



KEYWORDS: *Gariwerd* – *Marmie character* – *Motif distribution* – *Motif analysis*

## THE MARMIE: RE-ENGAGING WITH A DISTINCTIVE MOTIF IN THE EARLY ROCK ART OF GREATER GARIWERD, AUSTRALIA

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**Abstract.** Within the early phases of Gariwerd rock art, a particular motif has, since the earliest studies, caught the attention of rock art researchers. This figure is what we now call, in respect of Aboriginal tradition, the Marmie (father figure). Here, we present a detailed description of the Marmie and its distribution and a case for its high significance to its painters and today's Traditional Owner groups.

### Introduction

A red-painted, elongated stick-figure is the most notable of the repeated motifs in the early rock art of Gariwerd, western Victoria. It is a figure with a particular presence, and although the context of the figure to the painters is unknown, the images still suggest they represent a figure of some importance, and their presence gives their shelters a particular protection or significance. Larger examples of the figure are prominently displayed in their shelters, often off to one side of a more decorated, central art panel. Elsewhere, they can occur as smaller figures within a milieu of other rock art. In consultation with the three Aboriginal groups with ties to Gariwerd, the term *Marmie* has been selected to identify this characteristic figure (see below).

In the early 1990s, a group of three Marmie figures were chosen to be the symbol of the Brambuk Visitor Centre, Grampians National Park, signifying its ongoing significance to the local Aboriginal people. In this paper, we describe the characteristic features of the Marmie, its distribution and place in the Gariwerd repertoire, along with an indication of its probable significance in the culture of the painters and to local Aboriginal people today.

### Historic background

The Marmie figure, as a rock art motif, was first recognised as a discrete theme in 1943 by naturalist and author Charles Barrett (Barrett 1943; Fig. 1). In a brief article, Barrett interpreted the prominent diagonal Marmie figures as paintings of a small, local

freshwater fish 'Hardyhead' (presumably the small Murray hardyhead; *Craterocephalus fluviatilis*). Consequently, Barrett nominated the shelter, then known locally as Bringower Cave, the 'Cave of Fishes' (Barrett 1943). This name continued to be used until 1990, when it was renamed Larngibunja Shelter after the traditional Jardwadjali name for a prominent location in the Bullawin area (Clark 1991a). After visiting the site in 1956, anthropologist Aldo Massola dismissed Barrett's interpretation of 'fish', stating they were 'lizards', but without giving any justification for his claim (Massola 1958: 74). In the same article, he mentions that 'lizards' are painted at several of the then known art sites in the range. Massola continued to use the term



**Figure 1.** The smaller anthropomorph at the upper right was the first published photograph of a Marmie (R013), thought in 1943 to represent a fish. Flash-photo 2020 and photo-tracing from DStretch\_labi10 (RG).

	1	2	3
A			
B			
C			
D			

Figure 2. Classification of schematic stick-figure types from the Gariwerd red phase (from Gunn 1983: 24).

at other rock art sites he subsequently documented in the 1960s–70s, though also terming it a lizard-man. In a later publication, based on his understanding of central Australian Aboriginal culture, he speculated that two of the sites (his Red Rock and Shelter No. 5) ‘were prominent ‘stations’ in the mythologies of the Lizard Totem’ (Massola 1964: 172, 1973: 324). This interpretation was made despite anthropologist Radcliffe-Brown having previously found that there was no evidence in south-eastern Australia for the existence of local totemic centres with associated increase ceremonies (Radcliffe-Brown 1930: 232; also Dawson 1881; Howitt 1904) and therefore Gariwerd rock art could not be equated with the culture of central Australian rock art.

In their detailed recording of the Billimina Shelter (previously Glenisla 1, or Red Rock), and using a more formal approach, Coutts and Lorblanchet saw Massola’s lizard-man as a lizard-type human figure: one of four of their variants of the anthropomorphous stick-figure (Coutts and Lorblanchet 1982: 14–15). In plotting the proportions of a sample of all four figure types at Billimina, they found general conformity but with the lizard type having, with some overlap, a greater length of the body relative to mean limb length.

Using a similar approach to that of Coutts and Lorblanchet, an evaluation of a sample of 50 human figure images from 15 art sites in the Bullawin area found there to be 12 classes of anthropomorphs based on body and limb construction (Gunn 1983: 23–26; Fig. 2). The lizard-man type, as it was then known,

was attributed to ‘human figure type C2’. Unlike Coutts and Lorblanchet, however, the larger sample distinguished type C figures (long bodies-short limbs) from classes A and B (those with short bodies relative to limb length). It was noted that, at that time, the C2 type was restricted to the Bullawin Area and that it did not occur elsewhere in Victoria, nor was it known as a major motif in any other rock art region of Australia (Gunn 1983: 24–25). A subsequent work (Gunn 1987a: 219) studied 177 ‘lizard-man’ motifs from 27 sites; however, the data used was based on initial recordings (pre-1990). A more recent inspection of the rock surfaces using the DStretch colour enhancement program found that many of the rock art figures in this early sample were incorrectly classified. However, as more recently rediscovered sites contain previously unrecorded Marmie, the number of distinct Marmie images remains at 27.

As mentioned above, in preference to the label for this rock art motif as ‘lizard-man’ and in consultation with the Traditional Owner groups, the term *Marmie* has been selected as a more appropriate title for this significant graphic figure. In the Jardwadjali language, *Marmie* means father or father figure (Smyth 1878 Vol. 2: 77; from the Port-bulluk people at Horsham). The term is social and should not be confused with the figure of Bunjil, whom the Wotjobaluk call *Mami-ngorak*, the open name for Bunjil, who was the ALL-FATHER and Creator Being of south-eastern Australia (Howitt 1904: 491; see below).

The appendage hanging between the spread legs of the Marmie was considered by Massola to be a tail and, by Lorblanchet (and most tourists today), a penis. The appendage is more likely, however, to illustrate a *payankatj*, a sporran-like pubic covering (Blake 2003: 153, from the Djab Wurrung word collected by Dawson 1881: 8 and xxxvi – *piian gæætch*). Such a covering, made from possum skins, is worn by a Wiradjuri man painted up for corroboree and photographed by Fauchery and Daintree in 1859 (Fig. 3), and also as depicted in the 1841 drawings of J. A. Robinson’s Aboriginal informants (in Presland 1977: 109). James Dawson, living in the region in the late 1800s, noted that in warm weather Djab Wurrung men ‘wore no clothing other than a short apron, like a Scotch Highlanders’ sporran, formed from strips of opossum skins with the fur on, hanging from a skin belt in two bunches, one in front and the other behind’ (Dawson 1881: 8). The same ‘apron’ was worn during *koroborræ* that he witnessed, and which is also illustrated in the late 1800s paintings of the Aboriginal artist Tommy McCrae (Sayers 1994: 27–49). The paintings of Victorian Aboriginal artist William Barak (Sayers 1994: 12–25), also produced in the late 1800s, clearly represent a form of *payankatj*. His paintings of *payankatj*, with their long length and coloured-pattern infill, appear for him at least to have had a particular significance during a corroboree performance. *Payankatj*, such as depicted on the Marmie figures, are also commonly found on other forms of

anthropomorphous stick-figures, depicted both within Gariwerd and elsewhere in the rock art of Australia's arid/semi-arid areas (cf. McCarthy 1976; McCarthy and Macintosh 1962; Mountford 1965; Wright 1976). The consideration of these images as representing male figures may be correct but for the wrong reason: rather than displaying their 'penis', the figures are more likely to be wearing a costume *payankatj*. In many cases, figures with similar pubic coverings are depicted in a dancing pose with legs apart and bent at the knees—notably in central New South Wales (McCarthy 1976), further supporting the depiction of *payankatj*. The stance of the man with the *payankatj* in Fauchery and Daintree's photograph (see Fig. 3) presents the stance taken at the commencement of such a dance (again, note the paintings and drawings of Barak and McCrae mentioned above).

While previous reports have considered what we are now calling Marmie figures, only Coutts and Lorblanchet (1982) described some of the idiosyncrasies of the graphic character and placement of these figures. These aspects will be examined further below.

### The Greater Gariwerd rock art region

Situated in south-eastern Australia, Gariwerd is the focus of the Greater Gariwerd rock art region, which contains the topographically prominent set of rugged ranges Gariwerd (Grampians) and several outlying residual peaks and outcrops (Cayley and Taylor 1997; Parks Victoria 2021; Gunn and Goodes 2022: 113; Fig. 4). The region contains the largest concentration of rock art in the State of Victoria, with the majority occurring in central Gariwerd (Gunn 1984; Gunn and Goodes 2022). The sandstone ranges of Gariwerd dominate the surrounding low-lying plains, the lands of the Jardwadjali (Wotjobaluk Nations), Djab Wurrung and Gunditjmara people. Today, these groups are represented by the Barengi Gadjin Land Council Aboriginal Corporation, Eastern Maar Aboriginal Corporation and Gunditj Mirring Traditional Owners Aboriginal Corporation respectively.

To date, over 160 rock art sites have been documented within the Greater Gariwerd region, with *ad hoc* site surveys in the region ongoing. The majority of rock art research in Greater Gariwerd has been archaeologically and historically based (e.g.

