

METHODOLOGY IN THE RECORDING OF ROCK PAINTINGS

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Daar bestaan 'n groeiende belangstelling in die belangrike rol wat San-rotsskilderinge speel in ons nasionale erfenis. Hierdie belangstelling het gelei tot 'n besef van die vinnige agteruitgang van hierdie werke, as gevolg van natuurlike en menslike oorsake en dus van die dringendheid van effektiewe konservasie. Kopiëring – deur middel van natreksels of foto's – is tans die enigste metode om die werke te bewaar, sodat 'n getroue rekord beskikbaar kan wees vir toekomstige navorsers. 'n Voorbeeld van die waarde hiervan is geleë in die pionierswerk van William Stow. Vele van die skilderinge wat hy so versigtig gekopieer het in die laat 1800's het intussen verdwyn of tot so 'n mate vervaag dat hul nouliks sigbaar is. Hierdie artikel beskryf in besonderhede die tegnieke van natrekwerk en fotografie wat oor 'n periode van dertig jaar geleer is deur terreinondervinding. Die doel van hierdie beskrywing is om die entoesias aan te moedig, om 'n sin vir dringendheid te bevorder en om frustrerende foute te help voorkom.

There is a growing awareness of the significant part San rock paintings play in our national heritage. This has led to a realisation that they are fast deteriorating due to natural and human causes and that there is now an urgent need to take effective action for their preservation. The only method of preservation available to us at present is that of copying – either by tracing or photography – so that a faithful record is available for future researchers. An example of the value of this is the pioneering work done by William Stow. Many of the paintings he so painstakingly copied in the late 1800's have either disappeared completely or are so faded as to be nearly invisible. This article describes in detail the tracing and photographic techniques, learned from thirty years of field experience. The aim of this description is to encourage the enthusiast, to foster a sense of urgency with regard to preservation and to help avoid frustrating errors.

INTRODUCTION

The search for rock paintings has always been a popular hobby. Early travellers such as Spaarman, Le Vaillant and Burchell saw and wondered about them, and one still gets a feeling of satisfaction and achievement when, after walking through the veld – sometimes with a little rock scrambling thrown in – one comes upon a group of fascinating paintings on the wall of a rock shelter. It doesn't matter in the slightest that they may have been first discovered many years earlier or that they have since been visited by many people.

What is important is that their fresh 'discovery' opens up new opportunities to the beholder for adventure into the realms of history, archaeology, geology and not least, a new acquaintance with the beauty of our countryside. Therefore it is not surprising that this is an activity in which the amateur loves to participate. In fact he should be encouraged to do so because this is a field of archaeology in which he can make a meaningful contribution. The fact that the new enthusiast has been preceded by an illustrious band of like-minded people should not discourage him. The spur should be the alarming rate at which the paintings are deteriorating. Each is a unique piece of art. Once gone they cannot be recreated and so it is imperative that they be recorded as quickly as possible. This represents an enormous task. Already close to 7000 sites are listed at the Rock Art Recording Centre at the South African Museum in Cape Town and there must be thousands of others still to be accounted for.

It is obvious then that the role the amateur can play has in no way diminished.

HISTORICAL BACKGROUND

Some of the highlights in the history of the recording of San rock art are in themselves interesting because they illustrate the gradual development of a precise technique. It began with Sir James Alexander (1837) who published what is believed to be the first copies made of San rock paintings. One was of the now well known 'mermaid' scene in the site at Ezel-jagdspoor near Oudtshoorn. In 1867 George Stow decided he would also start copying the paintings. It is apparent that in at least one respect he encountered the same problem as today's recorders because in 1870 in a letter to Professor T. Rupert Jones, he complained bitterly of the effects of vandalism (Rosenthal 1953). Nevertheless, by 1878 he had made over 200 copies. In his archaeological introduction to Rosenthal's book A.J.H. Goodwin describes Stow's technique as "primitive", but goes on to explain how "...copies had to be drawn on the spot, every animal or human figure being measured up, then transferred to paper. This first copy was taken home, with the colours indicated by name in pencil, and transferred once again to a standard cartridge paper".

For many years paintings were reproduced in books and journals in black and white. It wasn't until 1905 and 1909 that the first full colour prints were made using the 'chromocollotype' technique to illustrate shaded polychrome paintings. The first ones are from sites on the Thorn River near Windvogelberg and on the lower Invati (Stow

1905 : 102 & 172), while the second ones are from Costello's farm near Cala and Glengyle in the Barkly East district (Tongue 1909: plates 49 & 33). After this it wasn't until Dorothea Bleek published Stow's copies that full colour was used again (Stow 1930).

The next major milestone was achieved by Walter Battiss, an artist of international repute, who made many magnificent reproductions of the paintings. In one of his folio publications (1939) he went so far as to include an original watercolour copy. Its printing was restricted to 200 copies and today every one is a collector's item, as too is his book (1948) which established new standards of artistic presentation.

While Battiss was working in Natal, the Orange Free State, the North Eastern Cape and in what was then Basutoland, exciting things were happening in the desiccated and far less hospitable Brandberg. The Abbé Breuil was copying the 'White Lady' frieze, which became the first of a series of publications containing full-colour copies of tracings made in South West Africa (Breuil 1955). This was an important volume, not only because of the quality of reproduction but also because of the unusual style of the paintings.

After this came Willcox who, by publishing the first book to make extensive use of colour photographs, undoubtedly pushed the state of the art even further forward (Willcox 1956). It was probably this book, together with the many well-illustrated talks he gave to various learned and popular societies which did so much to popularise San rock art and to bring it within reach of the amateur.

A new generation of researchers began with Patricia Vinnecombe. As a young girl she started tracing on butchers' paper scrounged from the local butchery. From this she progressed to a doctorate, Cambridge University having accepted her book (1976) as a thesis for a Ph.D. This is an excellent book of reference and with its outstanding illustrations is required reading for anyone interested in San rock paintings.

The works of the late Harald Pager – both in terms of his books (1971 & 1975) and particularly his meticulous copies of the paintings – made another major contribution to our knowledge of the art and its motivation. He lived in the shelters of the Ndedema Valley in the Natal Drakensberg and in the Brandberg for months at a time making copies of a standard never before achieved. If anyone ever opened his senses to the spiritual presence of the painters it was surely Harald Pager.

