

Part II Endangered site — a famous example

Introduction

A site containing rock paintings of two large anthropomorphs described as Lightning Brothers, situated near Delamere Station (Fig. 1), in the Victoria River District was first recorded by Davidson¹ in 1930. Since then it was visited intermittently by a number of interested individuals some of whom did publish individual photographs, usually those of the two main figures. After his 1956 visit, Arndt² published a detailed account of the major paintings and the associated mythology. A party from the N.T. Museum accompanied by the traditional owners of the area visited the site in October 1977. The purpose of the visit was to locate the site and mark it accurately on a map and aerial photograph so that it may be entered in the N.T. Recording System and nominated for inclusion in the Register of the National Estate. Additional reason for the visit was to ascertain what deterioration of the painted surfaces, if any, has occurred since Arndt's visit 21 years ago. On locating the site it was realized that only few of the paintings present at the three individual shelters found around the perimeter of this site were previously recorded and that there were other, though smaller sites in the vicinity. Also that water-wash, and leaching mineral salts were threatening the two major figures with total destruction.

The site in space

Yiwalalay, N.T. Site No. 00047; map ref: Delamere 5266; map co-ords: 696 653; aerial photographs: Willeroo, Run 29 — 5682, 21.7.72, Aerial Surveys Pty. Ltd., Perth.

Yiwalalay, the site made famous by the two large figures of Yabiringi and Yakjagbula, the Lightning Brothers, is situated approximately fourteen kilometres west-south-west of the new Delamere Station. It is a twelve metre high residual rock of very soft sandstone with a prominent overhang located on

its western aspect protecting Yanginjanawuya, the major shelter (Fig. 2). A smaller shelter with a number of paintings and engravings is situated on the eastern side of the rock, while a slightly protected rockface on the southern side also has a considerable painted surface.

Geology

Barclay and Hays³ suggest that the now weathered sandstone mounds and ridges of this area are aeolian and that the deposits were originally longitudinal dunes. They are found in a physiographic unit described by Sweet⁴ as Delamere Plains and Benches made up of plains with rounded and terraced low hills. The terraces are formed by resistant basalt layers and chert bands of underlying volcanic rocks. Several north-westerly trending ridges between Delamere and Aroona Creek are formed by sandstone inter-bedded with the volcanics.

Yiwalalay, is one of a number of eroded sandstone rocks and ridges in a pocket of a savannah woodland. Nearby is Ngalanjari, the "water rock", the Wardaman rain centre, a residual of similar height.

Traditional owners

This site and the nearby "water rock" are sites of considerable significance to the local groups of Wardaman speaking people. The two main groups visiting this site regularly came from Yerinj, the country around the Old Delamere Homestead and from Nimanyuk country, situated on the lower reaches of the Delamere Creek. However these sites are of importance to other groups of Wardaman as well as to Mudbura and even Walbiri people in whose area the Lightning Brothers have originated.

In the past these sites were visited and lived in by the people traditionally associated with it both in the wet season as well as in the dry, as there is never any shortage of water. Against a nearby

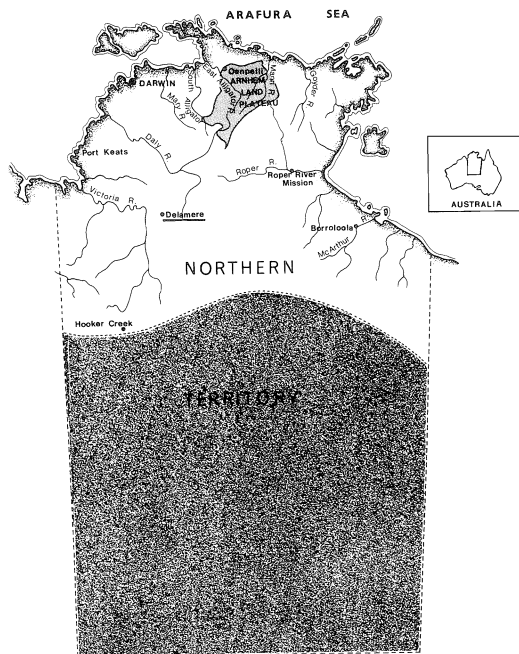


Figure 2: Yiwalalay rock, with the Yanginjanawuya shelter in the shadow of its overhang. One source of water-wash is clearly visible, while a bud of efflorescent mineral salts, deposited there by the activities of the second water-wash channel is noticeable above the roof fall protecting the western aspect of this shelter.

