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‘Like broad arrows’: A history of encounters with Central Australian rock art

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Dedication

To those Aboriginal people in Central Australia who have, over 40 years, shared our interests in the lives of the ‘old people’ and to the Traditional Owners who generously granted permission to us to undertake research at rock art sites.

Introduction

Research on rock art in Central Australia[1] has moved from a basic record of its presence (1870–1890), where it was mostly approached as an ethnographic curiosity, to more nuanced understandings of the sociocultural contexts underpinning production of rock art that emerged from anthropological research between 1890 and 1940. It was not until 1965, with pioneering research by Bob Edwards, that rock art moved to centre stage of archaeological studies and became the focus of dedicated research. Specialised rock art research in Central Australia involving rock paintings, engravings and post-European contact graphics increased after 1990 with a range of studies that approached rock art as a historical record of cultural geography, looking at changing style, structure and composition of the art and its likely age. Despite this proliferation of studies, detailed regional surveys of rock art in Central Australia did not begin until 1988.

Early accounts

Before 1950, observers of rock art were mostly interested in Central Australia as part of an emerging picture of the ethnography of the region. Most accounts provided only a basic description of the art itself. Sometimes, these included speculation about its meaning, or the techniques used in producing the paintings and engravings. Sometimes just a record of its presence was documented. Early accounts rarely provided detailed descriptions of individual panels or of their composition, the superimposition of motifs, or any evidence for the likely age of art panels.

1 In this chapter, Central Australia encompasses a topographically varied area of the arid zone centred round Alice Springs. It includes the central ranges, sand ridge deserts, expansive sand plains and riverine corridors. The area is bounded in the north at latitude 22°S – thus it includes the southern reaches of Walpiri country. It extends south to latitude 27°S and incorporates Anangu-Pitjantjatjara-Yankuntjatjara Lands. It extends east as far as longitude 138°E and to the west to longitude 129°E.

Explorers: 1860–1891

The first British exploration parties to enter Central Australia (Giles 1889; Gosse 1973; Stuart 1865; Sturt 1865; Tietkens 1891; Warburton 1981) either saw no rock art or did not comment on it. John McDougall Stuart, however, did notice inscribed trees at several locations (Hardman 1865:250, 258), perhaps because, as a surveyor, he was predisposed to notice blazed trees. For instance, at Marchant Springs on the Finke River (22 February 1861), Stuart noted a tree marked with a barred-circle, and bird tracks, which he described using a surveyor's lexicon as 'like "broad arrows"' (Hardman 1865:250). This was, he said, 'the first attempt at representation by the natives of Australia which I had ever seen' (Hardman 1865:250). Later, on the Hugh River (15 March 1861), he noted another tree inscribed with 'broad arrows and a wavy line' (Hardman 1865:250).

Explorers did not always notice rock art near the wells and waterholes they depended on. For instance, Stuart did not comment on a large vertical panel of pecked cupules at Annas Reservoir, which he visited and named in April 1860. Nor does he appear to have seen engravings at a waterhole on the Hugh River that he visited on 15 March 1861. Here he noted another inscribed tree, but not the small panel of old rock engravings, a circle enclosing a pair of macropod tracks above the waterhole (this site was relocated in 2007 during archaeological surveys (Ross and Smith 2007)). Nevertheless, Stuart's account of marked trees provides the first glimpse of the distinctive graphic systems used in Central Australia.

The construction of the Overland Telegraph Line from 1871 to 1872 brought more activity to Central Australia. Ernest Giles used the telegraph line as a springboard for exploring country to its west. Giles was taken with the 'romance of exploration' and, not surprisingly, often commented on the rock art he saw. His journals provide the first accounts of rock paintings in Central Australia. He vividly describes paintings at Tarn of Auber (Tjungkupu), but apparently did not notice the rock engravings on surrounding rock pavements. Giles was an unusually reflective observer who commented on the likely techniques used to apply the paintings and the way natural features of the rock were incorporated into the rock art. His journal entry on 5 October 1872 notes that:

> One device represents a snake going into a hole; the body of the reptile is curled round and round the hole, though its breadth is out of proportion to its length, being seven or eight inches thick, and only two to three feet long. It is painted with charcoal ashes which had been mixed up with some animal's or reptile's fat. (Giles 1889:78–79)

South-west of the Tarn of Auber, at a campsite that Giles called Glen Thirsty (Yatajirra) (see Smith and Ross 2008a), he subsequently described rock art in several rock-shelters, which he dubbed the 'Aboriginal National Gallery of painting and hieroglyphics', writing that:

> We … found a Troglodytes' cave ornamented with the choicest specimens of aboriginal art. The rude figures of snakes were the principal objects, but hands, and other devices for shields were also conspicuous. One hieroglyphic was most striking; it consisted of two Roman numerals – a V and an I, placed together and representing the figure VI; they were both daubed over with spots, and were painted with red ochre. (Giles 1889:101) (Figure 8.1)

Figure 8.1: Explorer Ernest Giles’s ‘Aboriginal National Gallery’, Glen Thirsty.
Source: Photograph by June Ross.