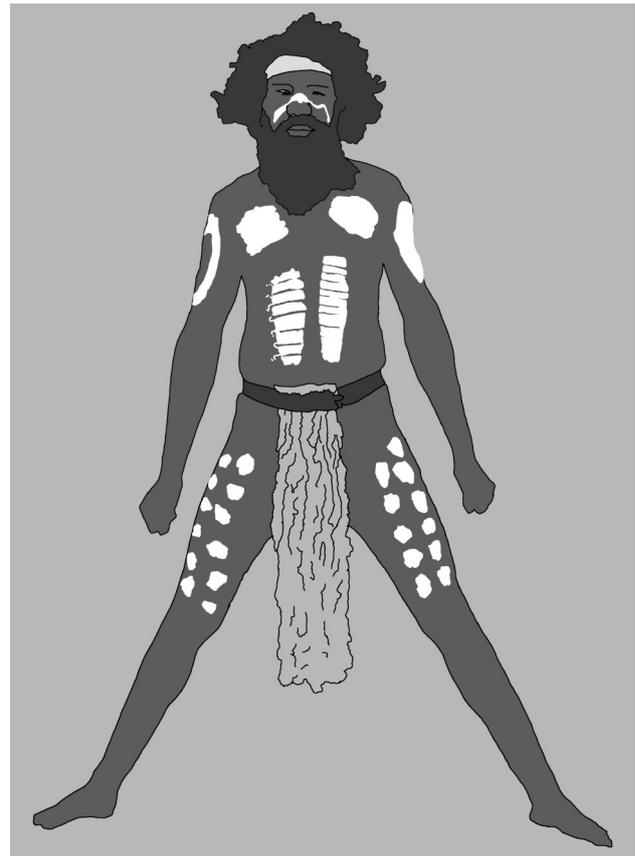


Figure 3. Wiradjuri man decorated for corroboree. Note the possum-skin *payankatj* and his stance. From Fauchery and Daintree's 1859 photograph.

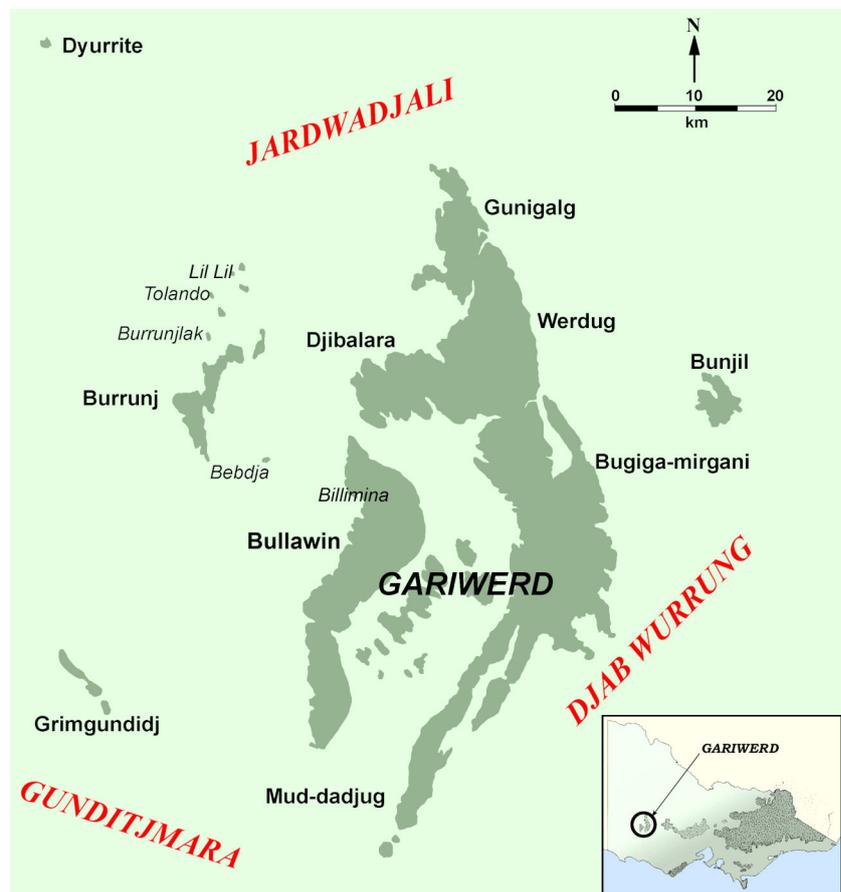


Figure 4. Greater Gariwerd with the named location of Traditional Owner groups (red) and rock art areas (black; area size represented by font size). Inset: Victoria.

Motif type	Number	Percentage
Bar	764*	43
Anthropomorph	373	21
Line	274	15
'Emu track'	115	6
Design – simple	89	5
Dot	79	5
Roo track	47	3
Other	46	3
<b>TOTAL</b>	<b>1787</b>	<b>101</b>

\* Excluding the overwhelming c. 2000 bar motifs at Billimina (see Coutts and Lorblanchet 1982).

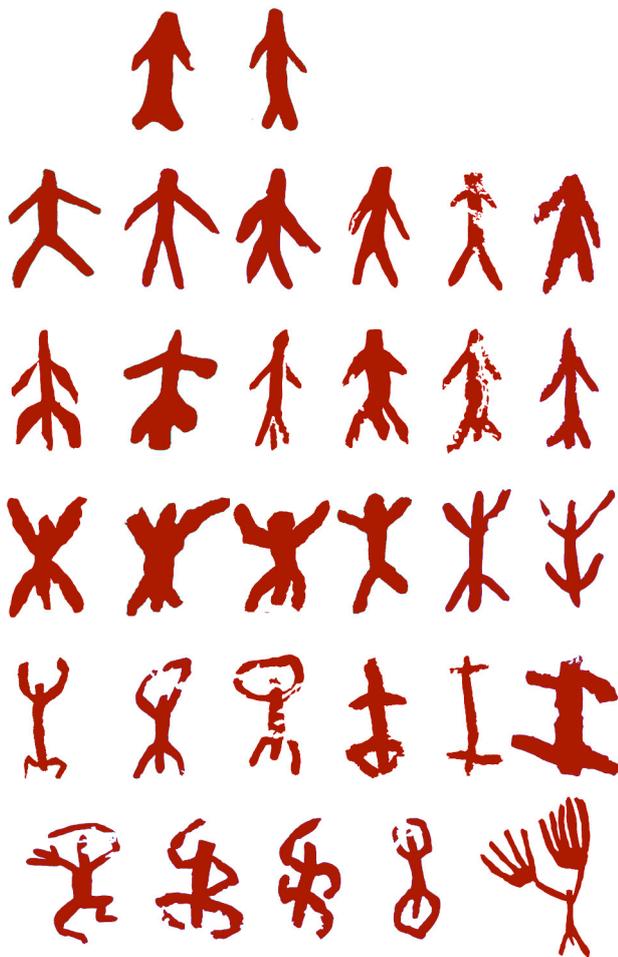
**Table 1.** Motif-type percentages from Greater Gariwerd red phase paintings (derived from Gunn 1987a: 171).

Site code	No. of Marmie	Total No. of motifs*
R001	2	1949
R004	3	292
R006	2	27
R009A	2	14
R009B	8	57
R009D	1	23
R010	7	327
R011	4	7
R012	2	34
R013	7	269
R016	1	32
R017	3	32
R018	6	101
R020	3	17

\*Tallies are mostly from pre-DStretch recordings and so represent minimum totals.

Site code	No. of Marmie	Total No. of motifs*
R030	1	25
R032	6	52
R035	3	57
R041	2	19
R046	2	5
R089	1	13
R099	10	124
R293	8	10
CC-30	1	9
CC-34	1	14
CC-35	1	21
MUL-4	1	14
RR-3	4	6
<b>TOTAL</b>	<b>92</b>	<b>3550</b>

**Table 2.** Number of Marmie figures per site and motif totals.



**Figure 5.** Examples of other anthropomorph types from within the Greater Gariwerd red phase paintings. Motif heights are standardised to highlight form.

Coutts and Lorblanchet 1982; Gunn 1983, 1984, 2005, 2009; Clark 1991b, 2017; Bird and Frankel 1998, 2005; Bird et al. 1998; Gunn et al. 2022b). Traditional Owners see Gariwerd’s rock art as a significant fingerprint in a holistic landscape that brings them together to continue their culture. Rock art is a library containing a wealth of knowledge, lore and songlines that connect them to their country and ancestors (Gunn and Goodes 2022). The extant ethnographic information about rock art in Victoria relates to the myth of Bunjil, the creator-father figure throughout south-eastern Australia (although the name of the figure varies: e.g. Smyth 1878 Vol. 1: 423–434; Howitt 1904: 488–494; Clark 2017). At Bunjils’ Shelter, in the east of the Greater Gariwerd region, there is an unusually large, bichrome painting of an anthropomorphous figure. This represents Bunjil, the All-Father of the Aboriginal people of south-eastern Australia (Massola 1957; Clark 2017). The prominent images at the shelter illustrate the importance of rock art in relation to mythology and religion in Victoria during the 1800s and also its subsequent cultural significance today. Given a similar situation exists between rock art and the complex and ongoing creation period of Aboriginal mythology in northern Australia (see Stanner 1953; Maddock 1970; David 2002), along with Bunjil’s Shelter in Victoria, it is likely that the Marmie figures were also representing aspects of the Aboriginal cosmology of Gariwerd.

A study conducted in the 1980s of the Gariwerd rock art (Gunn 1987b) found that the early red phase paintings were dominated by sets of short vertical bars (43%, excluding the nearly 2000 examples at Billimina), 21% anthropomorphs and 15% lines (Table 1). Gunn

found that anthropomorphs that conform to the Marmie template account for 33% of the human-like figures. None of the other types of anthropomorph categories presented during this phase are repeated with such a consistent schema (Fig. 5).

