Conservation of Aboriginal Art in New South Wales

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Introduction

This is a brief report on attempts at conserving Aboriginal art sites in New South Wales and on some of the problems encountered.

There are very large numbers of art sites in N.S.W., rock engravings, cave paintings (and drawings) and carved trees. No other State has the combination of a comparatively high human population density, and concentrations of Aborignal sites. Herein lies the most *immediate* conservation problem.

The conservation problems, in order of immediate seriousness, are the effects of humans, introduced animals and natural deterioration.

Human Impact

Direct impact is a result of deliberate destruction, ignorance or misplaced enthusiasm. Deliberate destruction ranges from using art sites as target practice, to bulldozing them to make way for subdivision. Usually when this has occurred, it is too late to conserve the site. In these cases we rely on public education and legislative and management measures to provide protection for remaining sites; this is a long term process. Ignorance and ill-judged enthusiasm on the part of the public is a much more common problem. Everyone has seen examples of this — initialled sites, chalked-in hand stencils or scratched rock engravings. In Ku-ring-gai Chase National Park, near Sydney, (which has about 2 million visitors a year) is a long line of engraved human footprints, which are visited very regularly. Visitors, especially children, are fascinated by the spacing of these footprints and their destination. They follow the line of footprints, hopping from one to another, and consequently wearing away the rock (and the engravings) at the specific points where the footprints occur. Thus the footprints temporarily show up even better and attract a continually increasing amount of attention.

Even if visitors are exceptionally well behaved, they still have an important indirect impact on sites; their activities change the immediate environment — for example by raising the dust level, and killing the vegetation immediately round the site.

A lot of these problems are the result of poor planning, or lack of any planning, in the management of the site. At this time we do not know what visitors want from a site, and how they react to sites. Many of the massive conservation problems at Mootwingee Historic Site, for example, are a result of such lack of knowledge and of planning. A very beautiful (and fragile) group of rock engravings and paintings were opened to the public, who were also supplied with camping facilities and attractive surroundings, and an interesting and well designed visitor centre. The result has been vastly increased visitor numbers, with no effective provision for long term protection of the art. Conservation measures are now well advanced, but they might not have been necessary had Mootwingee's designers made a greater effort to manage the sites' resources.

In short, though this paper is in the main about physical conservation measures, it seems timely to point out that often these are only necessary because of a failure in planning. The first conservation measure should be studies of the behaviour and expectations of visitors at sites. To my knowledge no-on has yet attempted this. National Parks and Wildlife Service of N.S.W. has plans to carry out such studies, at Mootwingee, and at some of its Sydney Parks. It is also experimenting with certain simple techniques — the provision of visitor's books, leaflets, brochures, etc. and the erection of grids at sites, in situations when it is not possible to provide guided tours.

Impact of Animals

In New South Wales as elsewhere, art is damaged by the activities of nesting birds and insects. A

much more serious problem, however, is the impact of feral goats. Goats became feral in N.S.W. before World War I, but recently, in the last ten — fifteen years their numbers, in western New South Wales, have increased alarmingly. Goats have no natural enemy — except humanity — and thrive in the harsh conditions of the semi-arid and arid plains of western New South Wales. On many properties there are now more goats per acre than sheep. Their diet is not as restricted as that of sheep and they do not suffer from the diseases to which sheep are prone. In particular, they favour rocky areas, especially in summer, when rock shelters provide shade. They are in such numbers that they occupy most such rock shelters. The result is massive deterioration and finally obliteration of the paintings in these shelters. Eventually, as National Parks and Wildlife Service records show, all paintings below goat level are completely removed by the goats rubbing against them. There are two conservation alternatives — grid the sites to keep the goats out, or control the goat population. On Mootwingee Station (about 50,000 acres) there are at least 200 shelters with art. Gridding all 200 is a massive job. Elimination of the goats is clearly a more permanent solution, but although a research project to this end is underway, the task remains. In the west of N.S.W. the goat problem is undoubtedly the greatest threat to the art. Therefore, though it may seem incongrous, one of the most important research programmes concerning the conservation of art sites in N.S.W. is research into goat populations and methods of controlling them.

