



## Archaeology and Petroglyphs of Dampier (Western Australia) an Archaeological Investigation of Skew Valley and Gum Tree Valley

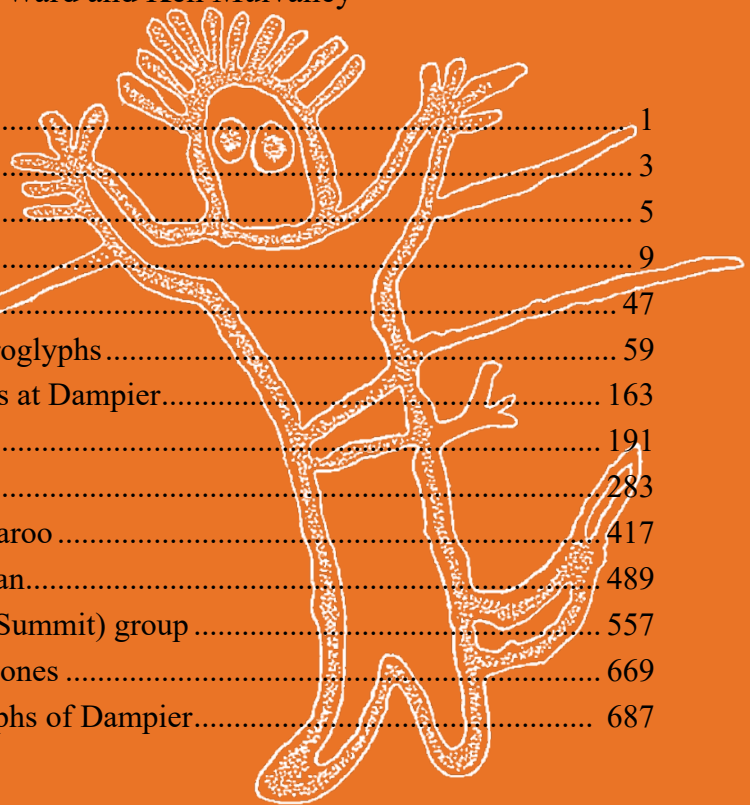
by

Michel Lorblanchet

edited by

Graeme K. Ward and Ken Mulvaney

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## Author

**Michel Lorblanchet** joined the *Centre national de la recherche scientifique* (CNRS, France) in 1969 to study the Palaeolithic rock art of France. After graduating in 1972 from Université Sorbonne (Paris) with a doctorate in Prehistory, he was employed from 1974 to 1977 at the Australian Institute of Aboriginal Studies to conduct research into indigenous Australian rock art. From his base in Canberra, he participated in projects in Far North Queensland and in western Victoria. Between 1975 and 1976, he conducted the fieldwork at Dampier, Western Australia, on which this monograph is based, and made two further fieldtrips there in 1983 and 1984. He returned to France in 1977 to the *Centre de Préhistoire du Pech Merle* (Cabrerets). Lorblanchet was appointed *Directeur de recherches au CNRS* in 1995; he retired in 1999 and lives near Saint Sozy in the Lot Valley where he continues to research and publish about rock art. He is the author of many papers and several books on European Palaeolithic art (some are listed in the editors' introduction) as well as reports and this monograph on his Australian researches.

## Volume Editors

**Graeme K. Ward** has conducted archaeological and ethno-archaeological fieldwork in the island Pacific and Australia. He gained his doctorate from The Australian National University and was employed at the Australian Institute of Aboriginal Studies where he was involved with administration of research programs including the national Rock Art Protection Program. Subsequently, as Research Fellow and Senior Research Fellow at the Australian Institute of Aboriginal and Torres Strait Islanders Studies he undertook research into Indigenous cultural landscapes in northern Australia with traditional knowledge-holders of cultural heritage places. He is the author of various research papers, of three monographs and editor of many collections of archaeological papers; he served as the editor of the Institute's journal, *Australian Aboriginal Studies*, for several years. Currently he is a visitor at the Department of Archaeology and Natural History, School of Culture, History and Language, College of Asia and the Pacific, of The Australian National University.

