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FIRE AND ROCK ART

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Abstract. Case examples are given where intense heat from fire resulted in significant damage to Australian rock art sites. Conservation and management strategies are discussed.

Introduction

This paper details field conservation work where fire has had a direct and significant impact on rock art sites. Case examples are given at Narrabri, Sydney, Gosford, Blue Mountains (all eastern New South Wales) and Northern Territory. Following on from these examples, a brief discussion is directed towards remedial and preventative action.

Narrabri

The axe-grinding groove at a site near Narrabri is shown in Figure 1. This shows damage caused by a campfire, which has been established directly on the sandstone. The implication here is that hot and sustained fire will cause sandstone to become friable. Note that only the immediate area of the fire is impacted.

Ku-ring-gai Chase National Park

This site is known as the Echidna Site and had a wooden boardwalk constructed for visitor and wheel chair access. In this case the boardwalk caught fire during a summer bush fire event and the heat



Figure 1. Damage to an axe grinding groove site near Narrabri, NSW. The damage has been caused by a campfire set directly on the sandstone. Note that damage is confined to areas of long exposure to intense heat (photograph by Craig Trindle).



Figure 2. Echidna Site showing the boardwalk before the fire event.



Figure 3. The same site after the fire. Note that damage to the sandstone is confined to the location of the former boardwalk.



Figure 4. The boardwalk before the fire at the Bulgandry petroglyph site near Gosford, New South Wales.



Figure 5. The same site after the fire. Note that damage to the sandstone is confined to the location of the former boardwalk.



Figure 6. A vandalised rock art site in the Blue Mountains where a vehicle was set on fire. Note that the fire damage is significant but confined to the area of intense heat.



Figure 7. The Northern Territory rock art shelter before the fire.

generated was sufficient to cause similar damage to the example shown above (Figs 2 and 3).

Bulgandry petroglyph site, near Gosford

This example is similar to the Echidna Site above. This was a hardwood boardwalk constructed in the late 1970s. Again, the intense heat generated from the burning wood, which was approximately 10 cm above the rock surface, was sufficient to disrupt the sandstone fabric (Figs 4 and 5).

Blue Mountains

This site is located adjacent to a public road but is an isolated part of the Blue Mountains west of Sydney, New South Wales. The site has suffered heavy paint graffiti and other vandalism. In addition, a stolen car was driven into the shelter and set on fire. The extreme heat generated has caused localised irreversible damage to the rock fabric. A metre or so away, however, the rock fabric within the shelter remains sound (Fig. 6).

Northern Territory

This example is from a major sandstone art shelter in the Northern Territory. In this case, the boardwalk was made from a recycled plastic material. As can be seen from Figure 7, there is little ground fuel to support a hot bush fire. In this case the fire was intended to be a hazard reduction burn. The result was that



Figure 8. Fire damage has resulted in the loss of valuable paintings. The shattered sandstone on the floor of the shelter was considered unsalvageable.



Figure 9. Traditional owners working to remove shattered material from the floor so that the shelter can again be used.

once the plastic material ignited, the severe heat generated caused the painted rock surface to shatter and disintegrate, falling to the floor of the shelter. The follow up conservation action in consultation with Traditional Owners was confined essentially to a clean up, placing the shattered material near the entrance of the shelter and to initiate baseline monitoring to assess the need for any future intervention (Figs 8 to 10).

Ways of preventing fire damage

The above examples clearly demonstrate that severe damage will result at rock art sites when



Figure 10. The site after washing. Note the site is now closed to public viewing.



Figure 11. Brad Welsh removing soil which is encroaching an petroglyph site at Ku-ring gai Chase National Park, Sydney.



Figure 12. Local Aboriginal Land Council member washing the site to remove the soil close to the rock surface. Note that drainage areas have been dug to allow runoff to escape from the site.

exposed to intense heat. The damage appears to be confined to those areas where the heat has been most intense, while adjacent areas show little impact.

Clearly, new boardwalks should no longer be constructed using combustible material, and old wooden boardwalks need to eventually be replaced with a non-combustible material or design.

In the Sydney sandstone, there is clear evidence of encroaching soil on petroglyph sites (Figs 11 and 12). Along with that comes highly combustible vegetation. Accordingly, site management needs to address this as a maintenance issue.

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Destruction of Dampier rock art site at Holden Point on 7 February 2007; photograph taken secretly by campaign activist.

Please visit the Save the Dampier Rock Art site at
<http://mc2.vicnet.net.au/home/dampier/web/index.html>
and sign the Dampier Petition. Thank you!