### Methods

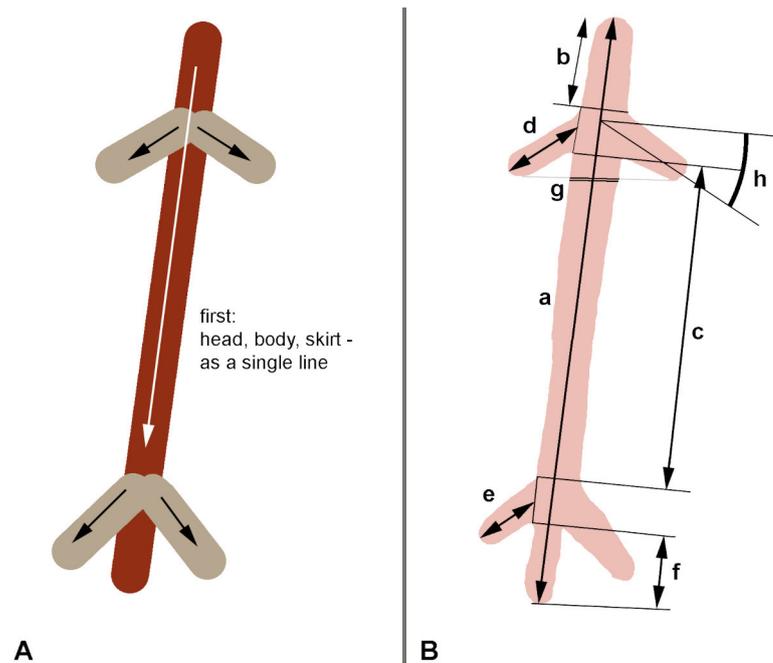
The data presented here was derived from 92 Marmie figures from the 27 of the 174 rock art sites recorded within Greater Gariwerd (Table 2). All figures were measured and photographed, supported by either sketching on-site or subsequent photo-tracing (e.g. Gunn 1981 and 1987b). All panels were examined using the DStretch colour enhancement programme (Harman 2008). Additional motif measurements of the individual body parts were derived from detailed, scaled photographs (full-frame Nikon D610). The measurements were tabulated for overall length of the figure and its individual body segments (body width, head, *payankatj*, each arm and each leg; Fig. 6B). All measurements were restricted to the nearest 0.5 cm owing to the granular texture of many of the rock faces on which they were painted. The angle between the left arm and left leg was used, where discernible, for consistency, but in a few cases, the right limb had to be substituted due to deterioration of the graphic figure. The angles were read using a protractor held over the photograph.

In addition to the sample of 92 figures used, 20 or so other figures have Marmie features, but due to deterioration, they lacked sufficient attributes for positive identification and so were not included in the analysis. However, given the contexts, it is considered highly likely that many of these deteriorated figures were originally depictions of Marmie. Further, of the sample used, not all figures retained measurable attributes; for example, some lacked an arm and leg from one side, and some had partially eroded heads. For this reason, the various attribute tallies differ for the following tables and graphs.

For convenience, individual sites are notated in the abbreviated form of their State Register Number. For example, Register Site 7323-0018 is abbreviated to R018. For those sites still unregistered, a recognisable code is applied, e.g. MUL-4. (All sites with Marmie figures occur with the area covered by the one 1:100,000 map sheet.)

### Attributes of the Marmie motif

The Marmie motif is essentially an elongated anthropomorphic stick-figure, with very short, straight (stubby) arms, legs and *payankatj* (pubic skirt) (Figs 1 and 7). They occur in an early phase of Gariwerd rock art (the red painting phase; Gunn et al. 2019), and they



**Figure 6.** Marmie construction (A) and measurements (B). *a*: Overall length, *b*: head length, *c*: body length, *d*: left arm length, *e*: left leg length (right arm and leg similarly measured to left arm and leg). *f*: *Payankatj* length, *g*: body width, *h*: arm angle (degrees). (The leg angle was measured the same way as the arm.)

have a simple graphic construction of a basic body, head, limbs and *payankatj* all produced by a single line. Occasionally, the head is slightly wider than the tailing *payankatj*, suggesting the pigment is applied downward from the head. To this central line, the limbs are then added with outward strokes (Fig. 6A), some of which produce tapering limbs. The figures have no internal features, lack any type of headdress and hold no weapons, tools or ceremonial objects. Most are orientated vertically. Some individual Marmie are the largest and most notable anthropomorphic depictions in Gariwerd.

Although no two Marmie figures are exactly alike, they all conform to the same graphic structure indicative of some form of (mental) template. The only other recognised 'dominant or recurring idea (motif)' in Gariwerd rock art is the bar set—rows of short vertical bars (cf. Coutts and Lorblanchet 1982) and three-toed 'bird tracks'. The short bar forms the basic unit of the graphic system for the early painted art of Gariwerd, of which bar sets, 'bird tracks' and Marmie figures are prominent parts (see Gunn 2005 and below).

The measured attributes of the Marmie figures are given in Table 2 and Fig. 6B. The number of Marmie per site ranged from one to 10, with a median of three. There appears to be no numerical relationship between the number of Marmie present at a site and the total number of motifs present. This reflects a site's continued use for artwork production long after the Marmie motif ceased to be a part of the developing repertoire. While some larger Marmie are deliberately placed



Figure 7. The best-preserved of the Marmie figures (26 cm length). Site R006, flash photo 2020 (RG).

Orientation	Number	%
Vertically up	72	78
Inclined right	11	12
Inclined left	7	8
Horizontal right	1	1
Horizontal left	1	1
Total	92	100

Table 3. Marmie orientation.

away from other motifs of the same art phase, many other, smaller Marmie can occur within a suite of other motifs, including other stick-figures (see below).

All of the Marmie figures were painted with a red pigment, with no signs of decoration of another colour. All except one (Fig. 7) are very weathered, suggesting they are of considerable age. (None of Gariwerd's rock art has yet been dated.)

There is insufficient detail in any figures to ascertain whether the pigment was applied by finger or brush.

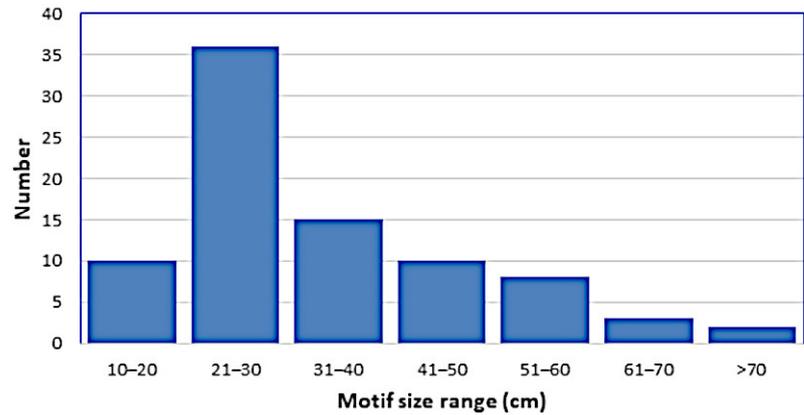


Figure 8. Marmie size ranges ( $n = 84$ ).

However, it is likely that a form of brush was used because of the average length (median 27.0 cm), as application by finger requires far more pigment replenishing than does a brush. Further, for the majority, it appears that the paint was applied with a single stroke rather than repeated application. It is unclear, however, whether those Marmie with wider bodies (up to 4.0 cm) were painted with a single stroke, necessitating a broad brush or whether multiple brush strokes were applied.

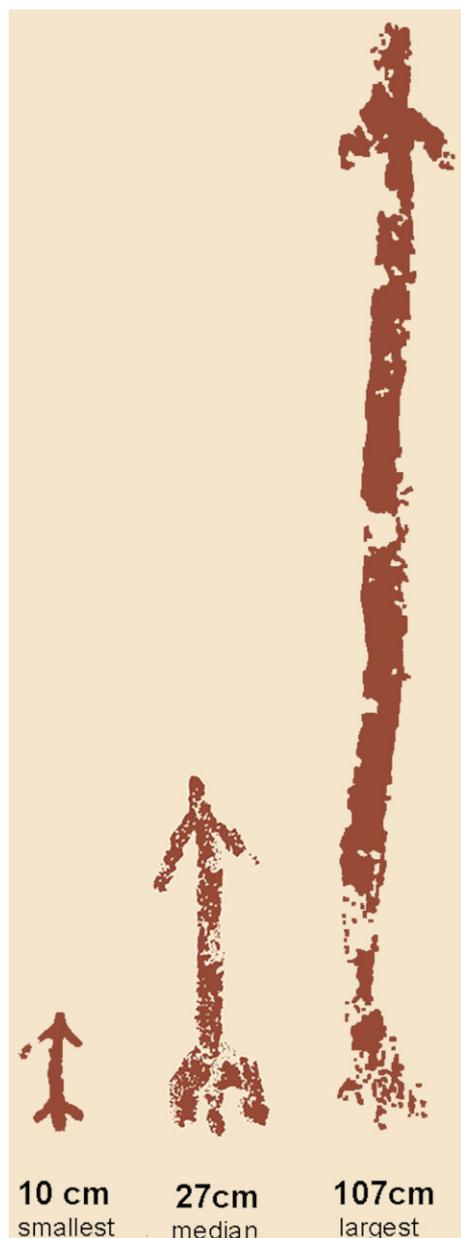
For this study, a distinction was made between Gunn's 1983 C2 anthropomorph (Marmie) and his C1 anthropomorph despite their superficial resemblance. The distinction used here is based on graphic construction and the presence/absence of the *payankatj* (see below).