**Ken Mulvaney** has lived and worked for the past ten years on the Burrup Peninsula, where he is the Principal Advisor Cultural Heritage for Rio Tinto Iron Ore. Prior to this, Ken spent many years in the Northern Territory working with Aboriginal traditional owners documenting their cultural heritage places and land affiliations. He first came to the Burrup in 1980 when employed by the Western Australian Museum as member of a team documenting archaeological sites in areas destined for construction of a petrochemical processing plant. His doctorate from the University of New England is the first such study on the prehistory of the Dampier Archipelago. He is author of many articles on rock art and Aboriginal culture, and is currently affiliated with the Centre for Rock Art Research and Management, University of Western Australia.

## Archaeology and Petroglyphs of Dampier Editors' Introduction

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**ABSTRACT.** Dampier Archipelago, on the northwestern coast of Australia has perhaps the greatest number and concentration of petroglyphs any where in the world. In this introduction to Lorblanchet's pioneering investigation of the archaeology of the Dampier petroglyphs, we provide an outline of the region's history, drawing on records of European exploration and settlement and the evidence from some early accounts and ethnographic investigations that emphasize its status as indigenous country. We consider the history of archaeological research into the Dampier petroglyphs, and describe how Michel Lorblanchet, an expert in French Palaeolithic cave art, came to make Aboriginal Australia, and Dampier in particular, his major research focus between 1975 and 1984.

In discussing Lorblanchet's legacy, we set his Dampier investigations within the context of Australian rock-art research at that time, discuss his field methodology and the analytical rigour that he brought to his study of the Dampier petroglyphs and their archaeology, his development of an appropriate typology, one drawing upon form, patination, carving techniques and other attributes. He emphasized the importance of recognising re-marking, seeing the carvings as 'living surfaces' contributing to a dynamic culture. There is another part of Lorblanchet's legacy, for he not only brought new research perspectives to his Australian studies but, on his return to France, allowed his Australian Aboriginal experience to influence his study and perceptions of the European Palaeolithic.

We note more recent research into the Dampier petroglyphs, especially the archaeological recording and salvage operations and cultural landscape surveys of the last few decades; we reflect on the variously successful or otherwise attempts to promote recognition of the Dampier petroglyphs' significance and protection. Recent initiatives seek to emphasize the 'Potential Outstanding Universal Value' of the Dampier Archipelago, while the role of native title settlement and the establishment and administration of the new Murujuga National Park is changing the dynamics of the place. Effort is being focused upon securing the status and the provision of protection of the petroglyphs and their archaeological settings.

Finally, we note our editorial and authorial stances on terminology, on descriptions of marks, and the sources of the many illustrations provided in these reports.



**Figure 1.** Satellite map of a portion of the Dampier Archipelago focusing on part of Burrup Peninsula. Scale: 5 km. Source: Produced by KJM adapted from Langate; Dampier\_2256 August 2004.

## Dampier and its petroglyphs

Dampier Island is the largest of nine main islands forming an extensive archipelago protruding into the Indian Ocean from the tropical western coast of the island continent now known as Australia. It is located more than 1200 km north of Perth, in the Pilbara region, which is known for the mining of iron ore, along with oil and gas processing.

The archipelago, the largest of the islands and the mining town, were all named after the buccaneer and adventurer William Dampier (1651–1715), who, in 1699, set foot on one of the outer islands. Dampier Island is known to the indigenous inhabitants as ‘Murujuga’. Until recently, it lay a short distance from the continental coast; now it is joined to the mainland by two causeways built as part of the industrial development of the area, and by the tidal mudflats now converted to solar salt ponds (Fig. 1).

In the late Pleistocene and early Holocene periods when the sea levels were up to 130 m lower than at present, the coast was over 100 km further to the north and west, and the islands of the archipelago would have been rocky high points seen across extensive coastal plains; they would have been particularly distinctive to the indigenous occupants of the region (Ingrid Ward *et al.*, 2013; Mulvaney, 2013a: 104). Perhaps this landscape—and its valleys with potable water resources—attracted those who carved what we now recognize as the greatest concentration of petroglyphs in Australia and, arguably, in the world.

Geologically, the islands are either limestone or eroded and tilted sills of igneous rocks dating to the Archaean era (about 4000–2500 million years ago).<sup>1</sup> Throughout the Dampier Archipelago the ancient igneous rocks have weathered and fractured into characteristic ‘rock pile’ form. There are considerable exposures creating rugged ridges and block slopes over a large proportion of the archipelago, and

these are distinctive today because of their dark colour, lack of vegetation and, as one approaches, the proliferation of petroglyphs (Figs 2–4).