ridge one finds Barguya, a spring, feeding a small creek of the same name. We were accompanied on our visit by Elsie Nonomaran, a traditional owner of the sites, who has camped at the Yiwalalay shelter with her family on a number of occasions. Her father Yidor and her father's father Yuwalitakar used to come here from Yerinj to paint on the rocks and to visit the "rain centre".

The cultural site and agents of its deterioration

As mentioned before, it was Davidson¹ who first described the rock paintings and engravings at this site. He described the two main figures in some considerable detail and included in his publication two photographs and a colour plate made by an artist from his sketches and photographs. Although at present the interior of the two figures is completely filled in, during Davidson's visit, the interior of the larger figure's body was only partially infilled by parallel red and yellow stripes.

Barrett and Croll⁵ visited the site some time after Davidson and in their photograph the infill of the larger figure was extended to cover the arms.

McCarthy⁶ published a colour photograph of the Lightning Brothers by Donkin. Arndt² says of this photograph that it "shows the paintings as it is at the present day and is an excellent reference for those readers not familiar with it". That was during his 1965 visit. By then the full interiors of both figures were filled in by parallel red and yellow lines. In considering the deterioration of the two Lightning Brothers figures which has taken place since 1956, it will be Donkin's photograph which will be used as a benchmark.

Arndt² argues for a recent origin of the Lightning Brothers paintings and quotes an informant who suggests that the designs were completed towards the mid-forties and recalls that Davidson¹ noting the subincised figures, considered the evidence of the geographical distribution of subincision, and on that basis suspected a recent origin for the paintings.

Without considering the contemporary myth associated with the two brothers, their origin and stopping places, or the extent of the practise of subincision and the question of who brought it from where, the time depth of the two paintings seems not to be of the most recent origin. On a rockfall facing the massive curved wall on which the figures of the two brothers are executed is an example of the most recent historical style of paintings. This is a contact painting in white representing a man with two rifles in the act of shooting the cattle. Such paintings were produced during the early contact period when there was certain novelty to such an act. As this area has been first settled by Europeans in the 1880's this painting would post-date that period.

It can be said that although the Lightning Brothers figures were not completely filled in and thus "completed" to European observers until quite recently, the figures in their monochrome outline might have been sufficiently complete to earlier generations of Aboriginals. It is recognized that the earlier rock painting styles were of only one or two colours.

Whatever their age, the paintings of the two Lightning Brothers as well as all the other paintings in the three separate shelters of this site should be protected and conserved as they form an important stylistic group situated between the rock art of the Kimberley to the west and that of Arnhem Land to the east. The two brothers are a link in a chain of allied figures found from eastern Kimberley across the Northern Territory to Ingeladi Waterhole, another important site in the Wardaman Territory. These and the Wandjina figures of the Kimberley were and probably still are the best known and mostly reproduced examples of Australian rock art abroad. The Lightning Brothers also featured in the UNESCO touring exhibition of Aboriginal culture.

The two Lightning Brothers, Yabiringgi and Yagjagbula are associated in the shelter with their wives Ganayanda and Gulidang. They have come to Yiwalalay from Walbiri country and on the way have stopped at Yirindale Spring on present Monte-jinni Station in the Mudbura language groups land.