Realising the shortcomings of general photography, my colleague, H.C. Woodhouse, and I developed the use of close-up and macro-photography in order to highlight much of the fine detail in the paintings. This was illustrated in our joint book (1970) and in subsequent publications (Woodhouse 1979 & 1984).

Although others had touched on the subject in varying degrees (e.g. Lee 1972 & Vinnecombe 1972), it was Lewis-Williams who initiated a new statement on the interpretation and meaning of the San rock paintings following his intensive study into the ethnography and particularly of the work of Bleek (1911). This is described in his book (1981), a doc-

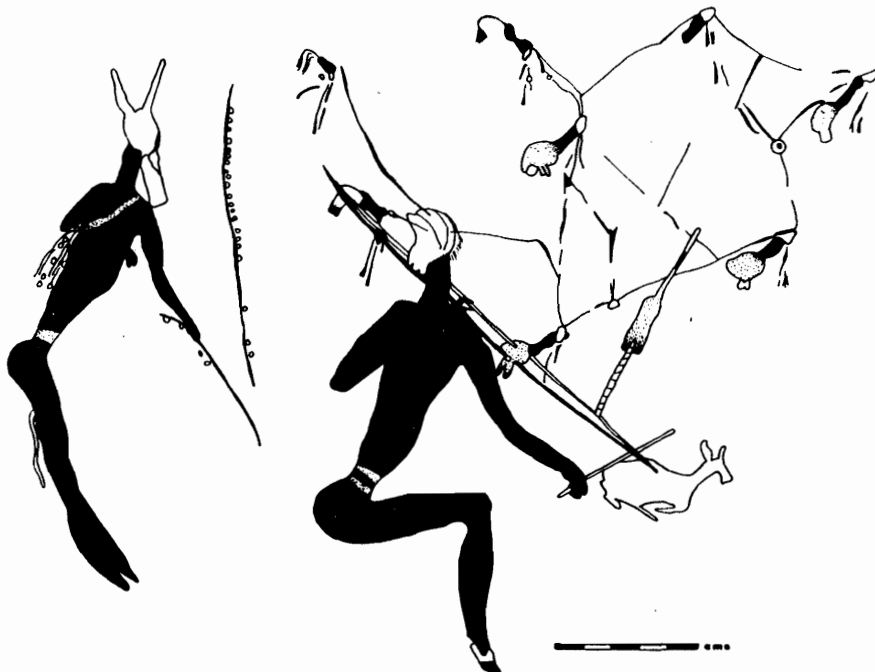


Illustration 1 : Tracing of a man playing a musical bow. Very few similar examples are known.

toral thesis which earned him a Ph.D. at the University of Natal. Another landmark was Townley Johnson's fine book (1979) which contains many full-colour copies which help keep alive the traditions of Stow, Tongue, Battiss, Vinnecombe and Pager. The standard of presentation and printing is so high that it won an award at an international book exhibition a few years ago.

METHODOLOGY

In the context of this article the word 'recording' refers to the following interrelated activities: searching for the sites; tracing and master copying; photographing; recording of data; and filing.

1 Searching for sites

The best starting point is a booklet (1952) compiled by the late Prof. C. van Riet Lowe on behalf of the then Archaeological Survey. This invaluable publication lists 1592 rock painting sites known in 1952. It was made up of sites already on record together with those shown on replies made to a questionnaire sent to all magistrates' offices and police stations throughout the country, asking them to enquire about and report back on any sites in their locality. The index of sites is divided into two main headings, namely rock paintings and rock engravings. These are subdivided into provinces under which are listed the magisterial districts known to have paintings or engravings. Under each magisterial district are listed the farms where they are to be found. The rock paintings are found in shelters which have been eroded into sandstone cliffs or under overhangs formed by boulders which have come crashing down the hillside. Exploring them can be hard, hot work and is often unrewarding. But, when you do find something new, all previous suffering and

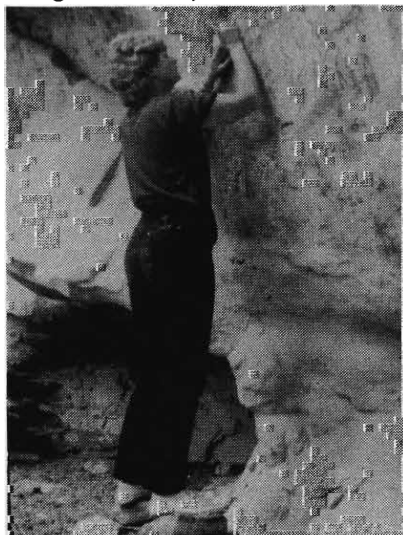


Illustration 2 : Paintings to be traced are not often so conveniently placed, but even here a rock platform had to be built.

frustration caused by finding your way through dense bush and so on, will be quickly forgotten. The golden rule to be remembered is always to get the farmer's permission before going onto his land. If the farm is unoccupied this can create a problem, usually solved by calling on the nearest neighbour or the police station of the local town.

2 Tracing and master copying

The process of recreating a painting (Illustration 1) by copying it onto tracing film is immensely satisfying. The secret is to study the paintings carefully to see what the individual figures are and how they relate to each other. Look again and again until you know what is there before putting tracing material to the rock face. Then be prepared to constantly revise those first impressions as closer and more intimate analysis of individual sections reveals more details.

In this respect there are four cardinal and functional rules: Exercise patience and allow plenty of time. Develop control of line. Be accurate and don't exert your own artistic influence. Really see what you are looking at (Illustration 2).

There are two methods of tracing: One method makes use of slightly opaque Ozatex tracing film, while the second method makes use of clear plastic material.

Ozatex tracing film is slightly opaque and of similar density to standard draughting paper. It is smooth on one side, matt on the other. With the smooth, glossy side against the rock-face, the exposed dull matt side becomes the working surface which takes pencil marks very readily and very clearly. A mistake can easily be erased without any damage to the surface and can then be redrawn. This film (Illustration 3) is used exclusively by the Rock Art Research Unity at the University of the Witwatersrand. Unfortunately it is very expensive.

