

Impacts of wildfire on Indigenous cultural values

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Summary

- Indigenous Australians have an indisputable right to be consulted when decisions that impact upon them or their Country are made. As the owners of a vast and growing estate they also have the right to lead the decision making and implementation process for the management of their Country.
- Fire was and still is an efficient tool used with great skill and effect by Indigenous Australian land management practitioners; it is embedded in their stewardship of Country and entwined from time immemorial with normative customary traditions, cultural values, myths, rituals and lore.
- The impacts of the 2019–20 Black Summer wildfires on Indigenous cultural heritage values were undoubtedly immense; however, no systematic quantification of the impacts have been undertaken.
- Deficiencies in understanding the notion of cultural significance from an Indigenous Australian's perspective and in identifying, managing and protecting Indigenous cultural heritage values from the impacts of wildfire are being recognised by authorities who are implementing risk minimisation strategies in partnership and with the consent of Traditional Owners.
- The impacts of the wildfires were not all bad, with some Indigenous cultural heritage values being further exposed to enable greater documentation and better protection from future fires and other threats.
- The upswelling of interest in cultural burning practices as a mitigation strategy to reduce the impacts of wildfire is also a positive outcome, especially as Indigenous Australians are being recognised for the stewardship of Country, their traditional knowledge is being celebrated and they are being encouraged to revitalise traditional practices.

Introduction

The misconception of fire, its purpose, its cultural value, its ecological value and its inherent resourcefulness is distorted by a European-style axiology and imposed colonial preconceptions

from the past. Fire has been and continues to be a quintessential element in the sustainability of the economy and spirit of Indigenous Australian communities, and is inextricably linked to the wellbeing of individuals, kinship systems, customs and cultural practices.

Indigenous Australians recognise fire as a living thing and have an innate understanding that Country is fire-prone. The stewardship of Country by Indigenous Australians for millennia has shaped Australia 'as the Aborigines made it' (Hallam 2014). This stewardship, conferred through the resourceful utilisation of fire and burning practices, is valued as part of a broader suite of responsibilities inherited from ancestors and ancestral beings, and passed down through the generations: care for Mother Earth and she will reciprocate by caring for you (Prober *et al.* 2011; Maclean *et al.* 2018; Neale *et al.* 2019).

In precolonial Australia fire was utilised to rejuvenate ecosystems, for hunting game, to promote and prepare bush foods (both plant and animal), for communication between communities and in rituals and ceremony (Lake and Christianson 2019). Essentially, fire was, and still is, a systematic tool used with great skill and effect to buttress the subsistence of Aboriginal society while maintaining the ecology (composition, structure, function) and ecosystems services that permitted Aboriginal society to endure for millennia.

An important although often neglected understanding of fire from an Indigenous Australian perspective is its spiritual and ceremonial significance. These intangible quantities have been embedded in Aboriginal myth and lore from time immemorial and are entwined with normative cultural values, procedures and protocols. For example, on Noongar boodja in the south-west corner of Australia the lighting of fires in burial pits/graves was a cultural and spiritual procedure to promote the transfer of life from the earth to the sky – into the sun-mother, which metaphorically held the womb of life and enabled life to continue after death in the spiritual sense (Hallam 2014).

In 2019–20 the Black Summer wildfires affected large parts of the Australian landscape, in particular Country on the eastern seaboard and throughout the Stirling Range and Great Western Woodlands in the west (Davey and Sarre 2020). Indigenous Australians who reside on Country impacted by the wildfires were severely affected as the event not only decimated community infrastructure but also destroyed sites and objects of cultural heritage significance and impacted on environmental values of cultural significance.

Key findings

Impacts on Indigenous cultural heritage

Indigenous cultural heritage, both tangible and intangible, includes sites, artefacts, practices and biological entities (species, ecological communities, landscapes) that are inseparable from the concept of Country (Brumann 2015; Weir *et al.* 2020). Consequently, Indigenous cultural heritage values may be impacted by fire and other extreme events along with the management practices, such as prescribed burning, deployed to mitigate threats.

The entirety of the area burnt in the 2019–20 season is Country belonging to Aboriginal people according to Indigenous law (Williamson *et al.* 2020). According to the laws of Western civil society conferred through legislative instruments such as native title determinations, land rights and heritage Acts, Indigenous land use agreements and through the ownership of freehold land, Aboriginal people hold significant legal rights and interests over large areas of the land affected by the 2019–20 fires.