These rocks are primarily fine-grained granophyre and gabbro. Originally greyish, they have, over time, weathered to a superficial red-brown colour. When carved, the pale unweathered interior of the rock is exposed; this contrast between the weathered rock surface and the newly exposed material is dramatic. We can imagine that these rocks would have provided a most satisfying canvas for the indigenous inhabitants of the area over a considerable period. Erosion rates of Dampier rocks are among the lowest in the world; recent research (Pillans & Fifield, 2013) suggests that these petroglyphs have the potential to survive for up to sixty millennia.

A variety of evidence suggests that the Australian continent was occupied at least 50 000 years ago, and it is likely that the western coastal lowlands were part of any early settlement process (e.g., Hiscock, 2008; Mulvaney, 2013a: 99). Archaeological excavations elsewhere in the Pilbara region have occupation levels dated to about 42 000 (radiocarbon) years before the present (BP) (Morse *et al.*, 2014). We do not know when the Dampier hills were first occupied or visited but a date of Pleistocene age has been provided by radiocarbon analysis of fragments of a large marine mollusc found among the rocky slopes of Gum Tree Valley, near Dampier. Collected by the French archaeologist, Michel Lorblanchet, this remains the only ancient date for the archipelago. During this period, the coast was more than 160 km to the north. Large seashells were used to hold water or food and have been found far inland in Australia’s central deserts.

About 7000 years ago, rising sea levels resulting from the melting of the extensive ice sheets of the northern hemisphere shrank the Australian coastline and formed the islands of the Dampier Archipelago. Today, the archipelago’s waters have an abundance of marine life, including five turtle species, four of



**Figure 2.** Gum Tree Valley landscape, June 2009. Source: Photograph: KJM.



**Figure 3.** Gum Tree Valley with characteristic block slope, August 2011. Source: Photograph: GKW.

which use the sandy beaches for nesting, dugong and bottlenose dolphins; humpback whales also frequent this area on their annual migration route (Mulvaney, 2015a: 36). Excavations conducted by Dr Lorblanchet at a midden at Skew Valley, on

Dampier Island, have revealed details of the area's occupation including a shift in diet from the earlier consumption of shellfish from mangrove habitats to a wider range of shellfish from both rocky and sandy shorelines (discussed in Chapter 2, Part I).



**Figure 4.** Gum Tree Valley Petroglyph, August 2011. Source: Photograph: GKW.

## History matters

### European exploration and settlement

We know little about the effects on local peoples of the landings made by the Dutch or Portuguese visitors to this region in the seventeenth century, despite plaques being left on shore with names of ships and personnel (e.g., Péron, 1809/2012, chapter XII).<sup>2</sup> The English navigator William Dampier in 1699 while anchored off one of the islands of the archipelago—which he named ‘Rosemary Island’—reported seeing smoke (Dampier 1729: 21–22 August 1699) but no other signs of indigenous inhabitants. Members of Baudin’s expedition (1800–1804) went ashore at Shark Bay to the south and Depuch Island to the east—where, in both places, they encountered much evidence of local peoples’ habitations. While recognising that the islands that they were approaching, including Rosemary Island, were those that Dampier had written about, unfavourable weather obliged them to sail past the archipelago (e.g., Péron, 1809/2012, chapter IX, July 1801; Milius, 2013). The impact of the visit of Captain Phillip Parker King RN (1827: 26 and 27 February 1818) during his survey of the western coastline of Australia in *HMS Mermaid* was possibly more substantial since he reported several brief interactions with the local inhabitants, including gifts and observations of their cultural materials.

In May 1861, Francis Thomas Gregory and his party landed in Hearson Cove (which they named) on the eastern shore of Dampier Island and began land exploration of the region. The crew of the *Dolphin*, anchored in Nichol Bay, maintained generally friendly contact with the local inhabitants over a period of almost five months. At Hearson Cove “ten or a dozen natives, engaged mending their nets”, had assisted, a short time before, Gregory’s boat crew in loading wood and water (Gregory and Gregory, 1884: 19

July 1861). Gregory’s favourable reports on the region’s potential for use led directly to settlement from the south with development of pastoral runs, pearl shell collection, and whaling and commercial fishing (Fig. 5).