Work parties for the Overland Telegraph Line also occasionally observed rock art. Ooraminna Rockhole, just south of Alice Springs had become an important waypoint for these parties moving through the region. By 1873, the vivid paintings above the rock hole, mostly emu tracks and ‘shield’ motifs, had attracted comment (Overlander 1891). Another party under Arthur J. Giles, thought to have been a worker on the telegraph line, observed a large panel of rock engravings near the Finke River in 1873 (Worsnop 1897:45), which he described as consisting of pecked dots, track lines, arcs and lines. This is the earliest account of rock engravings in Central Australia and is also noteworthy because A.J. Giles was the first to seek information from Aboriginal people to interpret rock art. He was unsuccessful in this respect and in lieu of a better explanation decided that the engravings might represent some sort of lunar calendar made by the lost Leichhardt expedition of 1848 (Worsnop 1897:45–46).

Anthropologists and ethnographers: 1891–1942

Ernest Giles’s remarks remained the only detailed observations of rock art in Central Australia until anthropological research commenced two decades later. However, for anthropologists and missionaries of the region, rock art was only an incidental interest. For a number of different reasons, they were mostly interested in the ethnography of Aboriginal societies and their traditions. Notwithstanding this, they had the advantage that they could usually communicate with local people, either in broken English or rudimentary Arrernte, though at first only mission-raised T.G.H. Strehlow was fluent in a local language.

Elder Expedition

The Elder Expedition of 1891–1892 was one of the most elaborate scientific exploration expeditions of its time (Lindsay 1893). Although it subsequently fell apart, it entered the Everard Ranges in 1891 where the naturalist, Richard Helms, made detailed notes on Aboriginal culture, including local rock paintings (Helms 1896). He left a remarkable account of the local rock art he recorded, illustrating each major panel of rock paintings (Figure 8.2). He commented, that 'they were not executed simply for idle sport becomes more evident the longer one looks at them. They probably possess a symbolic meaning, which I confess myself unable to elucidate' (Helms 1896:265). In his discussion of individual panels of paintings, Helms took pains to note any evidence of age or superimposition. In one case, he noted that 'the designs are undoubtedly of different age, and in many instances, particularly on the roof, which is nearly black, are obliterated by smoke' (1896:262). At another site, he observes that: 'It is a very old painting and was much obliterated, and … is painted over with bustard-tracks' (1896:262, Plate IX). Helms also commented on the incorporation of natural features into the rock art, observing at one site that 'the readiness with which the blacks adapt already existing outlines to their intended designs is here particularly well exemplified. A natural depression in the rock resembling the shape of an eye is utilised to represent that organ' (1896:262). Helms saw rock engravings ('broad arrows') but did not give them the attention that he devoted to the paintings (1896:265).

Figure 8.2: Rock paintings recorded by Richard Helms in the Everard Ranges in 1891.
Source: Helms 1896: Plate IX.

Horn Expedition and Baldwin Spencer

The Horn Expedition of 1894 was the first scientific expedition to enter the Alice Springs district (Spencer 1896). Its primary aim was to investigate the natural history of the centre of the continent, but its investigations initiated some of the most influential anthropological studies of the nineteenth century (Mulvaney and Calaby 1985). The research of Spencer and Gillen (1899, 1927) represents a quantum leap from earlier works, in that while not focused on rock art, it explored in some detail the cultural context in which Central Australian rock art was produced.

An initial report of the area's anthropology by E.C. Stirling, director of the South Australian Museum, illustrated representative motifs from several rock painting sites in the George Gill Range, at the Tarn of Auber and at Ayers Rock (Uluru), with unsupported interpretations of what they were thought to represent (Stirling 1896). Baldwin Spencer and Frank Gillen's later work across the region (1899, 1927) was fundamental in providing deeper insights into Aboriginal social systems, totemic beliefs and their elaborate cosmologies, which centred on the travels of Ancestral Beings over the landscape in the Altyerre, a creation-time that Spencer dubbed the 'Dreamtime' (see Mulvaney and Calaby 1985; Mulvaney et al. 1997). Spencer's partnership with F.J. Gillen, local postmaster and protector of Aborigines in Alice Springs, gave this research a deeper reach into Aboriginal cosmologies than any previously, as well as an ability to interact with local people.

Spencer and Gillen's research led them to the view that much of the art, including rock art, body decorations and designs on *tjurrunga* (sacred boards or plaques) were grounded in the religious beliefs of the 'Dreamtime', mostly as visual evidence signifying the presence of Ancestral Beings and their creative actions. As part of their attempts to understand such cosmologies, Spencer and Gillen published descriptions of the rock art motifs at three sites: Emily Gap (Anthwerrke), Quiurnpa (Kweyunpe) and Watarrka (1927:Plates II, III, IV).