Many paintings lack clarity of line and detail and consequently they are almost totally

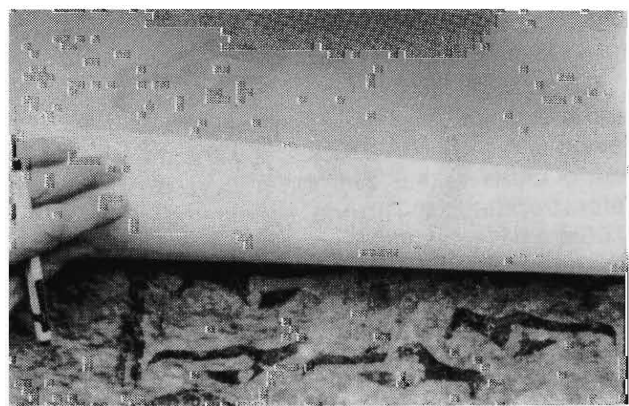


Illustration 3 : Ozatex tracing film being semi-opaque often obscures fine detail requiring it to be frequently lifted away from the painting.

obscured when the film is in place. This means it must be constantly lifted away from the rock-face in order to reveal the section of the painting being traced so that it can be studied more easily. The film is then replaced and the detail is pencilled in, checked and redrawn as necessary. That this can be done is obvious from the tracings in the Rock Art Research Unit library but it is equally obvious that it takes a lot of patient practice to acquire the skills achieved by the researchers.

The San artists were able to draw figures with a beautifully smooth outline and could sketch the finest of lines. These can be difficult to repeat because the rock-face is not nearly as smooth as it appears at first. One advantage of Ozatex is that it does not form an intimate interface with the rock, but even so the secret is to run the pencil very lightly over the film to avoid any jumping which will cause a rough, uneven line quite unlike the original. The best pencil to use is one with an HB 0,5mm diameter lead. A clutch type avoids the need for constant sharpening. It is also a good idea to use an eraser which hangs around the neck, as this saves fumbling in pockets and avoids the frustration of watching it bounce away amongst the rocks every time it is dropped.

Ozatex creases very easily so it can only be carried in a roll in a protective cardboard tube. This can either be put in a rucksack or can be fitted with shoulder straps. Under some conditions Ozatex also has a tendency to split at the edge. To avoid this developing into a tear which can spread, always apply adhesive tape to arrest the split.

Because of the considerable effort expended in making them, field tracings become cherished possessions. Consequently it is as well to remember that although the film itself is chemically inert, the cardboard cylinder has a relatively high acid content which reacts upon it. This is particularly important when storing finished field work and copies. A black plastic tube is available into which the finished film can be placed before being slipped into the cardboard tube.

Clear plastic film is completely transparent and is very flexible to the extent that it can be folded and carried in a rucksack without any fear of creasing. It is available in several different thicknesses. The one recommended is 0,05mm. It is inexpensive and obtainable from any artists' accessory shop. The obvious advantage of this material is that its transparency (Illustration 4) reduces the need to lift it for an unobscured view of a painting, although sometimes this does become necessary when fine detail is particularly hard to follow.

Because the clear film will not take pencil, pens have to be used. The 0,5mm reservoir

type with permanent black ink is ideal for site work. Permanent ink is necessary so that it will not be wiped off or smudged. (Later remarks concerning direction of work should be noted.) If a correction has to be made, the ink line is easy to remove with a hard eraser without damage to the film. The need to run the pencil very lightly over Ozatex applies even more to pen on clear film. Its flexibility causes it to lie closer to the rock-face so there is no 'smoothing out' of the rough surface. Practice is needed to draw a clean line. General points applicable in order to facilitate quality tracing are discussed in the following paragraphs.

Fixing the tracing material is very important to ensure that it does not move as you are working on it. A shift of a few millimetres can affect the accuracy of individual figures and a greater movement would cause incorrect spacing between figures in a group. Fixing can be difficult especially when the rock has a slightly powdery surface. Even when it appears to have stuck, the slightest breeze can get in behind the film and away it comes!

Problems will be caused by bulges in the rock face and especially by concave recesses. On occasion this can mean working with small pieces of film which must eventually be joined together. The size of the sheet will be determined by site conditions. Try to work with as big a sheet of film as possible, rolling it up from the bottom to leave just enough working space for that part of the scene being traced. (Illustration 5). This makes it easier to lift the film for periodic study of detail. As work progresses, roll the film downwards. Use either good quality masking tape or heavy gauge plastic self-adhesive tape at frequent intervals. In some situations non-hardening plastic putty works even better as an adhesive. Never stick any tape or adhesive directly over any part of a painting. Where more than one sheet of tracing material has to be used, always mark the contact point at which the figures join and clearly indicate the order in which the sheets run.

As one's memory for detail is notoriously short, frequent notes should also be made to aid copying back at base. These are best made on the tracing at the point to which they apply (Illustration 6). They will also serve as an important point of reference in the future, especially in respect of colours. Examples are: colours – DR = Dark Red; R = Red; B = Black; W = White, and so on; f = flake; 'this red eland is underneath the black human figure', 'snake on top of everything'. It is always better to make too many notes than too few.

Colour photographs, preferably transparencies which can be projected on a screen,

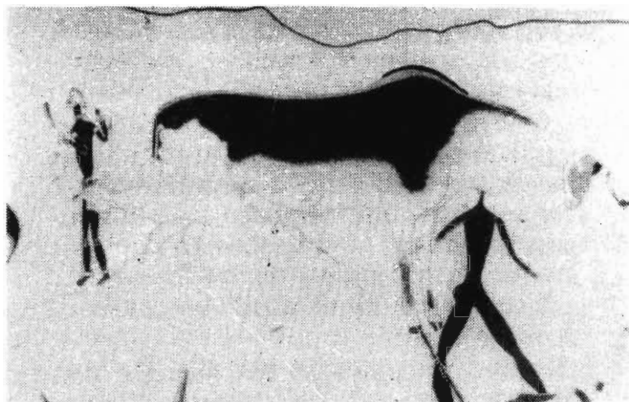


Illustration 4 : Clear tracing film has the advantage that detail being copied is not obscured. (The paintings here are identical to those in illustration 3.)