Yiwalalay rock has three separate rock painting areas. The major one is the Yanginjanawuya shelter with the paintings of the Lightning Brothers and other designs on its back, curved wall exposed to the late afternoon sun. The shelter is well protected by its high, deep overhand (Fig. 2). Its occupational area is further protected by a large fall of rock from the ceiling of the overhang which except for a narrow entrance completely encloses the site. The collapsed rocks protect the lower interior from driven rain and from direct afternoon sunlight, making it an ideal wet season living space. At the same time the inward surface of the largest fallen rock provides an additional area for painting and engravings. Its smooth perfectly vertical surface is covered with simple engravings and is completely painted over with a large number of anthropomorphs and animal designs in a number of styles. There are several bird species depicted including that of a spoonbill. There is also a contact painting of a man with two rifles shooting cattle. This is depicted in simple silhouette using white pigment only. External surfaces of the protective rocks are covered with engravings of random oriented parallel lines, bird tracks and shallow ground hollows. In between, one can find initials engraved in the soft rock by visiting Europeans.

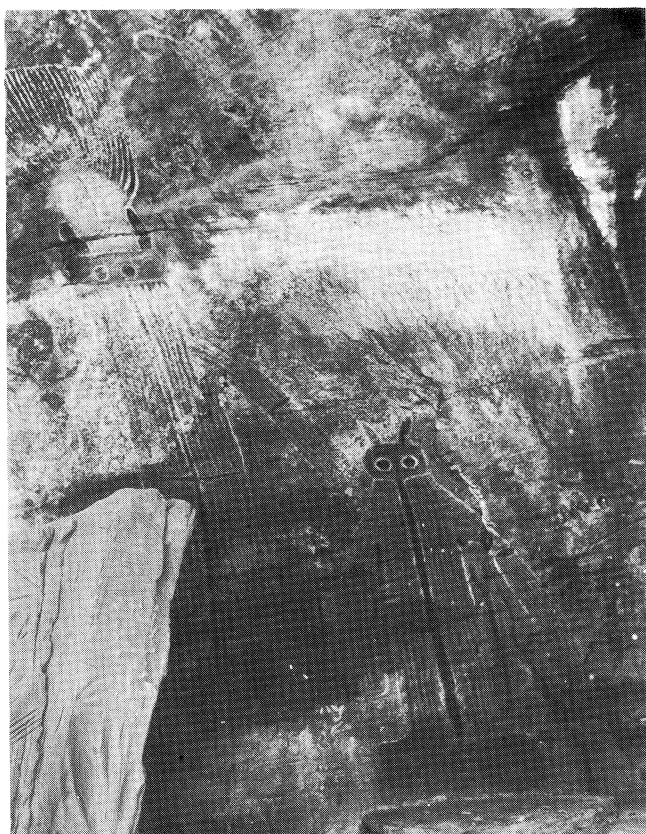
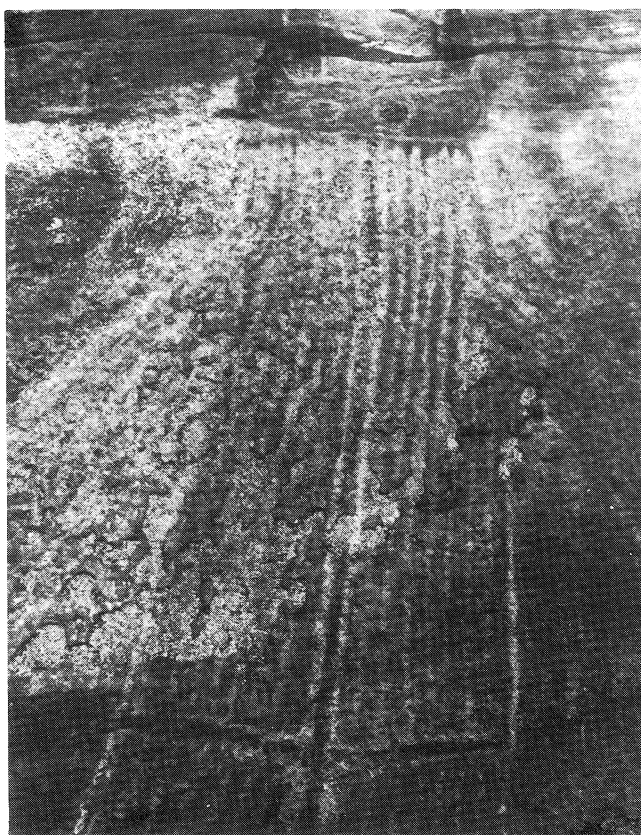