Indigenous cultural heritage values such as scar trees, rock art and stone arrangements, along with objects of nature such as culturally significant entities, were all impacted by the

2019–20 fires. Quantification of the impact is challenging as the values ascribed to Indigenous cultural heritage objects of significance to Indigenous Australians vary with community and Country. The absence of a formal assessment of the impacts to Indigenous cultural heritage values across the fire ground also hinders any quantification of the impacts. Nevertheless, the impacts can be assumed to be significant given the large population of Indigenous Australians living in areas that were fire affected and the extent of the Indigenous estate impacted. For example, Williamson *et al.* (2020) estimated that over 96 000 Indigenous people were directly affected in New South Wales, Victoria, the Australian Capital Territory and the Jervis Bay Territory, while archaeologists and Aboriginal Elders (Pickrell 2020) suggest that tens of thousands of historic Aboriginal sites and artefacts, many of which had not been officially recorded, may have been damaged.

The impacts of the 2019–20 fires on the Indigenous land estate (Jacobsen *et al.* 2020) have also not been qualified; however, where they have occurred, they have been extensive. For example, the majority of the 5500 ha Budj Bim National Park, a World Heritage Cultural Landscape property, was razed, while 81% of the Greater Blue Mountains Area and 54% of the Gondwana Rainforests, both World Heritage properties, were impacted. These localities harbour Indigenous cultural heritage sites and objects that contribute to the Outstanding Universal Values of the properties.

From a viewpoint focused just on objects of nature, the numbers estimated to have been impacted, both at the species level (e.g. 9092–17197 plant species (Gallagher 2020)) and total number of individuals (~3 billion vertebrates (van Eeden *et al.* 2020)), suggest that many totemic and customary-use (e.g. bush foods, bush medicines, tool-making materials) culturally significant species, such as the koala (*Phascolarctos cinereus*) and black bean (*Castanospermum australe*), would have been impacted.

The mode of impact of fire on Indigenous cultural heritage values is complex, and varies temporally and spatially with reference to the fires and the type of cultural value under threat. For example, tangible objects such as scar trees can be impacted by direct consumption during the fire, or through subsequent operations to make the fire ground safe and secure when dangerous trees are intentionally felled. Similarly, petroglyphs and art on rock faces and overhangs can be damaged directly by radiant heat, and the same heat may also promote accelerated weathering through fracturing, exfoliation and spalling (Gunn 2011; Buckman *et al.* 2021). These types of values can also be deleteriously impacted by the deposition on rock surfaces of soot that may interact chemically with pigments or the rock itself to promote image deterioration (Black *et al.* 2017). Changes in local hydrology as a consequence of reduced vegetative cover, including soil/substrate moisture and the flow pathways of water during storm events (Chapters 5 and 6) may also impact Indigenous cultural heritage values through mechanisms such as increased surface weathering (Mol and Grenfell 2022), chemical compositional changes to substrates, and accelerated erosion of floor deposits and artefact scatters (Gunn 2011). For some values that appear resistant to fire – such as stone arrangements, tool quarry sites and shell middens – fire suppression activities such as clearing mineral earth breaks, or the violent deluge of water/retardant during aerial bombing campaigns, can noticeably dislodge objects and compromise the integrity of sites.

Although not a consequence of the 2019–20 fire event, one of the best-documented examples of the deleterious impacts of fire on Indigenous cultural heritage comes from the destruction of rock art dated at around 19 500 years old in Baloon Cave in Carnarvon Gorge, Queensland. In December 2018 a wildfire ignited the viewing platform and walkway at Baloon Cave, resulting in an extremely hot fire with heat so intense that nearby



Fig. 3.1. Baloon Cave Carnarvon Gorge, Queensland after wildfire destroyed the recycled plastic viewing platform. The heat was so intense much of the rock shelter surface exfoliated and collapsed, destroying or severely damaging rock art. Black soot covered remaining parts of the shelter wall and ceiling. (Photos: Paul S. C. Taçon, Griffith University, Queensland)

rock surfaces suffered massive exfoliation, destroying or severely damaging rock art, including rare, hafted stone axe stencils, as well as coating rock surfaces with soot derived from recycled plastic products (Taçon 2019; Taçon and Harding 2021) (Fig. 3.1). The Bidjara-Garingbal Aboriginal community on whose Country the Baloon Cave is located were extremely upset with what occurred. The community has subsequently been warning other Aboriginal communities not to use recycled plastic or other flammable material at rock art sites as it can put the art at significant risk.