In 1864, a government administrative centre was established at Roebourne, and within a few years gold was discovered in the Pilbara. John Withnell, one of the pastoralists based in the Roebourne area, had frequent interactions with the Aboriginal inhabitants of the region (Withnell, 1901/1965). Friendly contacts, however, were forgotten when, following the spearing of four men including policeman Griffis, in February 1868 a retaliation that has become known as “The Flying Foam Massacre”, many Aboriginal men, women and children were murdered by a force deputized by the Government Resident; one of the leaders was Withnell (Gara, 1983; Bednarik, 2006: 16–22). Continuing settler exploitation of the region’s resources involved indentured Aboriginal labour, which, together with introduced smallpox and influenza, resulted in significant disruption to traditional lifeways and a reduction of the Aboriginal population by the late 1860s (Richardson, 1886: 296; Bednarik, 2006: 22). This historic circumstance was sufficient for the Federal Court to decide, in 2005, that for the archipelago there was extant no Native Title.

In the 1960s, pastoral and fishing activities were replaced by the mining of iron ore in the inland Pilbara, and later, exploitation of off-shore natural gas; with the extractive industries came the need for a deep-water port from which to export the iron ore and gas. Depuch Island, 90 km further to the east, was considered but rejected “on the grounds of its exceptional Aboriginal heritage” (Vinnicombe, 2002: 6; Mulvaney, 2011: 19; cf. McCarthy, 1961). Ironically, attention then moved to the Dampier Archipelago, an area now known to have the greater concentration of petroglyphs. No survey then was made of Dampier





**Figure 5.** Remains of stone building and sheep-pens, West Lewis sheep station, October 2006. Source: Photograph: KJM.

comparable to that conducted at Depuch Island, despite pre-existing knowledge and a brief visit there by the Depuch Island recording team led by Crawford “... to photograph for comparative purposes ...” (Ride & Neumann, 1964: 21).<sup>3</sup> Crawford (1964: 56) listed “200” petroglyphs for the Dampier Archipelago. Moreover, despite much evidence accumulated since that time of the values of the Dampier petroglyphs, no protection has been legislated comparable to that afforded Depuch Island.<sup>4</sup>

Dampier, the largest island in the group, covering some 118 km<sup>2</sup>, was renamed for expedience “Burrup Peninsula” in 1979 (Mulvaney, 2010: 14). Commercial development of the area commenced in 1964 with the construction of Dampier township, access roads, bulk ore storage, conveyors, ship-loading and rail infrastructure. Dampier (Burrup) is the most heavily industrialized of the islands that make up the archipelago, and one of Australia’s busiest shipping ports (Figs 6, 7).<sup>5</sup>

## Indigenous country

### Early accounts

The recent Aboriginal inhabitants of the Dampier Archipelago, the Yaburrara or ‘down-stream’ people, most likely were culturally and linguistically part of the Ngarluma group now centred in the Roebourne area (Vinnicombe, 2002; Mulvaney, 2013b, 2015a: 15). They had a specialized littoral and marine economy collecting shellfish, and they used rafts or floats of mangrove logs—propelled by hand (Lorblanchet & Jones, 2018: fig. 4)—to extend their collection range offshore and between islands.

There was no doubt from the accounts of nineteenth century European visitors that the country was occupied. It is unfortunate that Baudin’s expedition (1800–1804) did not

spend more time in the immediate area or we might have had illustrations of habitations and stone arrangements such as those made by expedition members when they went ashore on Peron Peninsula (e.g., Péron, 1809/2012 fig. 2, chapter IX, July 1801; Milius, 2013: 70–77). King (1827: 25 February 1818) observed family groups; their ‘tracks ... and their fire-places were everywhere visible and around the latter the bones of kangaroos and fishes were strewed’. Fifteen years later, albeit further to the east, Wickham was ashore on Depuch Island in 1840 (Stokes, 1846: June 1840/2004: chapter 2.5) where he:

... found several ... huts still standing. They were constructed of boughs and twigs fixed in the ground, and joined overhead in a circular shape. Over this was thrown a loose matting of twisted grass.