Figure 3: Photograph of the two Lightning Brothers, Yabiringi and Yagjagbula as found in October 1977. The activity of leached mineral salts has almost completely disintegrated the rock surface over the upper half of the larger figure, while dendritic channels are reaching the vicinity of the smaller figure. The larger figure is 417 cm and the smaller 284 cm high.

Figure 4: Detail of the lower part of Yabiringi's body, where it was superimposed over earlier engravings of macropods tracks. His penis terminates in a long, red ochred groove deeply incised into the rock.



On the back, inward convex wall (its shape indeed suggesting that this could be a fossil sand dune) amongst many other paintings are the two impressive figures of the Lightning Brothers (Fig. 3). Yabiringi, the larger figure is 417 cm high, while Yagjagbula, the smaller figure measures 284 cm. They have been executed in a combined painting and engraving technique, using the four common pigments of red, yellow, white and black. Both figures are outlined and have internal divisions and detail such as eye outlines and head-dress decorations in white pigment. The schematized faces are red, with the interior of the figures infilled by alternate, parallel yellow and red stripes. Although it is the same red pigment used on the heads of the two brothers, the juxtaposition of red and yellow gives the red an illusory effect of added brightness. Black pigment was used in the eyes, ears, armpits, penis, joint marks and internal division and the stone axe handle. The penis of both males terminates in long red ochred grooves deeply incised into the rock (Fig. 4). Although much of the white pigment outlining the external parts of the designs has weathered away, the figures, except for the damage to the larger figure, remain as they were described by Arndt and photographed by Donkin. The designs were not altered or added to in the past 21 years.

However the continuing deterioration of the larger figure is such that if not arrested it could completely obliterate that design. Similar agents of deterioration are acting on the painted surface immediately above the smaller figure.

The damage is caused by two areas of water wash and seepage of internal water, rich in soluble salts. The main water wash entry is to the right and above the figure clearly visible on the photograph. As it moves down the rock face it enters a fault line and moves across to just above the main figure where the leached solution runs down the painted design. During the dry season the mineral rich solution evaporates and leaves the white crystalline salts in the pores as well as on the surface of the rock. As this mineral salt happens to be very soluble and hygroscopic, it takes up moisture from the atmosphere during the next humid period, expands, loosening surface particles of this soft porous rock and these are then washed or fall away. This gradual disintegration of the rock surface and its actual breakdown occurs here in two different patterns. In one instance the soluble salts percolate through the rock mass above the main figure and leave the upper half of the body and a large area to its right thickly covered in white crystalline salts. The subsequent cycle of expansion and re-crystallization of this salts causes rapid breakdown and weathering of the rock surface which in this case takes form of random action leaving "islands" of the original

surface. These patches are further undercut, salts crystallize underneath the "island" shelves and these too will eventually weather away. The soluble salts active on the surface to the right of the larger figure and immediately above the smaller one are in the path of a water wash which re-dissolves it and carries it away with the loose rock particles down the wall in a dendritic pattern, leaving eroded channels in the rock surface. The salts are deposited lower down the wall and in time will move over Yagjagbula, the smaller of the two Lightning Brothers.