Their most detailed account was of the large, striped totemic designs painted in red and white pigments in a gorge at Emily Gap (Spencer and Gillen 1899:171, Figure 132). This painting site, they reported, was associated with Utnerrengatye caterpillar ancestors, and the apparent 'eyes' represent caterpillar eggs. At these three sites, we can see that Spencer and Gillen had begun to understand that much of the art is linked with the totemic belief system, although neither yet fully appreciated the degree to which this system codified links between people and place. These art sites also gave them a glimpse of the way in which local interpretations of the rock art was contingent on place and context, with a labile rather than fixed iconography. They also began to see that motifs in the rock art were linked to designs used in ceremonial body decoration.

Their research also led them to appreciate the direct role that some rock art played in Arrernte ceremonial activity (Spencer and Gillen 1899:193–201). For instance, at Undiarra (Indiarra), they learned that, as part of ceremonies, the prominent red and white stripes would be repainted and blood from men's arms allowed to flow over the painting while other men sang the songs associated with the activities of kangaroo ancestors. Although Spencer and Gillen (1899:1927) interpreted this as an 'increase' ceremony, what they had described was more likely to have been concerned with maintenance of species and ritual stewardship of the land. As part of this research, Spencer and Gillen began to make a conceptual distinction between sacred art and ordinary or secular art.

North-West Prospecting Expedition

Herbert Basedow, prospector on the South Australian Government North-West Prospecting Expedition into the Mann and Musgrave Ranges in 1903, made extensive notes on local ethnography explicitly to allow comparison with the records of the Elder Expedition, the Horn Expedition and the works of Spencer and Gillen (Basedow 1904). His report included basic descriptions of panels of rock paintings (1904:41–46) as well as descriptions of bruised or pounded rock engravings that he referred to as 'primitive rock scratchings' (1904:38). In particular, Basedow noted the extent to which many rock paintings had been over-painted or repainted (1904:41). He also apparently saw track-line motifs in the rock art and thought that they represented 'route maps' (1904:42). On the 1903 expedition, Basedow was only 22 years old and commencing his career as a self-taught anthropologist. Although his notes on the ethnography of the regions the expedition traversed were detailed, it is perhaps not surprising that there is little in his account of the rock art beyond a basic record.

T.G.H. Strehlow

T.G.H. Strehlow did more than any other scholar to deepen understanding of the cultural history of Central Australia. With an academic interest in literature and a fluency in Arrernte that came from a childhood on Hermannsburg Mission, he was able to show the poetry and detail in the elaborate song cycles of the region. He was also able to demonstrate that in the elaborate totemic geography of Central Australia, each Dreaming story was fundamentally linked to a particular place (Strehlow 1947, 1971). He provided the first formal description of the graphic systems used in Central Australian art (1964) and its landesque nature, noting that:

- Each totemic centre was associated with sacred patterns that were 'believed to have been provided by the local supernatural beings' (1964:50). These patterns were 'rigidly formalised' and adhered to, although changes could be made to designs in the secular domain.
- Each sacred pattern was tied to a 'specific location' rather than to the associated 'mythology'.

Strehlow, however, gave little attention to rock art, largely dismissing it from consideration:

> The rock paintings and rock carvings of inland Australia may be mentioned only in passing … none of the works at these inland sites can compare with the rock paintings and carvings found in certain other parts of the continent, especially in northern and north-western Australia. (Strehlow 1964:55)

C.P. Mountford

Charles Mountford led ethnographic expeditions into Central Australia in 1938–1942. Travelling from Ernabella to Ayers Rock and into the Warburton, Mann and Musgrave Ranges, he mostly worked in what are now the Anangu-Pitjantjatjara-Yankuntjatjara Lands (APY Lands) (Mountford 1948, 1955, 1960, 1965, 1968, 1976). He gave much more attention to Aboriginal rock art and graphic systems than other anthropologists had, disseminating his work in a slew of publications over the next three decades. In some cases, he was able to directly observe people painting designs, or ritual interactions with existing paintings. For instance, at the Ngama site, near Yuendumu, which he visited in 1951 with an expedition initiated by the Board for Anthropological Research in Adelaide, he observed a senior man take the hand of a male initiate and guide it to key designs (1968:69–70).

Mountford's work is notable as he was the first researcher to attempt to follow an entire Dreaming track on the ground, which he described in a book-length study of the Dreaming track of the mulga snake (Jarapiri) (Mountford 1968). He also produced ethnographic studies

of rock paintings at Ayers Rock (1965) and made a detailed record of the painted assemblage at Cave Hill (Walinynga) (1976:65–72, Plate 15, Figure 8). His book, *Ayers Rock, its people, their beliefs and their art* (1965) was based on his Master of Arts (MA) thesis at the University of Adelaide in 1964. His magnum opus, *Nomads of the Australian desert* (1976), is a remarkable catalogue of the Dreaming tracks and the associated actions of the Ancestral Beings throughout the Mann–Musgrave Ranges. Even today, this remains the most detailed and systematic account of the tapestry of cosmologies in any region, except possibly those given in Land Claim books in the 1980s. Mountford also recorded panels of rock engravings at Ewaninga, near Alice Springs in 1959 (Mountford 1960), which he regarded as an archaic art form with similarities to the engravings in north-eastern South Australia with which he was familiar. Like other recorders of rock art in this region, he found that his Aboriginal informants invariably attributed the origin of the art to the Dreaming, stating that it was not made by men but by a 'mythical hero during the creation period' (Mountford 1960:145).