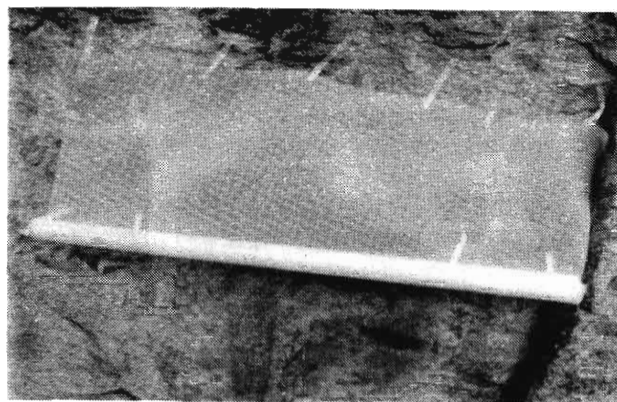


Illustration 5 : Tracing film is rolled up, making it easier to lift for periodic study of detail. ↑

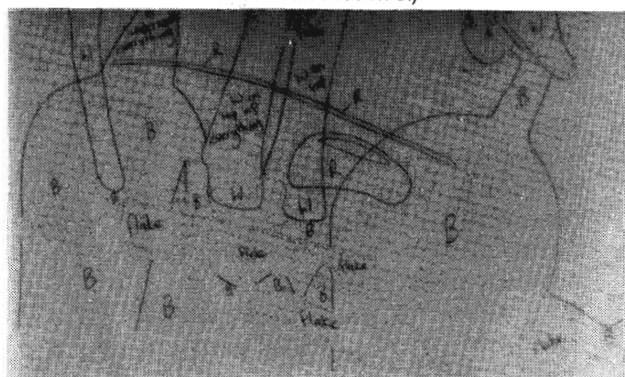


Illustration 6 : Notes made at site on the original field tracing.

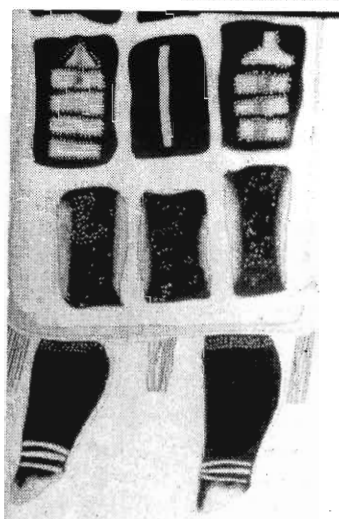


Illustration 7 : Close-up of a tracing showing the intricate detail of decorations on a kaross and on the wearer's legs. ←

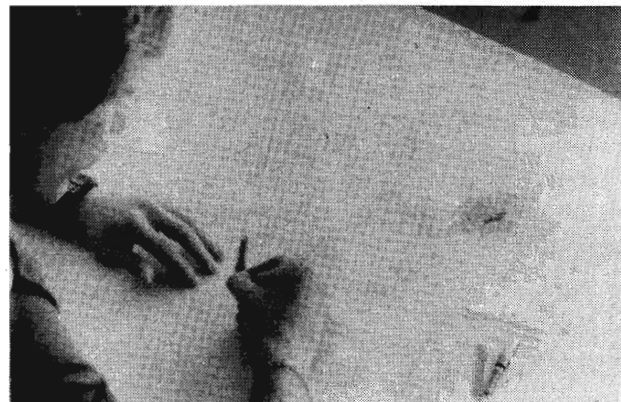


Illustration 8 : Drawing a master copy from the field tracing.

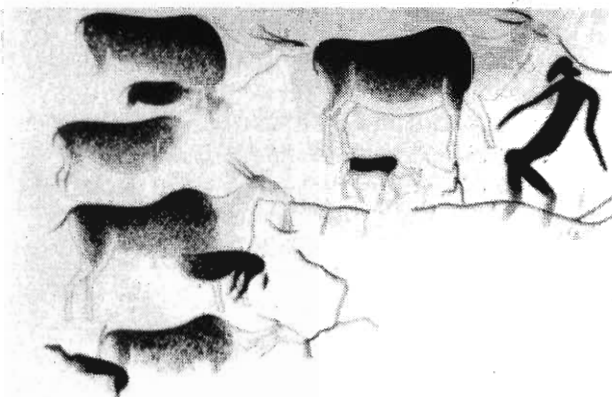


Illustration 9 : An example of the now widely used technique of stippling as a means of indicating colour and shading.

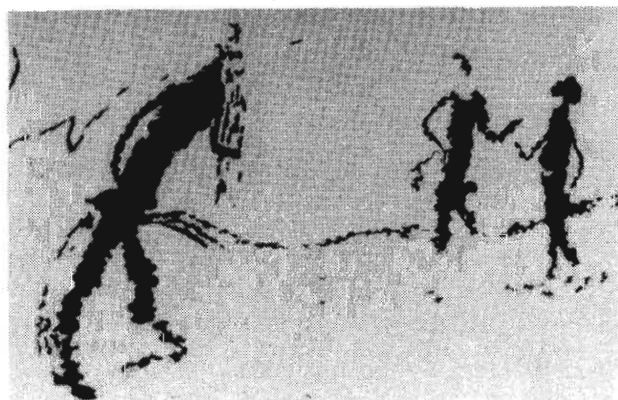


Illustration 10 : A tracing technique faithfully following the broken outline of every flake.



Illustration 11 : Reasonable license may be slightly less accurate than in illustration 10, but is certainly easier to follow.

are an aide memoire when copying from the original master. In addition they are a useful back-up to tracings, especially as a future reference to the colour of the paintings themselves and the colour and the condition of the surface upon which they were painted.

Lighting conditions have an important influence upon discrimination of fine detail. In fact, change of light at different times of the day may reveal something in a painting which was not visible previously. It is therefore a good discipline to constantly check back on work completed earlier. Hard sunlight falling directly on the paintings is the worst condition. Diffused light from an overcast sky or being reflected up from the floor of the shelter is probably the best. It is always a good idea to cross-check. Ask your companion to check what you have seen and copied. His view might be quite different to yours and it might be correct! A magnifying glass can also be used as an essential piece of equipment to allow the close study of fine line and faded detail.