Any local persons, however, withdrew or expressed hostility when encountered by Wickham’s ships company.

There appear to be few early accounts of the Dampier petroglyphs, with no observation of them having witness to their production (Stow, 1865; Thatcher, 1869). Wickham made detailed sketches of the motifs on Depuch Island (Wickham, 1843). Stokes’ account of their voyages (1846: June 1840/2004: chapter 2.5) includes this passage:

**NATIVE DRAWINGS.** The natives are doubtless attracted to the place partly by the reservoirs of water they find among the rocks after rain, partly that they may enjoy the pleasure of delineating the various objects that attract their attention, on the smooth surface of the rocks. This they do by removing the hard red outer coating, and baring to view the natural colour of the greenstone, according to the outline they have traced. Much ability is displayed in many of these representations, the subjects of which could be discovered at a glance. The number of specimens was immense, so that the natives must have been in the habit of amusing themselves in this innocent



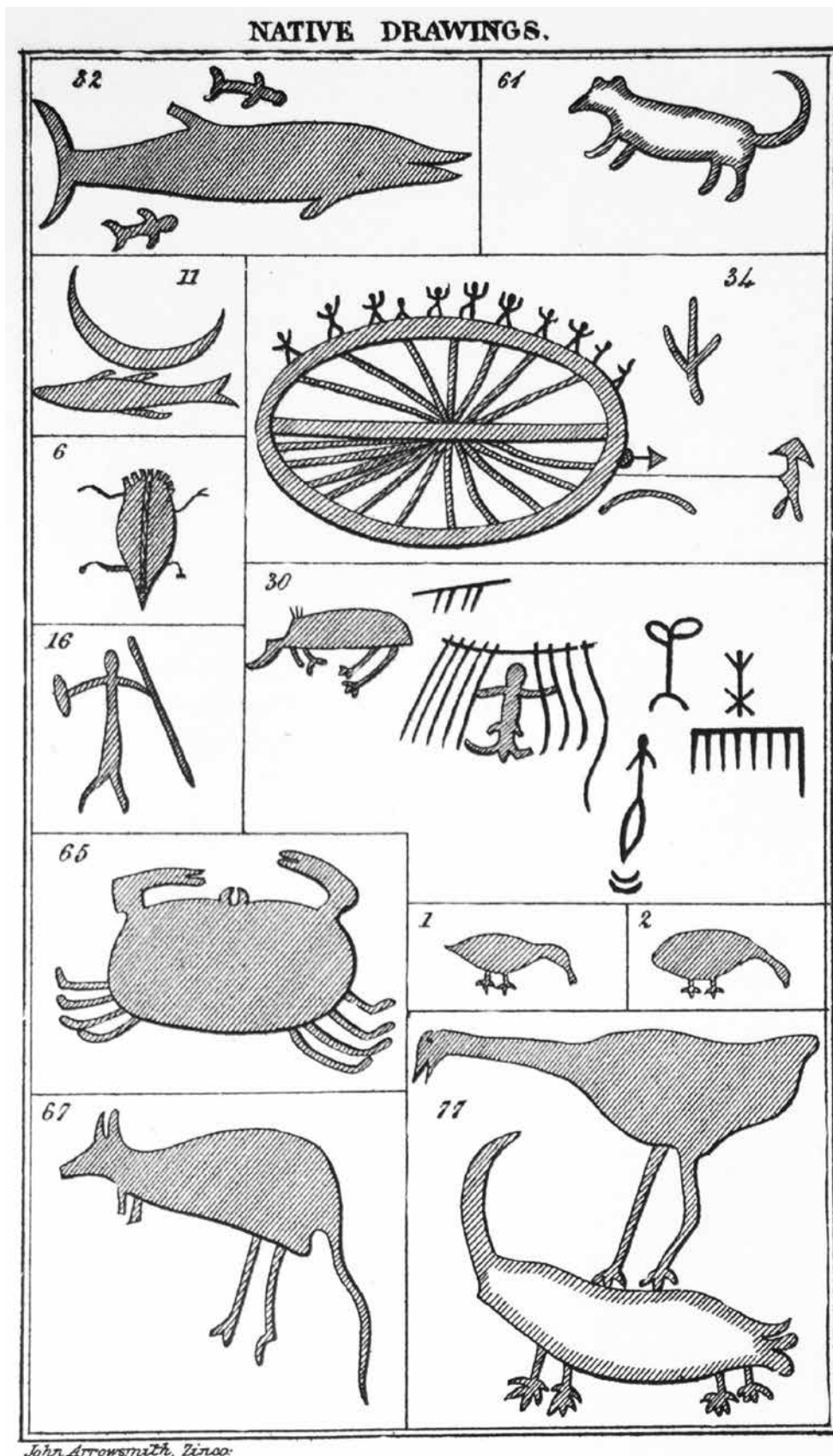
**Figure 6.** Aerial view looking across Dampier Salt works in 1974; with haul road running through part of Dampier Island out onto Mistaken Island, at right is the iron ore causeway out to East Intercourse Island. Source: Photograph: M Lorblanchet.