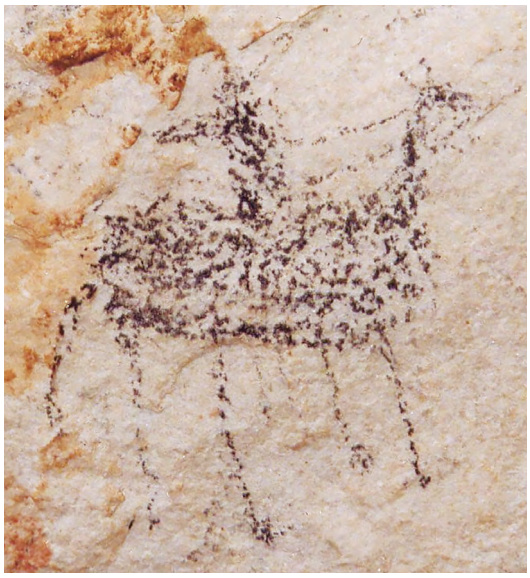

Figure 8.3: Post-contact drawn horse and rider, Watarrka National Park.
Source: Photograph by June Ross.

Mountford's work marked a watershed for rock art research in Central Australia, because he showed that the art remained a 'living art' among the Aboriginal people in this region, noting:

- Some sites had acquired new paintings between 1930 and 1940, as testified by a comparison of photographs.
- Some sites included post-European contact motifs such as horses and camel trains (Figure 8.3).
- He observed an Aboriginal man painting a motif at Ayres Rock by applying red ochre and pipeclay with a finger and outlining the motif with a brush made from bark (Mountford 1948:87–88).
- He observed men 'bruising' motifs by pounding rock surfaces (Mountford 1955).

Mountford's work also extended our understanding of the sociocultural dimensions of this 'living art', showing that:

- Traditional interpretations of rock art were often contingent on social and territorial context, and the right to produce paintings was entangled with primary rights in a site.
- The production of rock art was a continual process, as evident in the repainting or over-painting of motifs, and additions to pre-existing painted friezes.
- There were a range of ways people interacted with rock paintings.

Mountford had also begun to appreciate that rock art was often as much about performance and practice as display. At the Ngama painting site in 1951, he saw:

> An old Aboriginal, taking the right hand of each initiate in turn, rubbed it on the rock from the tail to the head of the snake painting, then, retracing his steps, placed the hand of the initiate on each individual design, at the same time explaining its mythical significance. (Mountford 1968:69–70)

Rock art researchers

From 1890 to 1960, work on rock art in Central Australia moved from interest in its place in the ethnography of the region to a much more nuanced understanding of the sociocultural aspects of the function and production of rock art. Charles Mountford was a highly influential figure in this shift. Until the 1960s, however, he was the only researcher working specifically on rock art in Central Australia, although Richard Gould had also observed men making rock paintings in the late 1960s (Gould 1968). Much of Mountford's primary fieldwork in the region was carried out before 1942 and published later (1955–1965) in a series of books and articles on the rock art. It was not until 1965 that the archaeology of rock art became the primary concern of research projects, and that the art itself became the core focus of research.

Bob Edwards: 1965–1970

The key figure in the shift to a more archaeological approach to the study of rock art in Central Australia (and especially rock engravings) was Robert Edwards (Smith et al. 2020). In a break with earlier work, the rationale for Edwards's approach (see below) was that the rock engravings might be 'of great antiquity' and derive from a period predating the ethnography (although he did not flag a specific time period).

Edwards's research in Central Australia (undertaken between 1965 and 1968) occurred during a decade when archaeological research in Australia was rapidly expanding and he was undoubtedly influenced by this milieu (Mulvaney 1969; Griffiths 2018). His work essentially marks the beginning of systematic archaeological exploration of Central Australia. For instance, Richard Gould did not begin his pioneering excavations at Puntutjarpa until 1967 (Gould 1968) and at James Range East (Intirtekwerle) until 1974 (Gould 1978). Eugene Stockton undertook the first archaeological excavation in the Alice Springs region, digging at Kerringke rockhole in 1969 (Stockton 1971). Apart from Edwards work, broad-ranging archaeological reconnaissance of Central Australia only began with surveys in 1973 by L.K. Napton and A. Albee (1973) and by Mike Smith from 1980 to 1988 (Smith 1988).

Edwards was curator of anthropology at the South Australian Museum (1965–1973) where, under the mentorship of Mountford, he had developed his interests in engravings as relics of an ancient Australia. Edwards's program of work on rock engraving sites began in the Flinders Ranges some time prior to 1962, and subsequently developed into a major survey of engraving sites in the Olary region of South Australia, centred on Panaramitee Station. By 1965, Edwards had extended his work into Central Australia, comparing the frequency of different motifs at six localities in north-east South Australia (Florinna, Panaramitee, Pitcairn, Tiverton, Nackara and Winnininnie) with several localities in Central Australia (Tukulnga, Keringke and at Roma and N'Dhala gorges). Between 1962 and 1971, he published nine research papers on rock engravings (Edwards 1964, 1965a, 1965b, 1966, 1968b, 1971; Mountford and Edwards 1962, 1963, 1964).