Accuracy of detail may seem self-evident but at the end of a long tracing session when neck and arm muscles are aching and begging for relief, it is easy to cut corners. For instance, if a human figure has tiny dots or circles on its clothing for decoration or lines about the ankles (Illustration 7), draw them exactly as they are, in the same position, in the same number and in the same size as on the original. This sort of detail may influence interpretation or the relationship of one figure to the next and to the group as a whole. In addition to drawing a faithful reproduction of

the painting itself, positions of surface flaking and cracks in the rock face which affect the figures must also be marked.

With regard to direction of work, the following should be noted: In warm to hot weather hands and arms perspire quite heavily and can easily smudge the traced lines. This applies particularly to work done with pen and ink. Always try and work from the top down so that no contact is made with drawings already on the film.

Ozotex is expensive and thus the economic use of tracing film is important. Where a wide space exists between figures it is quite satisfactory to close the space on the field copy providing a note is made of the distance between an identified spot on one figure to an identified spot on another.

Time is of the essence. If there isn't sufficient time available to do a tracing properly, don't start. If it becomes necessary to strike a balance between time and accuracy, accuracy is paramount. Recording San rock paintings is an ideal providing ground for patience – and a new vocabulary of expletives! Once impatience, exasperation and frustration sets in, just walk away and take a break.

Completed field tracings now have in their turn to be copied (Illustration 8) onto a clean sheet of film. Although the task is no less exacting, at least the conditions are better. Equipment required – assuming the copy will be black with stippled half-tones – is: as large a work space as possible (which should be covered with smooth white paper secured around the edges by masking tape); reservoir



Illustration 12 : Boer-woman herding goats and fat-tailed sheep.

type tracing pens 0,25; 0,35; 0,5 and 0,7mm thick and a good quality artist's brush; Black indian ink; and film on which to copy. Here – despite its cost – Ozatex is probably the best material. It may pay to experiment with others, but always bear in mind that a permanent record is being created and that it is thus self-defeating to use film which deteriorates with age.

The procedure for copying of field tracings is much the same as that for tracing itself. It is now only the field tracing which has to be accurately copied onto a master. Some important points do, however, need to be kept in mind : With regard to colour values, a variable hatching method of the type suggested by Vinnecombe (1963) is not recommended because it completely spoils the aesthetics of the art. A better system is to indicate the predominant colour with a complete infill and the others with stippling (Illustration 9) of varying density. Pager (1973) has left us some wonderful examples of the use of this technique in illustrating shaded polychrome paintings and superimpositions. It is not necessary to attempt to standardise on the same colour indicators for all copies. What is important is to mark full details of colours on the field tracing which then becomes a permanent source record. Only the predominant colours need be marked on the master copy.

Correct spacing is important. Whereas widely spaced figures or groups were closed up on the field copy, they must now be shown in their correct positions even though this means the use of a large sheet of material. It is also important that lines should not be heavier than those on the original painting, but if there is a possibility that the master copy may be drastically reduced at anytime for reproduction purposes, care must be taken to see that they will remain legible as line thickness will be reduced in the same proportion as the reduction in size of the complete drawing. Although the master copy is full-size, a centimetre scale should be included in case it is ever copied at a reduced size.

Another issue to consider is that of flakes. Some people faithfully duplicate the outline of each flake onto the final master (Illustration 10). Although this is undoubtedly correct procedure in terms of copy, it makes for a rather 'moth eaten' appearance, which in turn makes it difficult to follow the theme of a scene especially when there are a lot of closely grouped exfoliated figures. Sensible reconstruction can be done in some circumstances providing there is no risk of altering the meaning of the painting. Such circumstances occur when a flake is to be found in an area where there is uniform colour (e.g. somewhere in the body of an eland or a karossed

human figure) or where a line is clearly carried through. Where reasonable doubt exists, reconstruction of line should not be attempted. A fine dotted line should then indicate the flaked area (Illustration 11). Further advice on tracing techniques have been written by Bruce Fordyce (1983), Z.E. Kingdon and T.A. Dowson (1986) and by J.D. Lewis-Williams (1987).

3 *Photographing*

While there are some who ardently promote their particular method of recording, it would be foolish to maintain that one can be used to the total exclusion of the other. Tracing and photography can and should be used to support each other. Photography of San rock paintings (Illustration 12) is far removed from 'quickie happy-snaps'. It involves a technique which has been developed over the years and is ideally suited to the amateur. Excellent results can be obtained providing certain ground rules are observed. The comments which follow are based on the use of the popular 35mm format.

Equipment needed is, in the first place, film. The varied use of colour which typifies San rock paintings makes colour photography essential. This is best done with colour transparencies (slides) using a film speed of ASA 100 (ISO100/21). One's camera need not be complicated hi-tech electronic device. It is more important that it be robust because it will inevitably have to withstand a degree of rough treatment. Other desirable features are: through-the-lens, full-aperture viewing; detachable lens; self-timer; facility for cable release; and remote cable connection for flash. Because work is sometimes done in poor lighting conditions with a visual field which lacks detail full aperture viewing is essential in that the iris should automatically return to the fully open position after each shot so that all the available light passes through the viewfinder to reveal as much detail as possible. If this facility is not available, it means that the iris has to be opened manually for setting up and focusing. It must then be closed to the correct aperture before shooting. This can easily be overlooked, resulting in an over-exposure.

Close-ups are essential and can be done in either of two ways: A macro-lens, which allows accurate focusing from infinity to as close as 25mm from the object, can be used. A far cheaper but more bothersome solution is to use a pair of close-up lenses which can be screwed onto the face of the standard lens. Dependent upon the focusing distance required they can be used individually or in tandem.