Natural Deterioration

In New South Wales none of the art sites are re-painted or engraved by Aborigines, though some are significant to today's communities. All sites therefore face natural deterioration over a period of time, often accelerated of course, by human activity.

This problem is not as great in N.S.W. as in some other States, since the climate, and the rock on which the art is executed are both relatively stable. Nevertheless, the problem is a massive one.

Conservation Work To Date

Until very recently the Service has had no-one with the requisite training and expertise to carry on a long term project on the conservation of art. We have had extremely good advice and assistance from the various sources, including the Department of Mines (especially Joe Dolanski and Bill Chesnut) and from the Conservator of the Australian Museum, Sue Walston. However, it has often been difficult to put their suggestions into practise because of the lack of expertise within the Service. To date conservation work has been limited to emergency situations at relatively few sites.

Mootwingee

At Mootwingee Historic Site (80 miles N.N.E. of Broken Hill) are a group of very fine pecked engravings on a rock slope. The site is one of the most well known in N.S.W. and has been steadily visited since it was first described in 1927. The engravings cover an extensive area, and the motifs include animal tracks, circles, geometric designs, and many fully pecked human and animal figures. The whole slope is very unstable. A great deal of it has broken up into large slabs, with sizeable cracks between them, which are sitting on rubble and smaller slabs. These slabs (which bear the engravings) are moving downhill. The engraved surface itself is cracking up and pieces of it are exfoliating. Both these processes have been greatly accelerated by the activities of visitors.

This part of the Historic Site is now closed to visitors. The rock slabs have been pinned into place with stainless steel pins which are cushioned where necessary with nylon blocks.

The rubbish and small rubble has been cleared off the entire slope, and the cracks and areas under the slabs have been re-packed with loose large rubble to allow better drainage. A walkway is being erected over the best section of the engravings, which should allow a good view of them, while protecting them. The path leading up to the site has been re-routed to avoid engravings in the creek bed.

A photogrammetric survey of the slope has been carried out to assist this work.

Methods of restoring the engraved surfaces, damaged by exfoliation and by vandalism have yet to be found. This requires a substance which can be cast, and which will withstand extremes of temperature, and which cannot be prised off the rock by enthusiastic visitors.

Only when this work is carried out will the site be re-opened, and then on a guided tour only basis.

The Service has experienced extreme difficulty in getting this project underway — firstly because it received conflicting advice from experts on many points, and secondly because when it did finally receive an excellent brief, from the Conservator of the Australian Museum and the Mines Department,[1 — 3] there was considerable lack of expertise to follow through in its implementation.

Painted Sites in Western New South Wales

At Mt. Grenfell near Cobar in central western N.S.W. is a series of rock shelters painted with designs in four colours. The site was receiving an increasing rate of visitation, as were other such

sites in the area. It was decided to try to channel the visitors into this one site, where there was some chance of supervision. Therefore this site was locally advertised, and the others closed. It was not long before the occurrence of vandalism – a few initials scratched over the art. Weldmesh grids were therefore erected over the three main shelters. The site is policed by the local landholder, who asks visitors to sign the visitors book and takes their address and car licence number before giving them a key to obtain access to the sites. This appears to work very well, since people feel privileged to receive the key. So far no further vandalism has occurred, and the site is visited very regularly.

The other main conservation problem at Mt. Grenfell is the occasional very heavy flow of meteoric water at the site, which is washing paths through painted areas of the site, and percolates through the rocks, dissolving out minerals which coat and discolour the paintings. Sue Walston has worked out a plan for solving this problem – deflecting the water by cutting channels in the roof and applying flashing to the lip of the overhang in various places[4]. This work is now underway.

Sue Walston and Joe Dolanski have also carried out an analysis of the pigment and rock type at both Mt. Grenfell and at painted sites at Mootwingee. Scrapings of pigment (1 cm. square) were taken and analysed microscopically. The results have been described by them in some detail[3].