**Figure 7.** Similar aerial view of Dampier Island in February 2012; in the foreground, the area known as Pond Zero has filled and the developments at the southern end and along the haul road are all that has changed in some 38 years. Source: Photograph: KJM.

manner for a long period of time. I could not help reflecting, as I examined with interest the various objects represented ...—the human figures, the animals, the birds, the weapons, the domestic implements, the scenes of savage life—on the

curious frame of mind that could induce these uncultivated people to repair, perhaps at stated seasons of the year, to this lonely picture gallery, surrounded by the ocean-wave, to admire and add to the productions of their forefathers.



**Figure 8.** Wickham's Depuch sketch with caption accompanying its reproduction in Stokes' account. Source: Stokes 1846 (volume 2), opposite p. 170. "NATIVE DRAWINGS—lithographic impression of the copies made by Captain Wickham of the native drawings on Depuch Island. They have already appeared in the Royal Geographical Journal volume 12. The following list will convey to the reader what the drawings are intended to represent: 1. A goose or duck. 2. A bird, probably the leipoa. 6. A beetle. 11. A fish over a quarter-moon; which has been considered to have some reference to fishing by moonlight. 61. A native dog. 16. A native, armed with spear and woomera, or throwing stick, probably relating his adventures, which is usually done by song, and accompanied with great action and flourishing of weapons, particularly when boasting of his prowess. 20. A duck and a gull. 34. A corrobory, or native dance. 65. A crab. 30. A native in a hut, with portion of the matting with which they cover their habitations. 67. A kangaroo. 71. Appears to be a bird of prey, having seized upon a kangaroo-rat. 32. Shark and pilot-fish."

And he included a “Lithographic impression of the copies made by Captain Wickham of the native drawings on Depuch Island” (reproduced as Fig. 8).

The first reported notice of the Dampier petroglyphs appears to be that by JP Stow (1865: 187); while being shown a place to get water, he saw on the adjacent rocks “sketches of fishes, turtles, lizards and different kinds of birds, including emus. One aboriginal artist made a sketch of a turtle in the sand”. A similar observation was made by a gentleman reporting on the northwest pearling industry (Thatcher, 1869: part 3):

The natives also have displayed more ingenuity and artistic skill than I have seen in the decorative efforts of any other Australian aboriginals. On the flat surfaces of slabs of stone they have produced not untruth full [sic] representations of lizards, turtles, kangaroos, &c., by chipping with another stone or sharp instrument, thus making the animal or reptile represented, stand as it were in relief by contrast with the darker ground of the slab. These illustrations of animal life were found there by the first white visitors, so the natives could have received no instruction from Europeans ...

Withnell (1901/1965: 29) had noted that “They have very many rock carvings; every hill that has suitably hard stone will have some kind of figure tattooed thereon. They do not choose the softer rocks, and mainly prefer the basalt and granite”, and went on to describe the method of manufacture and some elements of the representations:

... to draw the outline with chalk or ochre and with a sharp hard stone hammer within the outline until the rock is fretted away about one-eighth of an inch deep. Some of the figures are very large, whilst others are small. None of the outlines show much aptitude for drawing. The head is round, then a straight line much smaller than the head represents the trunk of the body. A slighter line on each side represents the arms, with a bend for the elbow, and a large ball at the end of each of these line, represents the hands. Each leg is the same size as the body, with enormous feet, the whole being greatly out of proportion. Some, however, are done a little better, but others so badly that they require explaining. The carvings are mainly representative of men, kangaroos, rats, opossums, emus, turkeys, fishes, spears, shields, native weapons of all kinds, and many men and women in a variety of vulgar attitudes.