#### Marmie attribute sizes

The sizes of the Marmie attributes were recorded to the nearest half centimetre (Fig. 6B). Those figures whose overall length could be measured ranged from 10.0 cm to 107.0 cm in length, with a mean length of 33.5 cm, median of 28.0 cm, and standard deviation of 16.0 cm ( $n = 81$ ) (Figs 8 and 9). These measurements contrast with the other stick-figure motifs in Gariwerd (min 7.0 cm, max 47.0 cm, mean and median 17.0 cm:  $n = 71$ ). The body length of the Marmie, which ranges from 5.5–65.0 cm, increases with overall motif length. However, the body length tends to increase disproportionately as the motif lengthens. Hence, the larger the figure, the more distorted (amplified) the extension of its body is. This suggests that there is a tendency to keep the proportion of the head and *payankatj* more restrained with motif length. Body width ranges from 1.0 cm to 4.0 cm (mean and median 2.0 cm), but greater body width is only weakly linked with greater body length ( $n = 67$ ). Overall, the head-to-body length ratio ranges from 1:2.3 to 1:18.7, with a mean ratio of 1:5.6 and a median of 1:5 ( $SD \pm 3$ ;  $n = 57$ ). In effect, one of the principal attributes of the Marmie is that the body must be greater than twice the head length (>2:1), but any body length above this ratio can be expected.

Head lengths range from 1.5 cm to 7.0 cm ( $n = 62$ ), and *payankatj* lengths from 1.5 cm to 8.0 cm ( $n = 59$ ). There is no clear correlation between the two attributes ( $n = 47$ ), but the trend line is 1:1, with a maximum deviation of 2.5 cm, again suggesting only a loose correspondence to a mental template.

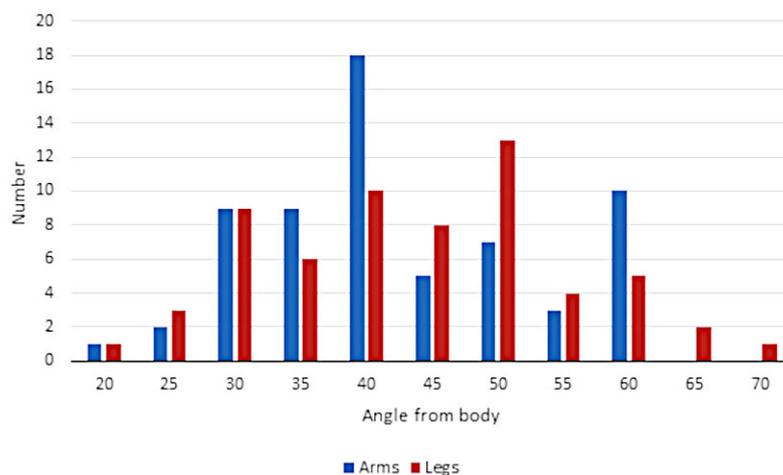
Where both arms of the figure could be measured, individual arms ranged from 1.5–8.0 cm in length. In 17 cases (34.7%), the two arms of a figure were of equal length, while the right arm was longer in 18 and the left in 14 cases ( $n = 49$ ). The size differences between the left and right arms were mostly within 0.5 cm, although for the



**Figure 9.** Relative Marmie heights (lengths). Smallest (R011; 10 cm), median (R032; 27 cm), and largest (RR-3; 107 cm).

larger arms (7.0–8.0 cm), the difference in length could be up to 2.0 cm. Hence, while there was a tendency to have them of equal length, this was not rigidly applied, as the overall mean for both left and right arms was 4.0 cm.

The mean arm lengths tend to be either equal or slightly shorter than those of legs on the same figure. Mean head lengths remain below 6.0 cm (with a single exception of 8.0 cm) regardless of mean body length. Thus, as the length of the body increases, the head length remains within the gambit of the



**Figure 10.** Angle of left arm (n = 66) and left leg (n = 63).

shorter motifs, consequently further emphasising the elongation of the larger Marmie figures.

The 53 *payankatj* measured ranged from 1.5 cm to 6.5 cm in length, with mean and median lengths of 3.5 cm (n = 47). While visually, the *payankatj* appear to be roughly the same size as the legs, the legs of individual figures tend to be slightly longer.

Most of the Marmie figures (78%) are orientated vertically upwards (head toward shelter ceiling); none are positioned upside-down (Table 3). Only two are orientated close to horizontal, with both placed on narrow, near-horizontal panels, which confines any vertical orientation for their size. Inclined figures, to either the right or left of vertical, occur in low numbers on otherwise flat panels (none have any obvious panel accents or impediments directing their orientation).

The angles formed between the left arm and the body ranged from 20° to 60°, and that of the left leg from 20° to 70° (Fig. 10). The mean arm angle was 43° and the median 40°, and for the leg, the mean was 44° and the median 45°. The extreme spread of the legs in the photograph of the man’s stance in Fig. 3 is far greater than that displayed in the Marmie figures.

### Marmie distribution

The 27 sites with Marmie figures occur within a small area of central Gariwerd. Twenty-five of the 27 sites are closely clustered within or around the basin catchment of Billimina Creek (hereafter called the Billimina Basin), and sixteen of these are within the basin itself (Fig. 11). The other two sites, R032 and R041, are spatial outliers. While the art corpus in R041 is fully consistent with that of the Billimina Basin sites, the rock art at R032 is dominated by a different type of anthropomorph, the D2 stick-figure (see Fig. 2). The six Marmie figures within R032 are, unusually, mixed with the D2 types, and none of the Marmie are any more visually apparent than the D2 anthropomorphs (Gunn 1983: 24). The occurrence of Marmie figures within and around the Billimina Basin has been noted previously (Gunn 1987a: 53 and 59), but now, with additional sites recorded, the density of this concentration is reinforced. Of the remnant motifs that may have been Marmie figures, all examples occur either within sites in which complete Marmie are represented or are at other sites within the Billimina Basin.

While forming a concentration, within and around this concentration there are other rock art sites from the same rock art phase that do not contain Marmie images. In addition, most of the Marmie

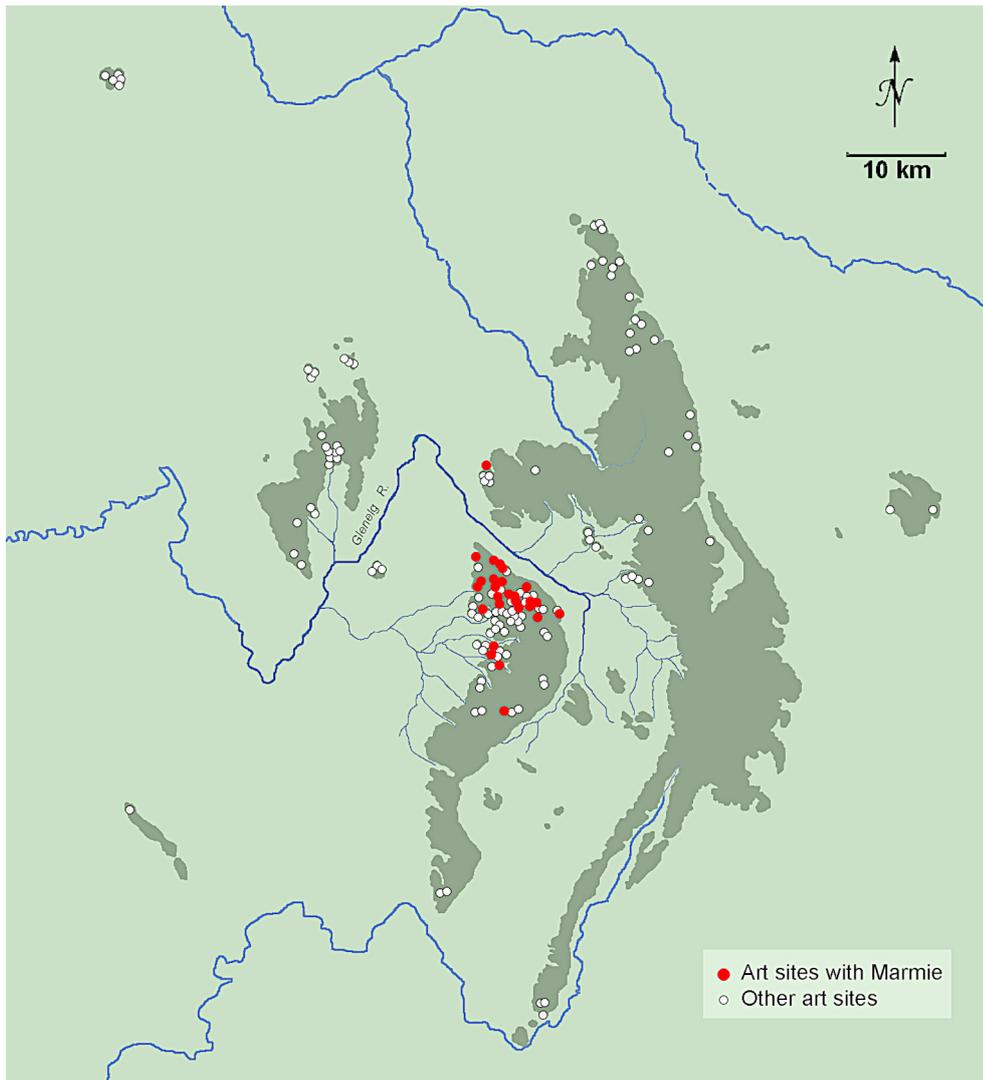


Figure 11. Distribution of Marmie sites and other art sites within Greater Gariwerd.