The two brothers are associated here with paintings of their wives who are depicted in much smaller proportions and in less elaborate design. Ganayanda, Yabiringi's wife (Fig. 5), is situated just outside the entrance of the shelter, some eight metres from his representation. She appears as only a 73 cm high frontal silhouette in red with a white outline. This painting is only slightly protected from elements but not subject to water wash. Its left half is weathered but the right side and upper part of the body protected by a shallow overhang is well defined. Gulidang, Yagjagbula's mate is situated just to the right of his figure. She remains there, barely visible as a red stain with traces of white pigment outlining her body and the deeply incised, black pigmented vulva. She is only 33 cm high (Fig. 6).

The shelter on the eastern side of Yiwalay rock is only slightly protected from the elements except for a small area of an undercut. It is on this well protected inward sloping ceiling that one finds a number of well preserved paintings such as a 240 cm long Rainbow Snake, as well as lizards, boomerangs, macropods, female figures, snakes and a bush potato design. Small rocks surrounding this site are engraved with groups of usually parallel lines, although bird and human tracks can also be found.

The southern shelter is hidden behind trees and shrubs and consists of a slightly protected vertical wall on which three paintings predominate. These are a spiny ant-eater and a long necked turtle, both in a plan view and executed as red silhouettes outlined in white, and a large quadruped in side view. The quadruped too has been painted in red and white and has, as well, a double joint mark at the neck and white outlined eyes and anal opening (Fig. 7). It is depicted with two yellow kidneys outlined in white. There are also a number of smaller macropod designs in yellow and traces of human figures can be recognised.

Of the pigments used in the painted designs of the three shelters, white, *bandjan*, is found in the vicinity of the site: black, *minjandin*, came from the campfire of the artist; red, *liwin*, from Yarinj



Figure 5: Yabiringi's wife Ganayanda on an exposed wall outside of the actual shelter. This simple figure in red and white is 73 cm high.

Figure 6: Yagiagbula, the smaller figure except for the loss of much of the white pigment outlining the body, is well defined. However the dendritic pattern in the disintegrating rock surface above warns of future damage. Gulidang, his wife, whose small representation is barely visible to the right of his body, remains as a red stain with traces of white pigment and with deeply incised vulva.



Figure 7: Painting of a quadruped from the southern site.



near the Old Delamere Station and yellow, *ilininga*, from Ingeledi Waterhole, another well known site in the Wardaman Territory.

The site's importance

Yiwalalay, the site best known for its paintings of the two Lightning Brothers is an important site in Australian, and, through its wide overseas exposure (of more than forty years), in the world context. In the rock art of the tropical north it forms an important link between the figures associated with rain and lightning found across the Top End from Kimberley to Arnhem Land Plateau.

After a visit to this site late last year, the N.T. Museum has become aware of the advanced stage of deterioration to the main figures and had initiated immediate steps to arrest this process which threatens the paintings concerned with obliteration.

A sample of the effervescing salt has been sent to John Clarke, a research officer in rock art conservation with the Western Australian Museum. His analysis shows that the offending mineral is nitre with minor phases of gypsum and halite (see appendix 1) but until he visits the site and subjects the rock to petrographic analysis he is not able to comment as to where the potassium nitrate originates.

Recommendations.

This general report, bringing to notice the state of the shelter as it is at the present, with a simple description of physical and chemical causes of weathering, should be followed by a detailed multidisciplinary scientific investigation culminating in first conservatory measures. As the damage is basically water induced, the first step in practical preservation of this site would be to prevent rainfall from entering the rock mass. The top and sides of this residual should be inspected for any opening, and these, pressure sealed with clear silicone or suitable hydro-epoxies. The existing sources of water-wash (Fig. 3) must be isolated and the water diverted away from the painted areas. At the same time the rock art of the three shelters should be recorded in detail. Although a number of investigators visited the site and published photographs and descriptions of the two main figures, it seems that other paintings have been overlooked. Arndt² mentions several designs from the eastern shelter, some of which he says "bear resemblance to those described by Davidson¹ and reproduced by McCarthy⁶".

However, neither Davidson nor Arndt mentioned the large number of important paintings located in the main shelter and completely overlooked those of the third, the southern shelter.