Edwards's involvement with Central Australia was funded by a grant from the then Australian Institute of Aboriginal Studies (AIAS) in 1965 to photograph and record rock art sites across the Northern Territory. In this, he had the support of the existing principal of AIAS, Fred McCarthy, who had strong interests in rock art. In 1967 he was also commissioned by the institute to visit Thomas Reservoir (Alalya) in the Cleland Hills, west of Alice Springs, to record the first of a series of engravings of faces (Edwards 1968a, 1968b), a type of motif now widely known from the interior (Brady and Carson 2012; McDonald 2005; Ross and Smith 2009) (Figures 8.4 and 8.5). To allow his research to develop into a more systematic survey of rock art sites in

Central Australia, Edwards convinced a newly established newspaper, *The Australian* (first published in July 1964), to fund an expedition across the Centre in return for a six-part serialised account of his fieldwork (1970). As a result, he was able to embark on an extensive 10-week journey through Central Australia in 1969. During this, he travelled north into the Tanami, into the area west of Alice Springs (including a second trip to the Cleland Hills, this time guided by Kukatja-Luritja man Timmy Tjukadai) and into the APY Lands across to the Blackstone Range. On his second visit to the Cleland Hills, he also made a series of latex casts of the distinctive 'face' designs. He was also the first person to suggest a site museum of desert rock art at the prominent rock painting site at Cave Hill (Walinynga) in the APY Lands (Edwards 1975).

Figure 8.4: One of 17 engraved archaic faces at Alalya, Cleland Hills.
Source: Photograph by June Ross.

Figure 8.5: Engraved archaic face with body, Alalya, Cleland Hills.
Source: Photograph by June Ross.

Edwards's approach to recording and analysing engraving sites was a break with previous work in Central Australia. He approached this as a systematic, quantitative and comparative survey of rock engravings in north-eastern South Australia and Central Australia. Sometime before 1965, Edwards had begun to collect a range of quantitative data, mostly on motif frequencies within sites. To gain a first-order overview of the structure of the art, he grouped his motif counts into broad motif classes, concatenating data on the dimensions of motifs, styles and compositions into

10 motif types. At this scale, his results showed an overall similarity in the engraved art at sites across southern and Central Australia, suggesting to Edwards that the engravings represented an ancient pan-continental art style (1966a).

In another break with previous work, Edwards was also concerned with the location and condition of the engraving sites. In 1971, he summarised his views on the antiquity of the engravings (1971), noting:

- the high degree of weathering, patination and break-up of engraved pavements
- their proximity to scatters of large stone artefacts that he presumed were archaic types
- the location of engraving sites near water, which he implied was different to the distribution of recent art sites.

To Edwards, both the archaic stone tools and evidence of an arid landscape suggested an early Holocene antiquity for the engravings, though later scholars have sometimes assumed a Late Pleistocene age for Panaramitee-style rock engravings (but see Rosenfeld 1991; Smith et al. 2020).

Although the idea of Panaramitee as an ancient pan-continental phenomenon is a legacy of Edwards's rock art research that frames much rock art research in Central Australia (e.g. Clair Smith 1992; Forbes 1982; Franklin 2004; Maynard 1979; Rosenfeld and Mumford 1996), the basis for this proposition has been questioned by later researchers (see Rosenfeld 1991; Smith et al. 2020).

The proliferation of rock art research: 1988–2000

Bob Edwards put rock art research in Central Australia firmly on an archaeological footing. A significant return to ethnographic research on the structure of the graphic system was the seminal 1973 publication by Nancy Munn (*Walbiri iconography*), who analysed the production of sand drawings in a social anthropological study of Warlpiri graphic conventions. A concern with both the archaeology and social anthropology was characteristic of rock art research as it proliferated after 1988. From this time, rock art research across Central Australia routinely approached paintings and engravings as records of social geography, variously looking at social boundaries, and relationships of the art to place, land tenure and cosmology. The social and ontological contexts of art production, and subsequent ritual interactions with rock art surfaces, were also given more attention. The focus of research mostly moved back to rock paintings, looking in detail at individual site complexes, with a consideration of style, structure, colour and composition.

Academic research

Working on a finer scale than Edwards, Sarah Forbes (1982) undertook a formal analysis of engravings at a large site complex at N'Dhala Gorge, east of Alice Springs, to investigate the degree of internal uniformity of the assemblage. The notion of a single ancient period of rock engravings became more problematic as Forbes (1982), and later Franklin (1991), Rosenfeld and Mumford (1996) and Ross (2003) showed that there was significant spatial and temporal patterning within individual rock complexes of rock engravings, despite overall use of a common core vocabulary.