Marmie portrayed in the two outlying sites, R041 ten kilometres to the north and R032 ten kilometres to the south, are not unusual in number or large size but are similar to those most commonly occurring within the main Marmie concentration. Likewise, there is no notable pattern in the distribution of the larger Marmie images, with the longer images occurring both within and on the outer slopes of the Billimina Basin. However, if we take those sites with Marmie greater than mean  $\pm$  SD for length (59 cm; mean 33.5, SD 25.4 cm), we find three sites stand out: RR-3 with two examples, R018 with three examples, and R008 with two (and also having two examples just below the cut-off at 59 cm). Sites R008 and RR-3 are both on the outer edge of the basin, and R018 is near the cusp of the basin and the closest other site to

sites also contain motifs common to other sites in the area. Within the Marmie concentration, no pattern of distribution has been recognised. There is no central site of Marmie figures, nor does the number of Marmie motifs decrease away from any particular point. They are impartially scattered throughout the Billimina Basin and range fringe. Also, the

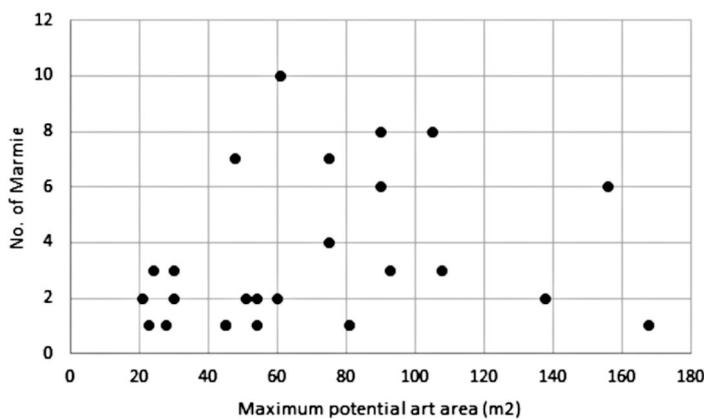


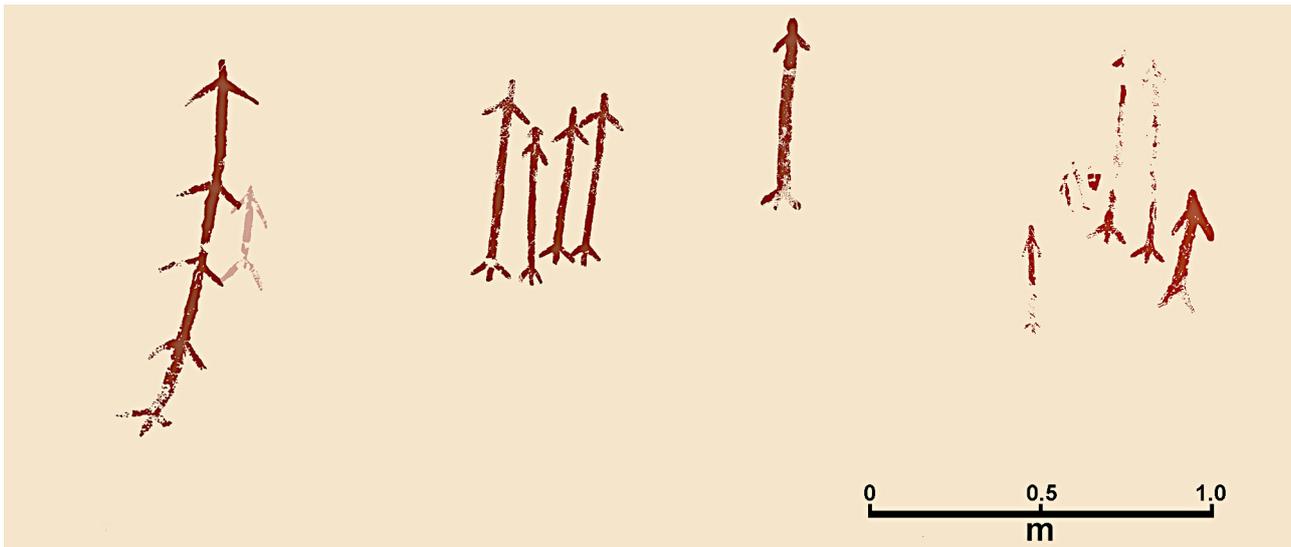
Figure 12. Motif numbers per shelter by maximum potential art area.

these two sites.

Shelter size is not a factor in selecting sites for depicting Marmie figures, with shelter widths ranging from 7 m to 56 m, nor is the number of Marmie related to floor area (occupation space). This shelter width range is similar to that of all Bullawin area shelters, ranging from 4 m to 56 m (Gunn 1987a: 167). Similarly, the number of Marmie present is unrelated to the maximum potential rock art area (length by 3 m height, with no rock art occurring over 3 m above the floor; Fig. 12). The twelve largest Marmie (>50 cm) occur in five sites, ranging from 17 m to 52 m wide, and the sites with the largest number of Marmie range in size from 16 m to 52 m wide; so again, no correlation is forthcoming.

**Composition and motif placement**

The Marmie are mostly placed on smooth rock faces, on overhanging walls between 70° and vertical. In those shelters with irregular surfaces, the Marmie were placed so as to avoid any rock



*Figure 13. Dramatic four-metre-wide composition of four motif clusters, incorporating Marmie and other motifs (R009B).*



*Figure 14. Unique composition of Marmie (two pairs and a trio set) (R293).*

distortions.

Thirty-six Marmie figures are greater than 30 cm in height, whereas only five exceeded this length for all the other anthropomorphic figures. The placement of these larger Marmie figures on their respective art panels was tabulated (Table 4). In the case of closely arranged sets of Marmie, these are treated as a graphic unit and included in the analysis of height division of the largest individual figure. The pattern derived from Table 4 indicates a preference for the larger Marmie to occur in locations peripheral to the main cluster of rock art in the shelter, usually at the centre of the rear wall. The large size of these Marmie also gives them a high visual prominence despite their non-central position

within the site. For example, the Marmie in Site R006 is positioned prominently, just above eye level, on a large but otherwise undecorated panel (Fig. 7; Gunn 1981: 106). At site R009B, the shelter's main and central art area is well-decorated, while several metres to the right is a large, flat wall area with a distinct composition extending over four metres. This composition comprises just 11 large motifs, including singular and sets of Marmie; as well, there is a large design motif constructed of a string alignment of anthropomorphs similar in style to the Marmie (Fig. 13). The only other clear composition, at site R293, involves a close cluster of two Marmie pairs and a Marmie trio (Fig. 14). While other adjacent areas of the wall are apparently

Site	Site motif Nos	Art context	Position cf. main art panel	Visual prominence
<b>30 – 39 cm</b>				
R009B	90	Mixed motifs	Central	Low
R010	24, 25	Mixed motifs	Central	High
R012	15	Mixed motifs	Peripheral	Medium
R013	196 – 198	Isolated single	Peripheral	Low
R016	10	Isolated single	Central	High
R018	6, 7	Isolated pair	Central	Medium
R018	101	Isolated	Peripheral	High
R089	1, 2	Isolated pair	Central	High
R099	90	Isolated single	Peripheral	Medium
R099	47 – 49	Mixed motifs	Peripheral	Medium
CC-34*	a	Isolated single	Peripheral	High
RR-03	5	Isolated single	Peripheral	Medium
<b>40 – 49 cm</b>				
R006	13	Isolated single	Peripheral	High
R010	120	Mixed motifs	Central	Medium
R013	2 – 4	Mixed motifs	Peripheral	High
R293*	c, d	Marmie sets	Central	High
RR-03	5	with fragments	Peripheral	Medium
<b>50 – 59 cm</b>				
R009B	19	Isolated single	Peripheral	High
R009B	15 – 18	Isolated set	Peripheral	High
R009B	20 – 24	Mixed set	Peripheral	High
R046	1,2	Isolated pair	Peripheral	High
R099	57, 91	Mixed motifs	Peripheral	Medium
<b>60 – 99 cm nil</b>				
<b>Over 70 cm</b>				
RR-03	1, 2	Isolated pair	Central	High

\*The rock art of R293 has yet to be fully recorded, and motif numbering is not available.

**Table 4.** Marmie context by size class.

suitable for rock art, the nearest other image is a vertical Marmie a metre to the right.

The smaller Marmie are generally within the central area of the main panel and mixed in with a range of other motifs (primarily bars and stick-figures: see superimposition below).

Like most Australian Aboriginal rock art, the Marmie are static figures and do not involve the viewer in any conversation/expectation. This attitude contrasts with that expressed by early dynamic or northern running figures of Arnhem Land rock art (Chaloupka 1989, 1993; Haskovec 1992; Jones and May 2015), where the course of the running action causes the viewer to look forward to a goal, or backwards for a threat. In figurative motifs, a turn of the head, or even the direction of the eyes, can cause a similar reaction in the viewer (e.g. Forcellino 2011: 246–247). The engagement of the viewer by the Marmie, however, is achieved through its select and mostly conspicuous placement and its

repeated presence within its restricted landscape.

### Superposition and superimposition

Nineteen of the 92 Marmie from 10 sites were involved in superposition (Table 5). The most common sequence is that of Marmie overlying bar sets (including bar pairs, trios and rows). Although a very small sample, the pattern of Marmie overlying, and hence younger than, bar sets demonstrated here is reinforced at two other sites where Marmie and bar sets co-occur, where, in both cases, the bar sets are more weathered than the Marmie. Bar sets are a common motif and occur widely throughout all sandstone areas of Greater Gariwerd (the exception being the granites of the eastern Bunjil area where bar motifs are absent; Gunn 1987a).

Although only illustrated by three examples, the superpositioning of Marmie over hand stencils is also consistent with general observations of relative preservation throughout the Bullawin area of the two motif types. At site R010, a Marmie overlies a C1-anthropomorph that is in an unusual orange-red colour that has preserved better than the red of the overlying Marmie.

