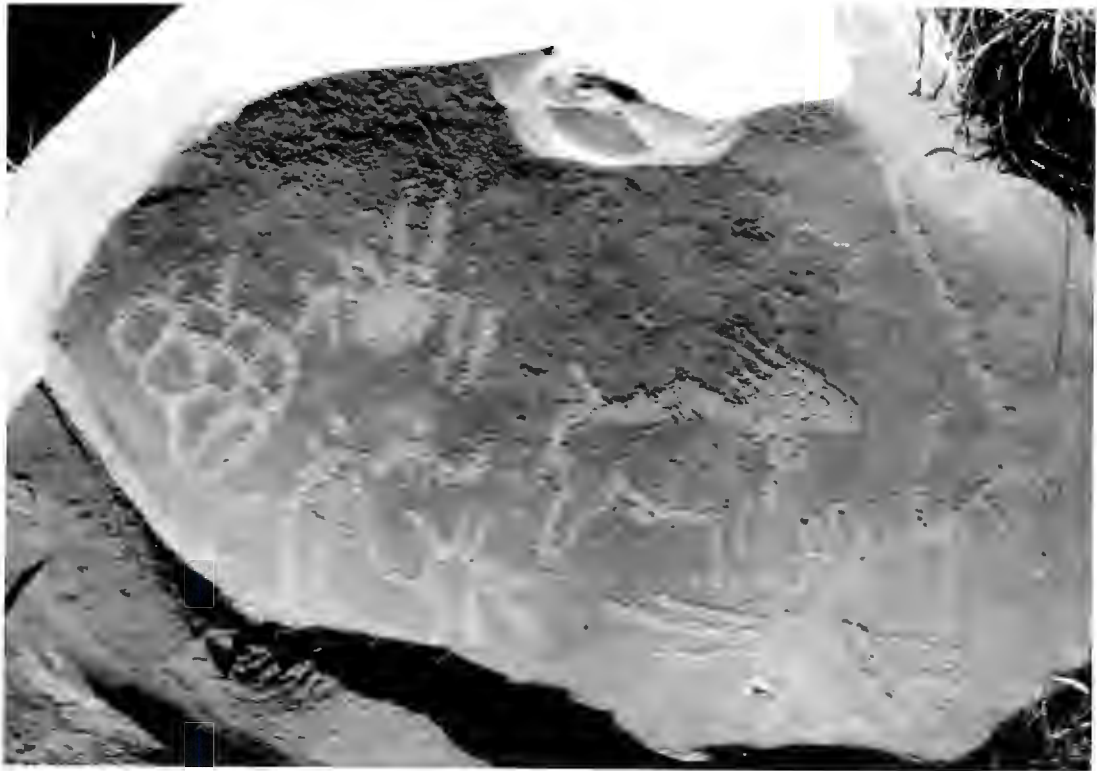


Figure 28. Engraved boulder from Bosworth (Dowson 1992:pl. 101).



Figure 29. Rubbing of non-representational engraving from Bosworth (Mason 1962:pl. 194).