The social context of rock art production was emphasised in several studies. Ursula Frederick (1999) related patterning in rock art production in the George Gill Range (Watarrka) to changes in Aboriginal society during the European contact period, showing that, despite the ongoing use of a core graphic vocabulary consisting of circles, arcs and tracks, there had been changes in the

site locations, motif types and techniques used during this period. Other researchers also gave specific attention to changes in rock art (paintings, stencils, prints, drawings and engravings) across Central Australia in the colonial period (Ross 2018). Galt-Smith (1997) found that assemblages of rock paintings within the region were most diverse at sites otherwise identified as important totemic sites. Rosenfeld (Rosenfeld and Mumford 1996; Rosenfeld and Smith 2002) explored social contexts of rock art production in an overview of research data from several rock art complexes, Watarrka, Wallace Rock Hole (Thuiparta) and Puritjarra, suggesting that two broad categories of paintings were present:

- **Secular art**, consisting of track alignments and hand stencils or prints. This type of rock art is widespread and commonly found in association with evidence of everyday occupation.
- **Sacred art**, consisting of elaborate formal or heraldic motifs associated with Dreaming stories.

Rosenfeld proposed that the secular art articulated daily economic and social geographies of groups associated with their foraging ranges, while sacred art was anchored in totemic geography (see also Gunn 1997c).

In a formal analysis of rock paintings, engravings, stencils and drawings investigating the repetition of motifs across space and through time, Ross and Davidson (2006) argued that ritual practices, both sacred and secular, were responsible for the production of much of Central Australia's rock art.

Impact of government agencies

By far the majority of rock art recording in Central Australia, undertaken between 1990 and 2015, has been commissioned by government agencies such as the Aboriginal Areas Protection Authority (formerly the Sacred Sites Authority), the Central Land Council (CLC) and the Conservation Commission of the Northern Territory (CCNT), latterly renamed the Parks and Wildlife Commission/Service of the Northern Territory (PWCNT) and now the Department of Environment, Parks and Water Security. These agencies found that they needed to improve site documentation to protect and manage cultural sites on lands for which they were responsible. The trigger for this proliferation of rock art recording programs seems to have been, in the case of the CLC, a shift from a core business concerned with land rights and land ownership in the 1970s and 1980s (land claims under the *Aboriginal Land Rights (Northern Territory) Act 1976* had a statutory 'sunset' clause), to a greater focus on the management of Aboriginal lands and Land Trusts in the 1990s. The requirement for parks and reserves administered by PWCNT to be jointly managed by Aboriginal Traditional Owner groups was initiated with passage of the *Territory Heritage Conservation Act 1991* (NT) and became widespread with the passing of the *Parks and Reserves (Framework for the Future) Act 2003* (NT).

Collectively, these studies created detailed coverage of the corpus of rock art in Central Australia, mostly in the MacDonnell, James and George Gill ranges, along the Finke, Hugh, Todd and Palmer rivers, and on the margins of the Simpson Desert, with some rock art complexes recorded multiple times by different researchers. Kimber (1991), Gunn (1995b) and Ross (2003) undertook comprehensive surveys of sites in Rainbow Valley (Urre) south of Alice Springs. Taçon (1994), Worrall (1994) and Ross (2003) documented assemblages of engravings at or in the vicinity of Roma Gorge in the West MacDonnell Ranges. Rosenfeld undertook rock art surveys, in addition to her academic research in Watarrka National Park (Rosenfeld 1990, 1993, Smith and Rosenfeld 1992; see also Ross 2003, 2009). Brown (1993, 1994) and Gunn (1989a, 1999b) completed site recording and condition assessments at the Ewaninga engraving site and at Kyunba just outside Alice Springs.

The most extensive body of recording has been by the indefatigable R.G. 'ben' Gunn who, over a decade of work from 1988, made detailed records of nearly two dozen rock art complexes at Illararri (Gunn 1988), Ewaninga (Gunn 1989a), several sites in the Dulcie Range (Gunn 1989b, 1992, 1993a, 1997b), Ooraminna (Gunn 1991a), Erota and Inangne (Gunn 1991b), Therreyererte (Gunn 1993b), Kwerlpe (Gunn 1994a), Kulpi Mara (Gunn 1995a), Rainbow Valley (Gunn 1995b), Keringke (Gunn 1995c), Inteyerre (Gunn 1997a), Intirtekwerle (Gunn 1998), Emily, Jessie and Heavitree gaps (Gunn 1999a), Kuyunba (Gunn 1999b), Akewlpe (Gunn 2001), Alyemperrke (Gunn 2002b), Irtikiri (Gunn and Thorn 1997a), Kulpitjata (Gunn and Thorn 1997b), and Yamaparnta (Gunn 1994b), one of the few sites recorded in Warlpiri Country during this phase of work.