The motifs that overlie the Marmie figures are C1- and D2-anthropomorphs, a stick-figure, a short vertical line, and a broad horizontal band, all in red, in addition to a stick-figure in yellow. The three overlying anthropomorphs are in a state of preservation similar to the Marmie, while the stick-figure is considerably better preserved. As mentioned above, the C1-anthropomorph is similar to the Marmie but lacks a *payankatj*, and its legs are painted as an extension of the body, not as an addition as required by our definition. The D2-anthropomorph is composed of a vertical line cut by two shorter horizontal lines that imply arms and legs (Gunn 1983).

The horizontal band that superposes the Marmie at R099 is visually more distinct, and its placement over the Marmie appears to be random as the band extends across the width of

this panel. Likewise, the C1 and D2 anthropomorphs that overlie Marmie show no indication of intentional placement.

Marmie figures involved in intentional superimposition are uncommon. One of a pair of Marmie at site R011 has been superimposed by a short vertical line (Fig. 15). Although off-centre in its positioning, given the availability of other blank areas on this panel, the placement of the line over the Marmie was probably intentional. Similarly, a

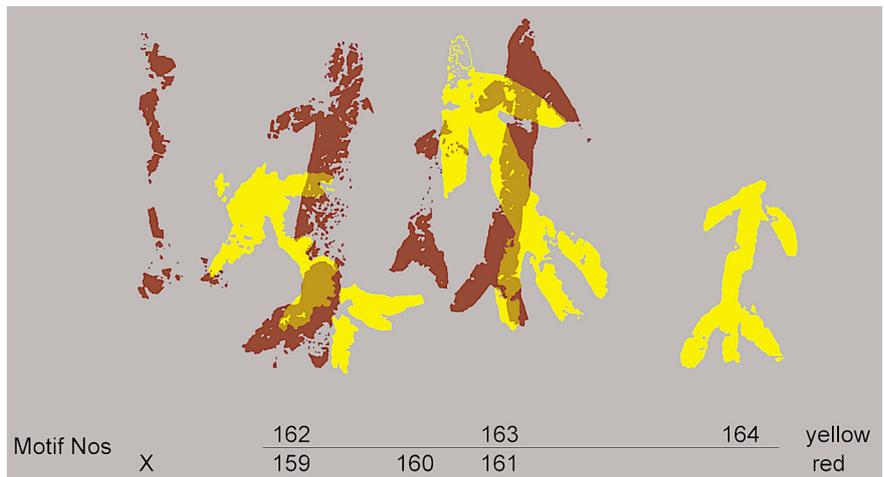
Context	Motif type	No.	Site occurrences
Marmie over	Bar set*	10	R001, R004, R041, R099
	Hand stencil	3	R004, R009B
	Other anthropomorph	1	R013
	Fragments	2	R010, R099
Over Marmie	Other anthropomorph	3	R009D, R010, R013
	Line	2	R004, R011
	Band	1	R099

\*Includes bar pairs, trios and rows.

**Table 5.** Summary of Marmie superpositions and superimpositions.



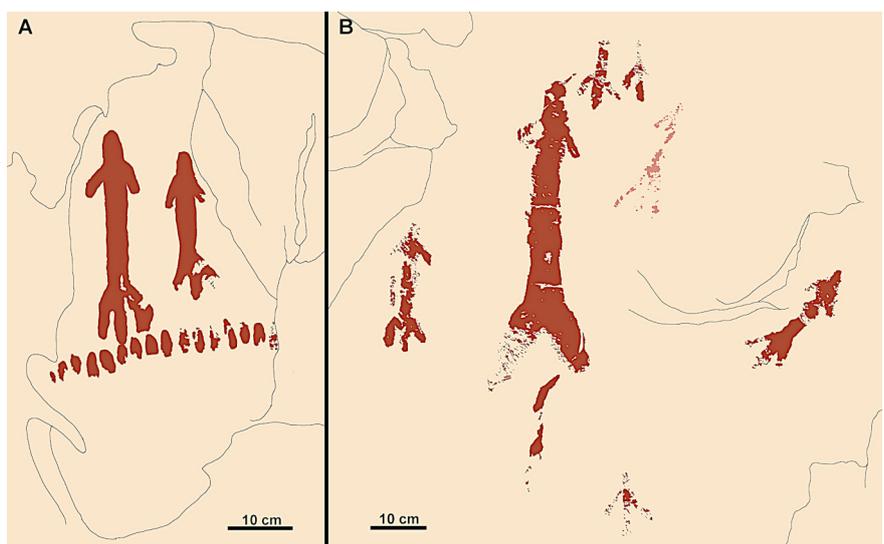
**Figure 15.** Superimposition at R011: red bar over red Marmie.



**Figure 16.** Superimposition at R013: yellow stick-figure (#162) over Marmie (#159). Note: motifs X, 160 and 161 are C1 anthropomorphs that appear contemporaneous and in composition with the Marmie (#159).

yellow stick-figure at site R013 has been deliberately positioned diagonally across a red Marmie (Fig. 16). The yellow figure is one of a set of three stick-figures, all of which are similar in form to that of the Marmie. The underlying red Marmie is one of a set composed of it and at least two C1-type anthropomorphs. These two examples, at sites R011 and R013, are the only examples of superimposition, where the relationship between the original Marmie and later motifs appears deliberate, thus demonstrating a re-engagement by a later artist with the work of the earlier (Gunn et al. 2022a).

This limited evidence conforms to a more broadly perceived pattern of Marmie post-dating hand stencils and also bar motifs, though with the latter there may be some early overlap; on a panel at site R010



**Figure 17.** Compositions involving Marmie figures suggesting some contemporaneity with different motif types from site R010. A: Marmie pair with a bar row. B: Small Marmie around a large C1-anthropomorph.

two Marmie are underscored by a row of bars that appears to be contemporaneous and forming a unified composition (Fig. 17a). At the same site there is a large C1 anthropomorph surrounded by four small Marmie, all of which are similarly (poorly) preserved and appear contemporaneous (Fig.

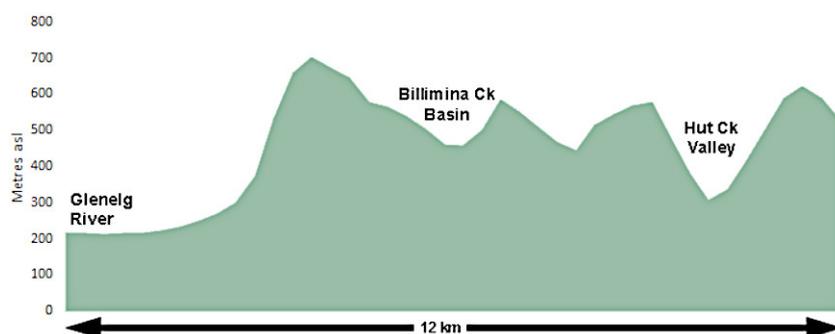


Figure 18. North-south profile of the Billimina Basin.

17b). At most other sites the C1 anthropomorph is generally better preserved and, therefore, considered more recent.

Superimposition and motif preservation suggest that the bar set motif, which forms a prominent feature of rock art throughout the Greater Gariwerd region and occurs throughout the whole of the Gariwerd rock art sequence, was established before the introduction of the Marmie motif and probably soon after the initial hand stencil sequence.

The C1 anthropomorphs overlap in time with the Marmie but continue after the phasing out of the depictions of the Marmie. Concurrent with both of these specialised anthropomorph types are an array of various stick-figure forms that continued, with variation, into the later drawing and white phases of Gariwerd region rock art (cf. Gunn et al. 2019: 26).

### The Marmie figure template

From the above findings, the visual template of the Marmie figure can be described as a straightforward, red stick-figure wearing a *payankatj*. The body length must always be greater than twice that of the head length (with most in the 21–30 cm size group). The head, arms, legs and *payankatj* are all approximately the same length (and consequently, each is less than half the body length). The Marmie are usually placed vertically in prominent positions but peripheral to the main cluster of art in the shelter. If involved in superpositioning, the Marmie may overlies hand stencils and bar rows but are otherwise overlain by a range of other motif types.

What is missing from this template is the original story, the associated song(s), dance(s) and an audience that knows the intertwined social aspects of the art and the place (cf. Taçon 1992; Mulvaney 1996; May et al. 2019; Brady et al. 2023). Despite this, however, the Marmie figure still has significance and meaning to the Traditional Owners groups who are re-engaging with this rock art, providing a new chapter in its story in the context of their ongoing culture (see Gunn and Goodes 2022).

### Discussion

The concentration of the Marmie in the upper area of the Bullawin area implies that this place was of par-

ticular significance to the painters. The Billimina Basin, which forms the focus of the motif, is 5 × 3 km in area and sits some 200 m above the plain. The basin is most readily accessed by a steep and rugged climb from the west, or from the south bypassing the major rock art shelter of Billimina (Fig. 18). The geology of the basin consists primarily of steeply dipping beds, 35°–40° to the southwest, of Silurian quartz-sandstone (Fig. 19).

The outcropping bedrock occupies around 50% of the land, forming a stepped landscape of northwest-southeast trending ridgelines (Cayley and Taylor 1997). Between the outcrops, there is an overstorey of Brown Stringybark and Messmate with a diverse understorey of shrubs, grasses and herbs (Parks Victoria 2019: 30). Key faunal species are small mammals (such as bandicoot and possum) and several species of owl (Parks Victoria 2020: 58). Creek flow is plentiful in most months, except in early autumn, and during drought conditions when even standing water is scarce (pers. obs.). Based on archaeological excavations, Coutts and Lorblanchet (1982) found that the only seasonal indicators for using the sites were emu-egg shells and lizard bones, suggesting a greater use of the shelters during spring.