For wide angles a 28mm lens is usually quite sufficient to take care of those situations

where the fall of the shelter floor gives insufficient distance to allow a general view shot with a standard lens. An excellent but rather expensive lens is a 28mm wide angle/85mm short telephoto zoom. By careful adjustment of the zoom, a number of different shots can be taken of the same frieze without moving the tripod. This often saves a lot of trouble and frustration especially where the paintings are hard to get at or the floor is strewn with boulders making tripod location difficult. A zoom lens from 80mm to 200mm is reasonably light in weight and serves most purposes. But it should have a macro facility and distance and focus selection should preferably be by a twisting action rather than sliding. Obviously, a zoom lens is useful for paintings which are high up, but it is equally useful for those which are low down and difficult to get at. Instead of moving the camera towards the rock face and using a macro lens, move it away and fit a zoom with a macro facility. The result will often be the same, but the physical contortions involved in getting an eye to the viewfinder will be far less arduous.

It is an exercise in futility to attempt to take photographs of rock paintings without using a tripod. Since it is a much abused piece of equipment, consistent with weight considerations, it must be robust and must stand firm under all conditions. Other points to look for are the following: With legs fully extended it should stand at least 1,3m high. It should



Illustration 13 : Where paintings are high up an extension to the central column of the tripod keeps the camera parallel to the rock face.

have a central column which, when raised, should extend the height to not less than 1,7m. Even so, 1,7m may not raise the camera high enough. A useful gadget is an extension (Illustration 13) some 700mm long made from aluminium rod which can be attached at one end to the tripod head via its fixing screw and

to the camera at the other by a ball and socket joint. Ideally there should be a third locking device on each leg. Unless the legs can be locked in position, there is a real danger that a precariously perched assembly will fall down the moment you push the release cable. The effects of this upon both equipment and demeanour can be traumatic to say the least.

A cable release is a must as without it there is no way the release button on top of the camera can be operated without causing some movement. Cable length of 250mm is quite sufficient. Also always consider the flash gun to be a useful piece of back-up equipment. Under normal lighting conditions it is not required unless there is a marked difference in illumination over the area to be photographed. An example is a situation where a protruding ridge of rock casts a shadow over the upper part of the painting. Expose for this and the lower part will be over-exposed and vice versa. (As a possible alternative try using a piece of aluminium foil. Correctly placed it may reflect sufficient light onto the subject to overcome the shadow.) The ideal flash is electronic with an automatic sensing device which measures the amount of light reflected back to it from the rock face and adjusts the exposure to suit. Often the camera will be too close to the subject to allow use of the hot shoe. Consequently, the flash has to be hand-held remote from the camera.



Illustration 14 : A large scene full of interesting figures involved in a trance dance. Two groups have been selected for closer study.

This requires an extension cable. In this case, check to see that camera and flash are synchronised.

UV-filters or 'skylight' filters are always a good thing to use. They can be screwed onto the lens and can be left in place as a means of protection, while they give the degree of

correction often required at mountain altitudes. Colour distortion can also be rectified: On a clear day when the sun is behind the shelter the blue sky becomes the effective light source, which may cause a blue cast on the film. Towards the end of the day as the sun goes down, there may be a red cast. This can be anticipated by a colour meter which indicates the density of red or blue correction filter to use. However, colour distortion is often caused by incorrect exposure. If any uncertainty exists, it is always wise to take another shot at a different exposure.

As far as photographic procedure is concerned, the first step is to carefully study the wall of the shelter from one end of the overhang to the other, in order to determine the extent of the paintings; how and where they are grouped; the extent of each group; and the significance of individual figures within each group. Having made a preliminary survey a decision can be made on the extent to which the paintings are to be recorded. Ideally, virtually every painting should be photographed – certainly as a group scene, often as individual figures in the group, and sometimes in terms of close-up details of individual figures. This can be expensive as it can easily involve 70 to 80 shots even in a medium-sized shelter. If this is over the budget the following suggestions may help: By careful study, determine the area covered by each group activity. Select those groups which are to be recorded in detail and take only general shots (Illustration 14) of all the others so that they are at least on record to some degree.

Having selected the groups on which to concentrate, each frieze must again be studied in detail in order to visually construct the composition of each shot. Always start with a full general view which identifies the position of each figure (Illustration 15). Then come closer and closer (Illustration 16) concentrating on points of particular significance, perhaps ending with an ultra close-up of a head, a bunch of arrows, the legs of a particularly well-painted animal, decorations on parts of a human figure and so on.

Always check the exposure after each shot, even though neither the camera nor the tripod has been moved and always remain in the same position when releasing the shutter as when reading the exposure. Other useful tips which have been learned from long experience are the following: It is better to pay full attention to one or two groups than it is to take only general interest shots of them all.

With regard to lighting, the worst conditions are those where the sun is shining directly onto the paintings and worse still, when it is casting shadows of bushes or trees right across the point where you want to work.

The best condition is a completely overcast sky – even during rain – which provides shadowless, totally diffused lighting. As the camera will be tripod-mounted, longer exposures can be taken using a small aperture. This provides extended depth of field which is important especially with close-ups because the face of the rock is seldom regular. In good lighting conditions an exposure of 1/15 or 1/8 is not uncommon. Because of the fineness of detail, focusing – particularly with close-ups – is critical. Sometimes it is difficult to establish sufficient detail against which to focus. When this happens, hold a piece of dry grass or the printed paper in the film carton in place (Illustration 17) making sure it is hard against the rock face. Then focus against this.

When using a zoom lens, always focus on tele and then zoom out to the required picture. Even though a long exposure with a small aperture gives extended depth of field, always see that the flat back of the camera is parallel with the rock face to avoid foreshortening and to ensure the whole frame is in focus. Always avoid any movement of the camera as it will cause distortion in the photograph. Do not jam the cable release button home, but rather squeeze it gently. When the tripod control column is extended and especially when using the additional extension described earlier, put the camera release on time delay. Beware of windy conditions as this may cause movement of the camera. If your tripod is flimsy and difficult to stabilise, try filling an empty netting bag (i.e. a small potato or onion pocket) with small stones from the shelter floor. Tie this to the apex point where the legs join. The added weight usually does the trick. Also make full use of the available lenses. A comfortably sited camera with a telephoto lens can often take as good a shot as one teetering on piles of rock to allow the use of a close-up lens. Under difficult circumstances it is also necessary to make full use of the versatility of the tripod: It sometimes happens that when trying to photograph paintings which are low down, with the tripod legs fully retracted and as far apart as they can go, the paintings are still impossible to get at because the central column hits the ground and the tripod won't stand up. The solution is to remove the offending column entirely and feed it in upside down from the bottom. The fact that the camera will now take an upside down photograph is not important as that can be corrected when mounting the slides. What is important is that the camera can be lowered right down to the required position.