Although many rock art studies from this phase of work involve detailed recording of individual rock art complexes, they are almost all unpublished in-house reports without peer review. With the exception of R.G. Gunn, who used a quantitative methodology (motif counts), these reports provide little scope for formal analysis of the art. The need to work closely with traditional custodians to document contemporary Aboriginal significance of each site complex has allowed some researchers, particularly Gunn, to record details of the sacred geography, Dreaming stories and totemic affiliations of many rock art sites. Gunn observed that, for Aboriginal people, rock art is only one of a number of elements that structure the totemic significance of a locality, and that the totemic geography is largely vested in natural features (Gunn 1995a:125, 1997c). In a comparison with the totemic geography outlined by Spencer and Gillen a century earlier, Gunn (2000) also found that large, bichrome, geometric motifs were distinctive at each site where they occurred – indeed, distinctly different in design from those at other sites.

This impressive phase of rock art recording produced a large and exceptionally detailed body of data on rock art assemblages across Central Australia. This primary literature is essentially a grey literature, mostly inaccessible to scholars, although there has sometimes been a sharing of reports among individual rock art researchers, and Gunn (2004) has published an outline of his accumulated rock art data.

Survey and synthesis

We could expect that a period that saw the rapid accumulation of new data would be followed by a period of synthesis. In Central Australia, despite an avalanche of rock art research after 1991, the fragmentation of studies undertaken for different purposes made broad-scale synthesis difficult, although two overall syntheses have emerged from programs of research by R.G. Gunn and June Ross.

Gunn provided an overview of Central Australian rock art (2004) and a series of studies exploring regional and spatial patterns in the rock art (Gunn 1995d, 2002a, 2011). He also revisited ideas about its articulation with land tenure and Dreamings (Gunn 1997c, 2011). Gunn used changes in motif frequencies in rock paintings to compare and contrast rock art in the central ranges (including the MacDonnell, James, Waterhouse, Harts, Deep Well and Rodinga ranges) with that recorded at complexes to the south-west of Central Australia (including the George Gill Range; Gunn 1995d, 2002a, 2011). Quantitative analysis of frequencies of motif type, technique, size and colour allowed Gunn to test ideas about the relative richness and diversity of rock art in these two regions, finding greater use of complex geometric designs in the central ranges where Strehlow contended there had been greater social complexity resulting from more favourable environments (Gunn 2002a).

Figure 8.6: Painted pole designs at Back Canyon, Watarrka National Park.
Source: Photograph by June Ross.

June Ross, working across a wide arc of Central Australia (1999–2003) in collaboration with PWCNT, was also able to take a regional approach based on her research at 51 site complexes (Ross 2003, 2005). The majority of these rock art sites were in the central ranges (see above), the George Gill Range, or in the riverine corridors of the Finke River and its tributaries. These data allowed a fine-grained characterisation of the structure and composition of rock art in Central Australia, building on the approach taken by Rosenfeld a decade earlier. Analysing the spatial distribution of rock art assemblages at a range of scales, Ross (2003) found that variability across

the region was subtle and articulated in a core graphic vocabulary that had been employed at regional scale, within site complexes, within sites and over single panels irrespective of technique (engraving, painting, stencilling, printing or drawing) (Ross 2002). Specifically, she found that individual site complexes feature specific dominant motifs that, while they may not have been predominant quantitatively, had been produced in a manner that creates a visual dominance either by placement, size, colour or repetition (Ross and Davidson 2006) (Figure 8.6). She related the creation of these motifs to the totemic geography documented in ethnographic accounts. In order to understand the spatial placement of rock art in the central ranges, Ross and Abbott compared the significance of the Dreamings recorded at sites and the associated art with the distribution of reliable water sources, the geological rock type, the associated archaeological material, and the medium or size of the rock art assemblage at site complexes. They concluded that no one element could be flagged as the defining feature for the selection of locations for the production of rock art (Ross and Abbott 2004), and many of the most significant Dreaming sites today contained no rock art at all.

The issue of chronology

The chronological dimensions of Central Australian rock art have received less attention than its anthropological aspects or its sociocultural contexts. Unlike in northern Australia, rock art researchers in Central Australia have not generally recognised a clear dichotomy in rock paintings between early and late rock art styles (comparable to the distinction between Gwion and Wanjina art in the Kimberley, or between Dynamic Figure and x-ray art in western Arnhem Land). The closest analogue to this is where some researchers have assumed that the engraved art of Central Australia uniformly represents an archaic body of art substantially older than other pigment art in Central Australia (contra Maynard 1979), a notion that has unfortunately persisted among some researchers since the 1960s, despite identified similarities in the structure and composition of the younger engraved and painted assemblages (Ross 2002). Ross's study supported Rosenfeld's contention that some engravings were produced into the recent past in a gestural manner and style similar to recent pigment motifs indicating that the two assemblages were contemporaneous (see also Frederick 1997).

Absolute dating

Central Australian rock art research has not seen major investments in direct dating of rock art, unlike projects undertaken in the Western Desert and northern, Australia where direct dating of rock paintings has emerged as an important line of rock art research (e.g. David et al. 2013; Finch et al. 2020; McDonald et al. 2014; McDonald and Veth 2012; Ross et al. 2016). This may be, in part, due to the failure of earlier attempts at dating engravings in the Olary region using cation-ratio techniques (Dorn et al. 1988).