Further support for this hypothesis is that most rockshelters in the Billimina Basin are large and face to the northeast, away from the prevailing cold weather of late winter and spring. On environmental grounds, however, most of the resources found in the mountains are more readily available on the better-watered plains that surround the ranges. Slabs from Brown Stringybark and small sharpened wooden pegs have been recorded at three sites in the basin. These artefacts have been linked to the cleaning and drying of possum skins to make them into heavy cloaks (Gunn 2009). Such possum skin cloaks were the major dress item during winter (Dawson 1881: 8–9). The Wartook Basin (Werduk) in the Mt Difficult Range, 20 km to the northeast, contains evidence of a large open campsite area around what was then a swamp (Gunn 2003). Werduk is substantially larger (longer and much broader) than the Billimina Basin and has a flatter floor more conducive to large-scale camping and the holding of ceremonies. The only area suitable for a group of people to camp in Billimina Basin is in the very centre of the basin, surrounded by the Marmie-housing rockshelters. Even this area, however, would only accept a small group of people (<50) and afford little area for even small ceremonies. However, rockshelters in the Wartook Basin are far less numerous than in the Billimina Basin. Although they are also decorated with rock art, they do not contain any Marmie figures or other repeated or characteristic motifs. The reason for the concentrated use of the Billimina Basin appears to coincide with its greater



Figure 19. Billimina Basin from the northwest. Note the steep dip-bedding of the bedrock.

concentration of shelters and the associated need for the repeated depiction of the Marmie figure. This hypothesis requires further archaeological examination, particularly in relation to the dating of the rock art and any corresponding change in the environment of Gariwerd over that time (especially regarding any changes in resources).

Anthropologist Ken Maddock (1970) illustrated how large size, prominent placement and particular patterned infill were important in the depiction of principal characters related to local Arnhem Land mythology and ritual. A similar situation applies to the Wardaman art to the west of Katherine (David et al. 1990), the Kimberley (Crawford 1968; Mowaljarlai and Malnic 1993), Pilbara (Wright 1968), central Australia (Gunn 2000), western New South Wales (McCarthy and Macintosh 1962) and possibly the Sydney-Hawkesbury region (note McDonald 2008: 49). Such a predisposition, to emphasise important characters by a larger size relative to characters of lesser importance (either anthropomorphic or zoomorphic) is common in the art of other cultures around the world, such as the wall art of the Assyrians and Pharaonic Egypt (Gombrich 1960: 135); the wall and book art of the Maya of Central America (Bushnell 1967) and early Christian art (Gombrich 1963), as well as in the art of Western children before their education (Read 1970: 134; Clegg 1979: 21–47). While the size and visual character of the Marmie do not compare with that of large and multi-coloured Dreaming characters depicted in northern Australian rock art, or even with the nearby Bunjil, the Marmie remain noteworthy within the overall restrictions of colour and size on the rock art of the Gariwerd red phase.

The distortion (body elongation) and relatively

larger size of the Marmie figures compared to the overall Gariwerd repertoire (where 80% of motifs are less than 20 cm long; Gunn 1987a: 35), suggests that they represented an important and significant character to the people of Gariwerd, at least during the time of Gariwerd's early red phase rock art. Whether the character and its story continued on as an oral story without further representation in rock art or took another visual form is unknown. The Marmie figures, however, would have remained visually noteworthy. Indeed, the general absence of superimposition over Marmie figures, and also in the few cases where it does occur (see above), supports a *continuation* of recognition and respect of the image by subsequent artists.

While bar motifs continue throughout the sequence of Greater Gariwerd rock art, no other style of anthropomorph gains the repeated coherence or visual significance of the Marmie figure. While there is some repetition of another, particular form during the drawing phase (Gunn 2008), these examples are visually inconspicuous because of their fine line work and small size. During the white phase, no anthropomorphic form is repeated more than twice (pers. obs.), none of which are visually distinctive.

As proposed previously (Gunn 2005), the painted art of the early red phase was highly structured. This implies the artists had a recognised format imposed on them by their society, or at least by an overriding group within the society. The repetition and limited distribution of the Marmie indicate that they were important to a particular society or social group. Based on extant ethnography (post-1800), the most likely cause is the visual expression of particular religious beliefs—the Dreaming (Stanner 1953; Elkin 1979). After an unknown period, the use of the Marmie



Figure 20. Use of the Brambuk Cultural Centre logo incorporating three Marmie figures, on a mug and the welcoming entrance sculpture.

and the structured art system of the early red phase ceased, to be followed later by less-structured images and a broader range of colours and techniques. It can be assumed that the belief system that operated with the Marmie also either ceased or changed radically at the end of the early red phase. Although the 'meaning' (the specific narrative content) of what we are calling the Marmie figure may have changed over time (note David 2002), the social framework (culture and system of meanings) in which it evolved has continued over the millennia to the present day (Elkin discussed in Morwood 2002: 71–73).

The current Traditional Owner groups of Greater Gariwerd are choosing to re-engage with the Marmie character as a symbol of their association with the land and cultural sites of Gariwerd. As mentioned above, three from a set of four Marmie from the Jananginj Njauji shelter in the Bullawin area were chosen as the symbol of the Brambuk Visitor Centre in the Grampians National Park (Figs 13 and 20), and are also on the cover of two books relating to the Aboriginal association with Gariwerd (Gunn 1983; Wettenhall 1999).

The present-day impressions by many visitors (and academics) to Gariwerd rock art (and that of most other areas of southern Australia) may be due to their exposure to the larger and more visually spectacular images and likely greater age depth of the art of northern Australia, through the media and/or personal contact. Seen in the context of Gariwerd rock art and landscape, however, the Marmie are motifs that stand out distinctively, regardless of their size, as even the smaller ones are readily recognised when their format is known.

## Conclusions

The Marmie motif is a standardised form of anthropomorphic stick-figure that played an important role in the culture of the early painters in Gariwerd. The template indicates that:

- The figure is painted in a monochrome red;
- The head, body and *payankatj* (skirt) are painted as a single vertical line;
- the body length is more than twice the length of its

- limbs, and limb lengths increase with body length, maintaining a semblance of proportion comparable with the smaller versions;
- the head, limbs and *payankatj* are of equal length;
- the limbs are painted out from the body at an angle of around 45°, though the legs tend to be splayed slightly less than the arms; and
- although preservation varies from site to site, all appear to be of similar age.

The static and formal frontal pose of the Marmie figure, particularly in the larger imposing examples, which are beyond the size of most other motifs in Gariwerd rock art, suggests they are (or at least represent) important mythological figures from the ongoing Dreaming at the time of the early red phase of Gariwerd rock art. Also, while totemic sites may have been within the area, there is no indication from the distribution of the Marmie of a particular single focal site. This suggests that the Marmie images signify a sphere of influence for the character represented.

What remains to be done, however, is to identify those motifs that co-occur with the Marmie so that the full repertoire of the phase (or sub-phase) in which the Marmie occur can be identified and compared to that of other phases, to elucidate differences so that a basis for social changes might be identified and aligned with other changes in the archaeological and environmental record (cf. Conkey 1997; Ross 2013).

The Marmie's current significance to the Traditional Owners groups is demonstrated by its selection as a promotional symbol for their association with Gariwerd. As such, the need to preserve and fully interpret the significance of the Marmie to visitors is an aspect of the Greater Gariwerd rock art that requires greater emphasis. In addition, the importance of the northern Bullawin area (at the northern end of the Victoria Range) must be highlighted as a place that particularly requires additional consideration by Park management.