This site should be visited in the company of the traditional owners, some of whom are said to be rock painters, and paintings and engravings, with their help, recorded and described and the necessary conservation measures discussed with them.

Conclusion

I would like to conclude by quoting what Donald Moore said on a previous occasion⁷ — "If all that remains . . . are photographs of long vanished paintings and engravings, then our successors will wonder what sort of vandals we were, to have allowed this unique human creative activity to decay and disappear".

Yiwalalay is an important site and its malaise is that of many such sites in the Northern Territory and indeed elsewhere. While in the southern states and Canberra, mausoleums are being built to house the provincial expressions of the art of the universal village, the real art of Australia, some of it as old

as the rock art of the Paleolithic Europe is left to ravages of nature.

This description of a threatened famous site with a number of black and white and colour photographs, forms a submission to the Australian Heritage Commission seeking funds for its immediate recording, assessment of damage and conservation. I have read this paper to the traditional owners living now in Katherine, N.T. On their behalf, Elsie Nonomaran said: "We want that Yanginjinawuya to be there always. Please help us".

Acknowledgements

I would like to thank my friends in the Department of the Northern Territory, Mines Branch, for putting me on the right geological tracks, Ms. Margaret West for the map of the "Top End", and Ms. Elizabeth Oberleuter, who has typed this paper, for her patience.

References

- 1 Davidson, D.S., (1936), *Aboriginal Australian and Tasmanian Rock Carvings and Paintings. Memoirs Amer. Philosoph. Soc.*, v, Philadelphia.
- 2 Arndt, W., (1962), The Interpretation of the Delamere Lightning Painting and Rock Engravings. *Oceania*, 32, No. 3, 162 – 197.
- 3 Barclay, J. & Hays, J., (1965), Minor Investigations by the Northern Territory Geological Section: water investigations at Victoria River Downs and Wave Hill 1963. *Bur. Miner. Resour. Aust. Rec.* (unpubl.).
- 4 Sweet, I.P., (1972), Delamere, Northern Territory — 1:250,000 Geological Series. *Bur. Miner. Resour. Aust. Explan. Notes SD/52-16*.
- 5 Barrett, Charles, and Croll, R.M., (1943), *The Art of Australian Aborigines. The Bread and Cheese Club*, Melbourne.
- 6 McCarthy, F.D., (1958), *Australian Aboriginal Rock Art*, 1st Ed., Sydney, Australian Museum.
- 7 Edwards, R., (Ed.) (1975), *The Preservation of Australian Aboriginal Heritage*. Report of National Seminar on Aboriginal Antiquities in Australia, May 1972. Australian Institute of Aboriginal Studies, AAS 54, Canberra.

Appendix I

Examination of a Salt Sample from Delamere N.T.

Introduction

Microscopic examination of the sample showed that it consisted of quartz sand grains with an encrusting salt. The salt showed a botryoidal structure with rare crystalline fragments and were translucent and easily soluble in water.

The salt fraction was separated and examined in a scanning electron microscope (SEM) fitted with an X-ray analyser which showed that the major element was potassium with minor calcium and sodium. Micro X-ray diffraction on the potassium rich phase showed that it was the mineral nitre (KNO₃).

The minor phases were gypsum (CaSO₄.2H₂O) and halite (NaCl) these were identified visually in the S.E.M.

Discussion

Potassium nitrate can come from several sources, urine being the most obvious, but bacterial action on animal remains is also possible. It is a very soluble salt and is strongly hygroscopic, taking up moisture from the atmosphere during humid periods and recrystallizing in dry periods. This process causes rapid breakdown of porous rocks by granular disintegration or even exfoliation. The salt should be removed as soon as possible from the paintings, this would best be done by leaching it out using a poultice after first stabilising the painting.

J. Clarke

Research Officer — Rock Art Conservation
Western Australia Museum
Aboriginal Sites Department