The surface of rock shelters bearing paintings at Mootwingee are exfoliating and crumbling due to processes resulting from wetting and drying cycles. At Mt. Grenfell both rock type and pigment appear to be fairly stable. Despite this at least one group of paintings appear less bright than five years ago; this may well relate to the increased dust level caused by visitors. At neither site did the pigment show evidence of a binding agent, though at Mootwingee the rock surfaces were probably primed with water before stencilling. It was also very interesting to note that the analysis showed that partially burned sticks still containing sap were used to apply the charcoal.

Sydney Rock Engravings

On the large flat expanses of Hawkesbury sandstone in the Sydney district there are probably 2000 engraving sites. The sandstone is relatively soft. We do not know the age of the engravings, except that some of them are post 1788. In most cases they are relatively stable; but the rock surfaces are gradually weathering, and one of the main causes of this seems to be the variety of lichens which live on the sandstone. In some cases when the lichens die they leave large soft patches of sandstone which are very friable. Where this occurs over an engraved line, the edges of the engraving begin to crumble away. These patches seem to be increasing on some sites. It seems likely that the lichen has died in this particular spot because it has eaten all the nutrient from the rock at that surface level, and at the same time, removed the bonding material. We have now set up a programme to monitor specific areas at a number of sites. As well as this, with John Clarke's advice we are experimenting with spraying the rock surface with a mixture of silicone water repellent and fungicide, which hopefully should kill the lichen and prevent water penetration which also appears to be causing problems[5].

We are also planning to set up a series of erosion meters at different sites to establish general weathering rates for Sydney sandstone. The Service has also successfully arranged the cutting out and moving of a 22 ton slab of sandstone with engravings, which was in the middle of a proposed road. The site was very fully recorded first, and a cast made of the engravings, in case of accidents en route[6].

Painting Sites – Sydney Sandstone

Phil Hughes' work has indicated that allowing people to visit sandstone rock shelters regularly, increases the weathering rate and hence lessens the life of their paintings and drawings[7]. This indicates that whenever possible such visits should be discouraged and people should be encouraged to view the sites from outside the overhang.

We have also had some advice from John Clarke about salt weathering in some of the shelters, and have consequently set up a programme of regularly spraying the effected areas with fresh water. Experiments on the removal of graffiti from art using fibreglass brushes and detergent have also been carried out as advised by John Clarke[5].

Research consultants for the Australian Institute of Aboriginal Studies have carried out a pilot study of photogrammetrically recording a Sydney rock engraving site, which will shortly be opened to the public. This site will have wooden walkways leading to the figures, interpretive signs and brochures etc. to help people see and understand the figures. It is hoped this will discourage people from chalking or scratching them. We have also commissioned the detailed recording of some engraving sites which appear to be becoming very faint.

Carved Trees

In most of New South Wales trees were carved at initiation grounds and at some grave sites. Usually the bark is cut back from the tree, and the carving is made on the wood beneath it. Some of these trees are still alive, and some have been dead for some time. We have employed the services of a

wood technologist and tree surgeon, Mr. G. Doherty, to treat these trees. He has advised on the stability of dead trees and their removal if necessary. Where it is possible to leave them in situ he has treated them with insecticide and fungicide and has trimmed off unstable upper branches. Live trees have had their carved areas treated in the same way and have had parasites (mistletoe etc.) removed and any large holes or scars stopped. In three cases trees existed which we know to have been carved, but on which the bark has completely grown back. This regrowth (sometimes 4 – 6 inches thick) has been carefully cut back, and the carving revealed, and treated. The removed regrowth carries a negative impression, or cast of the carving.

The Future

Projects to date have been carried out in often adverse conditions, with lack of Service expertise and equipment hampering the work. However, with the recent Service appointment of a geologist to begin a research programme on conservation of sites in New South Wales the situation will improve; and long term studies and programmes will be possible.

References

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