The 2019–20 fire event does have an upside with respect to Indigenous cultural heritage in that across the fire ground the fires cleared away dense vegetation, permitting access to previously inaccessible areas and exposing previously hidden Indigenous cultural values. The best example of this positive outcome comes from the 7000 ha razed by fires on land around Lake Condah and in the Budj Bim Cultural Landscape World Heritage area in Victoria. As a consequence of the fires, previously unknown sections of channels and pools carved out of the rocky volcanic pavement by Gunditjmara People over 6600 years ago to harvest eels, part of the Muldoon trap complex, were revealed (Johnson 2020). The additional structures identified as a consequence of vegetation removal also include 27 stone houses (Indigenous Mapping Workshop 2020). Another positive outcome of the fires at Budj Bim were the low-impact control techniques employed to suppress the fires, avoiding the need to use heavy machinery to clear mineral earth breaks and thereby preventing any damage to stone structures or arrangements. These fire suppression approaches were co-designed and jointly implemented with the Gunditjmara People (Country Fire Authority 2020). Coincidentally, another positive outcome from the Budj Bim fires was the removal of 1100 feral animals (feral pigs and deer) during aerial shooting operations, a result achieved due to the significant reduction in vegetative cover following the fires (Miles 2021).

Response from the Aboriginal community

... I've watched in anguish and horror as fire lays waste to precious Yuin land, taking everything with it – lives, homes, animals, trees – but for First Nations people it is also burning up our memories, our sacred places, all the things that make us who we are.
(Allam 2020)

The 2019–20 fires compounded the perpetual trauma and helplessness that many Aboriginal people experience as a result of historic dispossession, institutional racism, and the contemporary disconnection and exclusion from Country and their obligations to care for Country (Williamson *et al.* 2020). This predicament is reinforced by the notion that the stewardship of Country as practised before colonisation protected sacred, culturally significant and spiritual values that are at the crux of Aboriginal identity and wellbeing, and are now those cultural values most at risk of being lost to future generations. For Aboriginal people, moving on, healing people, is very much a process that entails Country, healing Country, because Country is a living entity that intrinsically informs Aboriginal culture.

In concert with understanding and quantifying the impacts of the fires and suppression activities on cultural heritage values, many Aboriginal people were concerned about the ongoing protection post-fire of Country and the heritage values within. These concerns included protection of newly exposed and vulnerable heritage values, reconnecting with Country to support recovery, and subsequent mitigation of the likelihood of further and future impacts (Australian Broadcasting Commission 2020; Pickrell 2020). Ultimately Aboriginal people are seeking to prioritise their interests and draw upon their strengths and values to collaborate in the ongoing stewardship of their Country.

In the immediate aftermath of the fires, much attention was drawn to determining the extent to which, and how badly, Indigenous cultural heritage values had been impacted, in conjunction with the discovery of previously undocumented heritage values and how such values would now be protected. As happened in the wash-up for the 2003 Victorian Alps fires (Freslov 2004; Freslov *et al.* 2004), Aboriginal people and archaeologists sought a formal assessment and thus called on government to launch a thorough investigation to gauge the fire's effect on culturally significant sites and artefacts.

A greater recognition and better protection of Indigenous cultural heritage values susceptible to fire impacts, or associated suppression and management activities, is happening through collaborations between Traditional Owners, government institutions and other land managers. After the Baloon Cave tragedy, for example, the Queensland Environment Minister ordered an audit of the infrastructure at cultural heritage site and subsequently the removal of all recycled plastic walkways and viewing platforms (Australian Broadcasting Commission 2019). It is worth noting that the Baloon Cave tragedy was not the first occasion that recycled plastic infrastructure has caused the unsalvageable destruction of rock art. An identical outcome was the consequence of the ignition of a boardwalk during a hazard reduction burn in 2008 at a site in Keep River, Northern Territory (Lambert and Welsh 2011). Clearly, communicating the risk such infrastructure affords to Indigenous cultural heritage site managers, including Traditional Owners, is critical, a challenge the Bijara-Garingbal community is actively addressing (Taçon 2019).