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## REFERENCES

- BARRETT, C. 1943. New primitive art gallery. *Wildlife* 5: 124–126.
- BLAKE, B. J. 2003. *The Warrnambool language: a consolidated account of the Aboriginal language of the Warrnambool area of the Western District of Victoria based on nineteenth-century sources*. The Australian National University, Canberra. <https://openresearch-repository.anu.edu.au/bitstream/1885/146713/1/544%20Blake.pdf>.
- BIRD, C. F. M. and D. FRANKEL 1998. Pleistocene and early Holocene archaeology in Victoria: a view from Gariwerd. *The Artefact* 21: 48–62.
- BIRD, C. F. M. and D. FRANKEL 2005. *An archaeology of Gariwerd: from Pleistocene to Holocene in western Victoria*. Tempus 8, University of Queensland, St Lucia.
- BIRD, C. F. M., D. FRANKEL and N. VAN WAARDEN 1998. New radiocarbon determinations from the Grampians-Gariwerd region, western Victoria. *Archaeology in Oceania* 33(1): 31–36.
- BRADY, L. M., J. J. BRADLEY and A. J. KEARNEY 2023. *Jakarda Wulka (Too many stories): Narratives of rock art from Yanyuwa Country in Northern Australia's Gulf of Carpentaria*. Sydney University Press, Sydney.
- BUSHNELL, G. H. S. 1967. *Ancient arts of the Americas*. Thames and Hudson, London.
- CAYLEY, R. A. and D. H. TAYLOR 1997. *Grampians special map area geological report*. Geological Survey Report 107. Natural Resources and Environment, Melbourne.
- CHALOUKKA, G. 1989. Rock paintings of the dynamic figures style, Arnhem Land Plateau region, Northern Territory, Australia. *Ars Prehistorica* VII/VIII 1988/89: 329–339.
- CHALOUKKA, G. 1993. *Journey in time: the World's longest continuing art tradition*. Reed, Chatswood.
- CLARK, I. D. 1991a. Larngibunja Shelter ('Cave of Fishes') VAS Site 7323/13: a history of management and intervention. Unpubl. report to Victoria Archaeological Survey, Melbourne.
- CLARK, I. D. 1991b. A history of rock art site management and intervention in the Grampians National Park and environs. Unpubl. report to Victoria Archaeological Survey, Melbourne.
- CLARK, I. D. 2017. Bunyip, Bunjil and mother-in-law avoidance: new insights into the interpretation of Bunjils Shelter, Victoria, Australia. *Rock Art Research* 34(2): 189–192.
- CLEGG, J. 1979. *Notes towards Mathesis art*. Clegg Calendars, Balmain.
- CONKEY, M. W. 1997. Beyond art and between the caves: thinking about context in the interpretive process. In M. W. Conkey, O. Soffer, D. Stratmann and N. G. Jablonski (eds), *Beyond art: Pleistocene image and symbol*, pp. 343–367. University of California Press, San Francisco.
- COUTTS, P. J. F. and M. LORBLANCHET 1982. *Aborigines and rock art in the Grampians*. Records of the Victoria Archaeological Survey No. 12, Ministry for Conservation, Melbourne.
- CRAWFORD, I. M. 1968. *The art of the Wandjina*. Oxford University Press, Melbourne.
- DAVID, B. 2002. *Landscapes, rock-art and the Dreaming: an archaeology of preunderstanding*. Leicester University Press, London.
- DAVID, B., I. MCNIVEN, J. FLOOD and R. FROST 1990. Yiwarralray 1: archaeological excavations at the Lightning Brothers' site, Delamere Station, Northern Territory. *Archaeology in Oceania* 25: 79–84.
- DAWSON, J. 1881. *Australian Aborigines: the languages and customs of several tribes of Aborigines in the Western District of Victoria*. George Robinson, Melbourne (facsimile edition 1991, AIATSIS, Canberra).
- ELKIN, A. P. 1979. *The Australian Aborigines*. Angus & Robertson, Melbourne (5th edn).
- FORCELLINO, A. 2011. *Michelangelo: a tormented life*. Polity Press, Cambridge.
- GOMBRICH, E. H. 1960. *Art and illusion: a study in the psychology of pictorial representation* (2000 edn). Princeton University Press, Princeton.
- GOMBRICH, E. H. 1963 *The story of art*. Phaidon Press, London.
- GUNN, R. G. 1981. *The prehistoric rock art sites of Victoria: a catalogue*. Occasional Report Series No. 5, Ministry for Conservation, Melbourne.
- GUNN, R. G. 1983. *Aboriginal rock art in the Grampians*. Records of the Victorian Archaeological Survey No. 16. Ministry for Conservation, Melbourne.
- GUNN, R. G. 1984. The rock art of Victoria: an initial comparison. *Aboriginal History* 8: 189–202. <http://doi.org/10.22459/ah.08.2011.12>.
- GUNN, R. G. 1987a. Aboriginal rock art in Victoria. Unpubl. report to the Victoria Archaeological Survey, Melbourne.
- GUNN, R. G. 1987b. Second catalogue of Victorian rock art sites. Unpubl. report to the Victoria Archaeological Survey, Melbourne.
- GUNN, R. G. 2000. Central Australian rock art: a second report. *Rock Art Research* 17(2): 111–126.
- GUNN, R. G. 2003. Three more pieces to the puzzle: Aboriginal occupation of Gariwerd (Grampians), western Victoria. *The Artefact* 26: 32–50.
- GUNN, R. G. 2005. Motif structure and Australian Aboriginal rock art analysis: an example from Gariwerd, Victoria. *Rock Art Research* 22(1): 35–47.
- GUNN, R. G. 2008. Dry-pigment drawings within Gariwerd, Australia. *Rock Art Research* 25(2): 183–200.
- GUNN, R. G. 2009. Wooden artefacts from Gariwerd rockshelters, western Victoria. *Australian Archaeology* 68: 23–30.
- GUNN, R., B. DAVID, J.-J. DELANNOY, B. SMITH, A. UNHANGHO, I. WAINA, Balanggarra Aboriginal Corporation, L. DOUGLAS, C. MYERS, P. HEANEY, S. OUZMAN and P. VETH 2022a. Superpositions and superimpositions in rock art studies: reading the rock face at Pundawar Manbur, Kimberley, northwest Australia. *Journal of Anthropological Archaeology* 67: 101442, <https://doi.org/10.1016/j.jaa.2022.101442>.
- GUNN, R. G. and J. R. GOODES 2022. A short story of Gariwerd: the rock art management chapter. In P. S. C. Taçon, S. K. May, U. Frederick and J. McDonald (eds), *Histories of Australian rock art research*, pp. 113–130. Terra Australis 55, ANU Press, Canberra.
- GUNN, R. G., J. GOODES and L. C. DOUGLAS 2019. Gariwerd petroglyphs and their situation within the Gariwerd rock art sequence. *The Artefact* 42: 17–27.
- GUNN, R. G., J. GOODES, L. C. DOUGLAS, D. GRIFFIN, B. BRIGGS and L. WALKER 2022b. Boorpeck: its significance in Gariwerd rock art. *Rock Art Research* 39(2): 168–181.
- HARMAN, J. 2008. Using decorrelation stretch to enhance rock art images. Paper presented at American Rock Art Research Association Annual Meeting, 2005. Online at <http://www.dstretch.com/AlgorithmDescription.html>.
- HASKOVEC, I. P. 1992. Northern running figures of Kakadu National Park: a study of a regional style. In J. McDonald and I. P. Haskovec (eds), *State of the art*, pp. 148–158. Occasional AURA Publication No. 6, Australian Rock

- Art Research Association, Melbourne.
- HOWITT, A. W. 1904. *The native tribes of south eastern Australia*. MacMillan, London.
- JONES, T. and S. K. MAY 2015. Rock art and ritual function: the northern running figures of western Arnhem Land. *The Artefact* 38: 53–66.
- MCCARTHY, F. D. 1976. *Rock art of the Cobar pediplain in central western New South Wales*. AIAS, Canberra.
- MCCARTHY, F. D. and N. W. G. MACINTOSH 1962. *The archaeology of Mootwingee, western New South Wales*. Records of the Australian Museum 25(13): 249–298. The Australian Museum, Sydney.
- MCDONALD, J. 2008. *Dreamtime superhighway: Sydney Basin rock art and prehistoric information exchange*. Terra Australis 27, ANU E Press, Canberra.
- MADDOCK, K. 1970. Imagery and social structure at two Dalabon rock art sites. *Anthropological Forum* 2: 444–463.
- MASSOLA, A. 1957. Bunjil's cave found. *Victorian Naturalist* 74: 19–22.
- MASSOLA, A. 1958. New Aboriginal rock paintings in the Victoria Range. *Victorian Naturalist* 75: 73–78.
- MASSOLA, A. 1964. Victoria Range shelters. *Victorian Naturalist* 81: 169–176.
- MASSOLA, A. 1973. Report on new discoveries and notes on an older Aboriginal painted shelter in the Victoria Range, Grampians. *Victorian Naturalist* 90(10): 280–285.
- MAY, S. K., J. G. MARALNGURRA, G. JOHNSTON, J. GOLDHAHN, J. LEE, G. O'LOUGHLIN, K. MAY, C. N. NABOBBOB, M. GARDE and P. S. C. TAÇON 2019. 'This is my father's painting': a first-hand account of the creation of the most iconic rock art in Kakadu National Park. *Rock Art Research* 36(2): 199–213.
- MORWOOD, M. J. 2002. *Visions from the past: the archaeology of Australian Aboriginal art*. Allen & Unwin, Crows Nest.
- MOUNTFORD, C. P. 1965. *Ayers Rock: its people, their beliefs and their art*. Angus and Robinson, Melbourne.
- MOWALJARLAI, D. and J. MALNIC 1993. *Yorro Yorro: Spirit of the Kimberley*. Magabala Books, Broome.
- MULVANEY, K. 1996. What to do on a rainy day: reminiscences of Miriuwung and Gadjerong artists. *Rock Art Research* 13(1): 3–20.
- Parks Victoria 2019. *Conservation Action Plan for parks and reserves managed by Parks Victoria: Grampians (Gariwerd)*. Parks Victoria, Melbourne.
- Parks Victoria 2021. *Greater Gariwerd Landscape management plan*. Parks Victoria, Melbourne. <https://engage.vic.gov.au/gariwerd-management-plan>.
- PRESLAND, G. (ed.) 1977. *Journals of George Augustus Robinson March–May 1841*. Records of the Victoria Archaeological Survey No. 6, Ministry of Conservation, Melbourne.
- RADCLIFFE-BROWN, A. R. 1930. The social organisation of Australian tribes. *Oceania* 1(4): 426–456.
- READ, H. 1943. *Education through art*. Faber, London (1970 edn).
- ROSS, J. 2013. A continent of nations: the emergence of new regionally distinct rock art styles across Australia. *Quaternary International* 285(0): 161–171.
- SAYERS, A. 1994. *Aboriginal artists of the nineteenth century*. Oxford University Press, Melbourne.
- SMYTH, R. B. 1878. *The Aborigines of Victoria* (2 vols). Government Printer, Melbourne.
- STANNER, W. E. H. 1953/1978. The Dreaming. Reprinted in W. E. H. Stanner (ed.), *White man got no Dreaming: essays 1938–1973*, pp. 23–40. ANU Press, Canberra.
- TAÇON, P. S. C. 1992. 'If you miss all this story, well bad luck': rock art and the validity of ethnographic interpretation in western Arnhem Land. In M. J. Morwood and D. R. Hobbs (eds), *Rock art and ethnography*, pp. 11–18. Occasional AURA Publication No. 5, Australian Rock Art Research Association, Melbourne.
- WETTENHALL, G. 1999. *The people of Gariwerd: the Grampians' Aboriginal heritage*. Aboriginal Affairs Victoria, Melbourne.
- WRIGHT, B. J. 1968. *Rock art of the Pilbara region, north-west Australia*. Australian Institute of Aboriginal Studies, Canberra.