4 Recording

Having done the tracings and taken the photographs, they and the details of the site

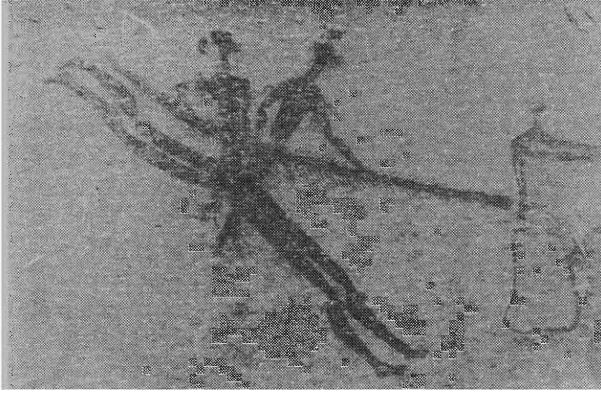


Illustration 15 : Two running men in full view. (From the top left of illustration 14.)



Illustration 16 : Close-up of a man falling backwards in a trance with bleeding from the nose. (From the lower right of illustration 14.)

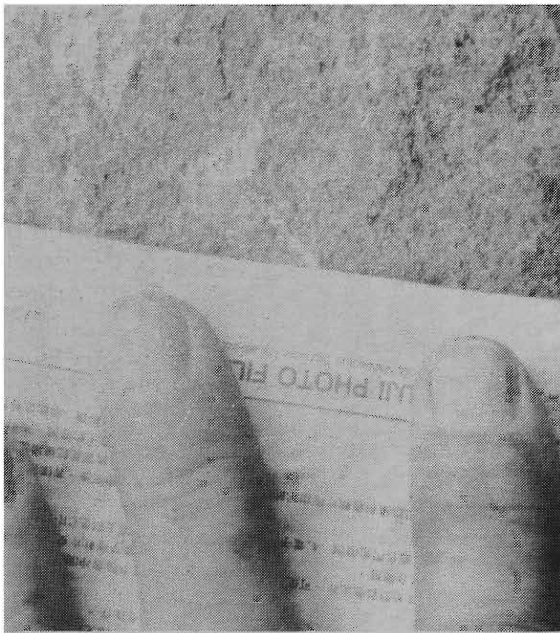


Illustration 17 : The edge of film wrapping-paper establishes a definite line against which to focus.

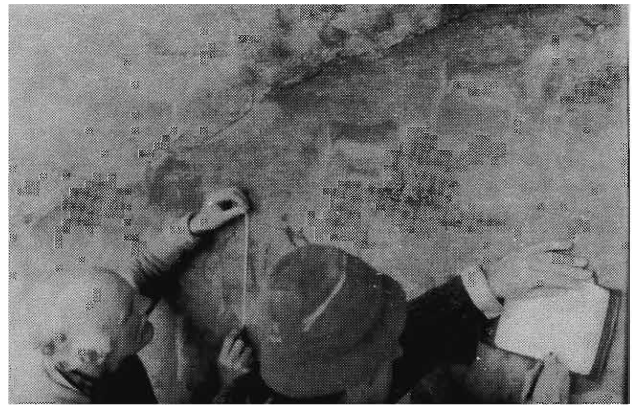


Illustration 18 : Measurements of the paintings and details of the site are entered into a field notebook.

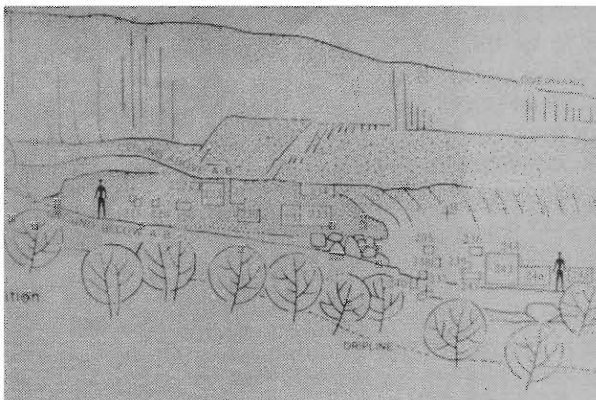


Illustration 19 : The location and number of each group of paintings is set out on a sketch of the rock-face.

must be noted in a field notebook (Illustration 18). Paintings should be described sufficiently well, so that they can be easily identified and they must be measured in respect of the whole group and the principal figures in it. Make a sketch of the section of the rock-face



Illustration 20 : Slides should be clearly identified as to site and district and should be filed systematically for easy reference and retrieval. upon which you have been working, showing a few clearly identifiable features. Measure the length and height of each scene or group you have photographed and number from left to right. Measure their height above ground and the distance between them. By marking

this information on your sketch (Illustration 19) you will have a record of the position of each group and their relationship to each other. Incorporating the group number in the slide reference will help to locate the position of each general view of a scene and, by extension, the position of each figure within that scene.

The size of the shelter must also be determined, depth being taken from back wall to drip line. Furthermore, it should be noted whether there are signs of occupation, such as bone fragments or stone implements on the floor or in the surrounding area. The location of the site must also be marked – on a map preferably having a 1 : 50 000 scale – and the map sheet name and reference should be noted together with the name of the farm, the farmer and the magisterial district. Directions to the site should only refer to identification points of a permanent nature. (Mentioning that the site is 200m above a clump of trees does not help much if in the interim they have been cut down for firewood!) Back at base, all this information – together with any other recorded material considered relevant – can be transferred onto a standard site record form, which can be sent off to the local Rock Art Recording Centre.

5 Filing

Field note books and copies of site records form an essential part of a personal recording system which can be developed and refined to suit one's own needs, i.e. a card index of each site and a register of types of paintings (battle scenes, dancing, etc.) It is essential that every tracing and slide should be properly identified, especially as to name of farm, district and date recorded.