Petroglyph production is confirmed by another contemporary observer, John Slade Durlacher, who worked on Pilbara pastoral stations including the sheep run on West Lewis Island in the 1870s (Durlacher, 2013). Withnell also wrote (1901/1995: 5–6) of what he called the “Tarlow” [*thalu*]. Palmer (1975: 158) used the variant “*dalu*”, stone or a cairn of stones marking a ‘hallowed spot’ relating to increase ceremonies: “... in some they hammer the cairn or boulder with other round stones and go through many speeches ...”.

### Ethnographic investigations

Kinglsey Palmer (1975: 155), working from the Department of Aboriginal Sites of the Western Australian Museum, discussed the problem of origin and ownership of the Dampier petroglyphs with indigenous residents of the area:

Informants all agreed however that the engravings were not the work of humans, but that they had been drawn by the *Marga* people who lived in the Dream Time. This mythological explanation of the engravings points to two things. Firstly, the engravings were done at least as long ago as it takes for incidents to become part of mythology. Secondly, the reasons and material relevant to the engravings obtained from contemporary sources reflects only the significance of the engravings to living Aborigines or their forebears. They tell us nothing about the original artists or about their reasons for drawing as they did.

Palmer’s informants continued with stories about various attributes of the Dampier images including the significances of representations of animals, genitalia, headdresses (1975: 155 ff.). Palmer (1977: 43–44) wrote about Indigenous belief systems of the peoples of the Depuch Island—Port Hedland region along the coast to the east of Dampier: petroglyphs were permanent signs left by ancestral beings to record their own existence and activities and the validity of the law that they had formulated. Moreover, while many of the designs were regarded as secret, his informant:

... explained how it was they were left about on the rock for anyone to encounter. While women might see the sacred designs, no harm would come to them provided they did not know their true meaning.

The contemporary significances of petroglyph motifs are in their relationship to ancestral beings and their role as reminders of the behavioural imperatives formulated by them; the present community has obligations to look after these places of special potency that have possible harmful effects if they are neglected; there are songs and associated mythology for many of the motif subjects, and there may be multiple cultural references above simple representation. These issues have been reinforced in accounts provided by local persons involved in the various archaeological surveys conducted in recent decades (Vinnicombe, 2002; Mulvaney, 2010).

Vinnicombe (2002: 24–25, end note), in referring to Withnell’s observation, noted that *thalu* (increase) sites, “usually associated with standing stones and sometimes with petroglyphs, were identified by Aboriginal elders who took part in archaeological surveys of the Dampier Archipelago”:

... Many of the larger anthropomorphous and animal figures, together with their tracks, were identified with ancestral creator beings, and some of the attenuated figures were described as ‘spirit people’. These observations confirm that mythological and ceremonial significance is still attributed to the art in certain contexts. In addition to recognising the prolific evidence of stone having been quarried and converted into artefacts, and places where food was formerly gathered, ground and cooked, the Aboriginal participants in the surveys were profoundly aware of the spirits associated with the pragmatic evidence that was being recorded. Many incidents occurred which clearly demonstrated their belief that the spirits of their ancestors were ever present and interacting both with themselves and the land on which the sites are located.

In discussing the petroglyphs, Vinnicombe (2002: 14) continued, “... it is essential that an attempt should be made to perceive and assess the images in terms of the Aboriginal world view and not merely as a set of statistics reflecting western-oriented techniques and subject preferences”.

It was evident to Lorblanchet during his Dampier fieldwork, and especially during visits made by traditional owners, that the petroglyphs may be seen in the context of indigenous cosmology and not be reduced to data reflecting archaeological research foci (Chapter 1). Although these matters were not central to his investigations at Skew Valley and Gum Tree Valley, Lorblanchet, while developing archaeological description and analysis of the imagery, recognized that the presence of a contemporary culture tied to the rock art afforded a unique opportunity to researchers working in Australia. (Cf. Lorblanchet, 1988, 1991b; his argument in this paper concerning the importance of archaeological approaches to rock art in reaction to the emphasis upon use of ethnographic parallels for interpretation as used at the turn of the century is a different matter (below).)