Field evidence from several Central Australian studies has also shown that engravings were produced over an extended period of time and into the late Holocene. A fragment of an engraving was recovered from excavations at Keringke, where its position in a late Holocene deposit provides only a *terminus ante quem* for engravings (Stockton 1971:57). More secure evidence that rock engravings were produced during the last few millennia was provided by a large slab with engraved bird tracks found buried within late Holocene deposits at Intirtekwerle (James Range East) (Gould 1978:120, 122; Smith 1986). Smith et al. (2009) dated the formation of calcium oxalate crusts on rock slabs and boulders containing engravings at two sites, Wanga East in the George Gill Range and Puritjarra, and established that oxalate had begun forming in the early Holocene (NZA27388, 7970-8161BP), extending over the engravings in the mid-Holocene (from NZA27393 4840-4965BP). The age estimates for formation of the oxalate

crusts were cross-checked against radiocarbon ages for sediments excavated from beneath the fallen rock slabs and boulders, providing a maximum age for the engravings (Figure 8.7). Noting widespread evidence for pulses in the production of engravings, Smith (2013) used a state-and-transition model to suggest that any major challenge to land tenure or territory posed by rapid changes in population or environment would see accelerated production of rock art, followed by a period when existing rock art was curated, remarked or refreshed once the social geography had once again stabilised.

Figure 8.7: Engraved circles covered in calcium oxalate crust sampled for dating, Wanga East, Watarrka National Park.

Source: Photograph by June Ross.

Relative sequences

A number of researchers have identified relative sequences in panels of paintings or engravings at individual art site complexes, primarily using superimposition of motifs and degrees of patination (Rosenfeld and Mumford 1993; Rosenfeld and Smith 2002; Ross 2003). A handful of studies have attempted to integrate changes in rock art assemblages into programs of excavation at archaeological sites (Rosenfeld and Smith 2002; Smith et al. 1998; Smith and Ross 2008a; Thorley and Gunn 1996).

At a regional scale, Gunn (2002a) proposed a five-phase rock art sequence based on technique, suggesting that the range of techniques used to produce rock art have broadened over time. A detailed study of relative chronology at both the regional level and within individual site complexes was carried out by Ross (2003) in a fine-grained analysis of superimposition, weathering and relative patination of motifs at rock art sites across Central Australia. Although this was not a straightforward task, given that a core graphic vocabulary was used throughout the period of rock art production, and the composition of earlier and later art varied from complex to complex,

her work showed that there was a substantial increase in production of rock art during the last millennium (see Ross 2005; Smith and Ross 2008b). Using site data from Ross (2003), Smith (2013) used a similarity matrix to show greater differentiation in motif types, techniques and frequency between sites. Based on these results, he proposed that rock art produced within the last millennium had responded to the emergence of distinctive clan territories that underpinned ethnographic land tenure with its focus on site-specific proprietorial knowledge.

Proposing a detailed relative sequence of rock art for Central Australia, Ross (2003, 2005) argued that the earliest surviving rock art consisted of small deeply pecked circles, or circles and pits, concentric circles, and individual or paired intaglio bird or macropod tracks. These motifs continued to be produced over time but were supplemented by a range of new motifs. Initially, these additions included figurative and outline designs (bird, macropod and lizard motifs), with additions in more recent art including meandering or straight track lines, spoked wheels, fans, ferns, complex poles, sinuous lines and anthropomorphic figures with headdresses and/or carrying boomerangs or spears (Figure 8.8). The early pigment assemblage includes a similar range of motifs with the addition of hand stencils. Stencils, including stencilled objects, continued to be produced into the recent past, although printed or drawn hands became more common forms of hand representation. A proliferation of charcoal and ochre drawings, both European contact subjects and roughly rendered traditional motifs, mark the last phase of rock art production.

Figure 8.8: Pounded figurative motifs among the most recent art at Rainbow Valley.
Source: Photograph June Ross.

Conclusion

The history of rock art research in Central Australia over the past century shows an evolution from documented encounters with the graphic systems showing they were poorly understood, to a more nuanced appreciation of the social and ideological system in which the rock art is embedded. The work of Charles Mountford is especially important in this regard, as he combined interests in the ethnography and anthropology of the region with a strong focus on rock art. The work of Robert Edwards in the 1960s was seminal in putting rock art research in this region on an explicit archaeological footing, and also because he introduced a quantitative perspective with his methodology of using motif counts as a central element of his analysis. Research by scholars after 1990 involved studies of the social and geographical context of rock art production, its structure and its social geography. The plethora of studies documenting individual rock art complexes commissioned by government agencies between 1990 and 2015 created a large, unpublished literature on rock art across Central Australia. This saw subsequent analyses of regional patterns in the rock art of the region as well as the first attempts to systematically extract relative and absolute chronological details for this geographically expansive corpus of art. The intensification and expansion of data on the rock art of this region after 1960, documenting both its cultural and chronological dimensions, places future rock art research in a strong strategic position to contribute more comprehensively to understandings of the archaeology of this region.

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