An ideal method of filing slides is to use four or five drawer typists' stationary cabinets (Illustration 20). The drawers are slightly deeper than slide mounts, so that these can be stored neatly standing on end. Three 3mm thick pieces of masonite each cut to the length of the drawer and slightly shallower than the slide mount will divide each drawer very neatly into four sections. The slides will be easily accessible and up to 600 can be stored in a single drawer, dependent of course on the thickness of the mounts. Cardboard dividers – colour-coded as to magisterial district – of sufficient height to take the farm name, can be inserted between each set. If different drawers are used for different districts, the slides can be filed away to correspond exactly with the listing in the 1952 Archaeological Survey Report. Do not, however, forget to leave sufficient room for additional sites to be added in the process of

discovering more of the wonders of South African rock art.

CONCLUSION

No matter what recording method is used, how diligently it is applied or at what level of proficiency, it remains the co-operation between people doing the recording which is central to the ultimate success of the endeavour. The history of this segment of Archaeology points to the fact that – because of the extent of the distribution of the sites and the abundance of the paintings – the professional depends upon the amateur for most of his site information.

What is needed today are a number of regionally located data recording centres, into which information regarding the distribution and content of rock art sites can be fed through loading into a computer. If such centres are linked to each other, nation-wide data will be readily available to researchers. At the moment there are centres at the national museums in Cape Town, Pietermaritzburg and Kimberley, while one is being established in Bloemfontein and another is being planned for Pretoria. In this regard, full credit should be given to Shirley-Ann Pager who is attempting to form a Southern African Rock Art Research Association (SARARA), centred in Johannesburg and having association with other similar organisations in countries which also have rock art. Its objective is "... to promote and encourage rock art research; to co-ordinate studies concerning the recording, distribution and conservation of rock art sites in Southern Africa and to generally work for an awareness and appreciation of the prehistoric art in our part of the African continent".

If this laudable concept gathers the momentum it deserves it will provide a meeting of minds and a place for them to meet. However, this only becomes valid if opportunities are created for dissemination, which leads to education, which in turn leads to preservation. And with time running out on us – preservation is what this is all about.

NOTE

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BIBLIOGRAPHY

- Alexander, J.E. 1837. *An expedition of discovery into the interior of Africa*. London : Colburn.
- Battiss, W.W. 1939. *Art in South Africa. The amazing Bushmen*. Pretoria : Red Fawn.
- Battiss, W.W. 1948. *The Artists of the rocks*. Pretoria : Red Fawn.
- Bleek, W.H.I. 1911. *Specimens of Bushmen folklore*. London : Trianon.
- Breuil, H. 1955. *The White Lady of the Brandberg*. London : Trianon.
- Fordyce, B. 1983. Rock art recording. *South African Archaeological Bulletin*. 1983, Newsletter 6.
- Johnson, R. Townley. 1979. *Major rock paintings of Southern Africa*. Cape Town : David Philip.
- Kingdon, Z.E. & Dowson, T.A. 1986. The Work of the Rock Art Research Unit. The South African Archaeological Society. *The Digging Stick*. 1986, 3 (2,3 & 4).
- Lee, D.N. & Woodhouse, H.C. 1970. *Art on the rocks of southern Africa*. Cape Town : Purnell.
- Lee, D.N. 1972. Bushman folklore and rock paintings. *South African Journal of Science*. 1972, 68: 195-199.
- Lewis-Williams, J.D. 1972-3. The syntax and function of the Giant's Castle rock paintings. *South African Archaeological Bulletin*. 1972-3, 27 (105 & 106): 49 – 65.
- Lewis-Williams, J.D. 1974. Rethinking the South African rock paintings. *Origini*. 1974, 8: 229 – 257.
- Lewis-Williams, J.D. 1975. Bushman paintings – A signifying system. *South African Archaeological Society, Witwatersrand Centre*. 1975, Occasional Paper: 94 – 109.
- Lewis-Williams, J.D. 1981. *Believing and seeing*. London: Academic.
- Lewis-Williams, J.D. 1983. New approaches to southern African rock art. *S.A. Archaeological Society Goodwin Series*. 1983, 4: 3 – 13.
- Lewis-Williams, J.D. 1984. The empiricist impasse in southern African rock art studies. *The South African Archaeological Bulletin*. 1984, 139: 58 – 66.
- Lewis-Williams, J.D. 1987. Art as a window to other worlds. *S.A. Journal of Science*. 1987, 83: 245.
- Pager, H. 1971. *Ndedema*. Graz : Akademische Druck.
- Pager, H. 1973. Shaded rock paintings in the Republic of South Africa, Lesotho, Rhodesia and Botswana. *Archaeological Bulletin*. 1973, 28 (109 & 110): 39 – 46.
- Pager, H. 1975. *Stone age myth and magic*. Graz : Akademische Druck.
- Rosenthal, E. 1953. *Cave artists of South Africa*. Balkema: Cape Town.
- Stow, G.W. 1905. *The native races of South Africa*. London : Swan & Sonnenschein.
- Stow, G.W. 1930. *Rock paintings in South Africa*. London : Methuen.
- Tongue, M.H. 1909. *Bushman paintings*. Oxford : Clarendon.
- Van Riet Louw, C. 1952. *The distribution of pre-historic rock engravings and paintings in South Africa*. Pretoria : Archaeological Survey No. 7.
- Vinnecombe, P. 1963. Proposed scheme for standard representation of colour in black-and-white illustrations for publication. *South African Archaeological Bulletin*. 1963, 18 (70): 49 – 51.
- Vinnecombe, P. 1972. Motivation in African rock art. *Antiquity*. 1972, 46 (182): 124 – 133.
- Vinnecombe, P. 1972. Myth, motive and selection in southern African rock art. *Africa*. 1972, 42 (3): 192 – 204.
- Vinnecombe, P. 1976. *People of the eland*. Pietermaritzburg : Natal University.
- Willcox, A.R. 1956. *Rock paintings of the Drakensberg*. London : Max Parrish.
- Woodhouse, H.C. 1979. *The Bushman art of southern Africa*. Cape Town: Purnell.
- Woodhouse, H.C. 1984. *When animals were people*. Melville: Van Rensburg.