In the Australian Capital Territory (ACT) on Ngunnawal Country during and following the fires, a range of strategies was undertaken in collaboration with Traditional Owners to safeguard Indigenous cultural heritage values. These strategies included the retrieval and temporary storage of a 700–1000-year-old culturally significant, women's business object from a remote area of the Namadgi National Park. This outcome was achieved through a collaboration between the Dhawura Ngunnawal Community, the Environment, Planning and Sustainable Development Directorate, the ACT Emergency Services Agency and the Australian Defence Force (Weaver 2020). Post-fire the ACT government has also reinforced its efforts to provide greater protection for Indigenous cultural heritage sites and artefacts during emergencies by implementing a range of safeguards (ACT

Environment, Planning and Sustainable Development Directorate 2020; Freeman *et al.* 2021). These safeguards include:

- low-fuel buffer zones, bare earth breaks and sprinklers around rock art sites;
- removing of timber viewing boardwalk at rock art sites;
- bare earth breaks to protect scar trees;
- 'no water bombing zones' to protect stone arrangements and burial sites; and
- the embedding of an environmental and cultural 'values officer' in the Incident Management Team to assist in protecting Country during emergencies.

Similar strategies to protect Indigenous cultural heritage values have also been executed in other jurisdictions (Forestry Corporation of NSW 2021; NSW Rural Fire Service 2021).

A transformational consequence of the fires driven by politicians, bureaucrats, land management practitioners, and welcomed by Aboriginal people, has been the drive to unlock and enable Indigenous land management practices, in particular cultural burning. It is perceived that this holistic approach to landscape management, which is based on a person's 'sense of place', their connection to Country and the anthology of traditional knowledge amassed over millennia, can confer significant social, cultural and environmental benefits that deliver security for Indigenous cultural heritage and promote healthy people and healthy Country (Burgess *et al.* 2005; Barber and Jackson 2017; Steffenson 2020; Taylor-Bragge *et al.* 2021).

While many Indigenous Australians and land management practitioners enthusiastically embrace Indigenous land management programs and cultural burning, it will take time, resources and considerable effort to make the transformation to this new paradigm, a new way of working that is Indigenous-led and Indigenous-owned. This is particularly the case in southern Australia where the revival of cultural burning faces many challenges to its widespread adoption, including land tenure and management regime intricacies, burdensome administrative requirements over small spatial scales and altered environmental setting from past pre-European conditions (e.g. weeds, feral animals, climate change) (Baker *et al.* 2001). Further compounding this revival is the under-resourcing of Indigenous communities who are still endeavouring to regain access to Country and advocating for their traditional cultural management practices to be recognised as legitimate evidence-based practices equivalent in legitimacy to those deployed by European-style land management practitioners and not simply dismissed as historical practices of the past (Williamson *et al.* 2020).

Busting paradigms that devalue traditional knowledge systems and practices, and decolonising Indigenous land management, underscores discussions and initiatives to reinvigorate and revive cultural burning (Fletcher *et al.* 2021; Plange 2021). For areas impacted by the 2019–20 events, the Commonwealth Government's provision of \$2 million in grant funding, to support Indigenous-led knowledge exchange of Indigenous fire and land management practices, goes some way to paradigm busting. Thirteen Traditional Owner and Indigenous enterprises were able to participate in the grant program that facilitated the sharing of cultural burning knowledge among community members and with partner organisations while re-engaging community with their Country and culture.

Recommendations

The summer wildfires of 2019–20 had a detrimental effect on the entirety of Indigenous communities in areas that were impacted, although the consequences of this extreme event on Indigenous cultural heritage remain unquantified.

The contemporary Australian perception of fire as an evil and dangerous element or hazard is as prevalent as ever (Fletcher *et al.* 2021). This attitude has led to the deliberate suspension of traditional land management practices, including cultural burning, in which fire was skilfully used by Indigenous stewards as a tool to care for Country and in so doing care for their community and themselves. Ironically, as noted by Fletcher *et al.* (2021), fire is now perceived as a Promethean threat to Australia's natural environment, its unique species and ecological communities, and its ancient Indigenous heritage.

This prevailing attitude, if allowed to persist, will devalue the wellbeing of all Australians and our unique environments. Consequently, limiting the impacts and mitigating the risk of future wildfires and similar extreme events on Indigenous cultural heritage values will be effectively improved through:

- enhanced knowledge of the spatial distribution and cultural significance to Indigenous Australians of places and objects/entities of significance and their vulnerability to fire;
- greater legislative and regulatory protection from destruction and desecration for tangible and intangible cultural heritage values;
- development of risk minimisation strategies, for routine land management and for emergency response, that do not deliberately or unintentionally ignore Indigenous cultural heritage values, but rather help to secure such values in perpetuity; and
- improved comprehension of the viewpoint of Indigenous Australians on fire to find common ground or a common understanding in relation to fire and the stewardship of Country that recognises the rights of Indigenous Australia to participate in decisions about themselves and their Country.

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