That Lorblanchet had included Aboriginal community members in his pioneering study reflects his inclusive

approach to research. This indigenous engagement included involvement of staff of the Western Australian Museum Department of Aboriginal Sites (Cyril Peck and Ted Wilkes), employment of an Aboriginal field assistant, and visits by local custodians including Coppin Dale, Bundabarr Williams, David Daniel, Ernie Smith and Jeffry Hubert. Mr Herbert Parker, then Pilbara representative of the National Aboriginal Council and Chairman of the Pilbara Aboriginal Bush Meetings, also visited Lorblanchet and his team. In addition, Lorblanchet drew upon the services of anthropologist Kingsley Palmer and linguist Frank Wordick to assist him with contemporary cultural information and liaison with local Aboriginal representatives (Chapter 1). Later, in France, Lorblanchet was pleased to return the favour of fruitful interactions by hosting young indigenous Australians professionally trained and working as cultural heritage managers. The two young persons were Cliff Coulthard (Fig. 9) and Jenny Carroll; both were involved in cultural heritage management in their respective State administrations, Coulthard in South Australia and Carroll in New South Wales.

Lorblanchet has reported that, once they had overcome some culture-shock, their visits were successful, with learning on the part of both Aboriginal and French parties. Coulthard remains influential in Indigenous cultural heritage management, managing, with Adnyamathanha family members, Iga Warta—"The Place of the Native Orange"—in the Flinders Ranges (IGA WARTA n.d.). Carroll (later Jenny Crew) returned to National Parks and Wildlife Service to continue working with women's cultural heritage.

Several thousand archaeological sites now have been identified within the archipelago and their significances of many to contemporary Aboriginal custodians have also been documented. Most were recorded as a consequence of the industrial development and with the involvement of



**Figure 9.** Cliff Coulthard in 1983, a photograph that he sent to Michel Lorblanchet prior to his departure for France. Source: Photograph used by permission of Cliff Coulthard and South Australian Department of State Development, Aboriginal Affairs and Reconciliation.

Aboriginal custodians (Mulvaney, 2011, 2013a: 104), and are focussed mainly within the industrial zoned lands of the Burrup (comprising 27.8 km<sup>2</sup>). In 1971, formation of the Dampier Salt haul road across the island to a ship-loading facility on Mistaken Island resulted in the partial destruction of a midden at Skew Valley, and, incidentally, allowed the ready access into this part of Dampier Island that resulted in the identification of the two major cultural heritage complexes of Skew Valley and Gum Tree Valley, the subject of Lorblanchet's research (Fig. 10).



**Figure 10.** Skew Valley. Dampier Salt transportation route out to East Mid Intercourse Island and Mistaken Island, at top centre, October 2013. Source: Photograph: KJM.

## Researches into the Dampier petroglyphs

### Initial archaeological investigations

Apart from the observations made by Ian Crawford, archaeologist at the Western Australian Museum, who visited a few Dampier locations after his fieldwork on Depuch Island in 1962, the earliest reported investigations were carried out by amateur fieldworkers. Robert Bednarik (e.g., 1977, 2002a,b, 2006: 25–32), while working for a Pilbara engineering company, reported that from 1967 he recorded many petroglyphs on Dampier Island and elsewhere in the archipelago and adjacent mainland, usually working alone but sometimes in company with Aboriginal men. Enzo Virili, the Project Engineer for Dampier Salt (1972–1976), also recorded petroglyphs across the archipelago, and he collaborated with Warwick Dix, the first Registrar of Aboriginal Sites at the Western Australian Museum, in drawing them to the attention of a wider audience through conference presentations and publications (e.g., Virili, 1978, n.d.; Dix, 1977; Dix & Virili, 1977; also Comalco, 1972; Virili was involved in the consultations which led to one petroglyph, a depiction of a turtle, being sent with the first shipment of salt to Japan (Anon., 1973)).

During the 1970s, in the face of increasing industrial development within the archipelago, field surveys were conducted by staff of the Western Australian Museum and by consultants (Palmer, 1975, 1977; Vinnicombe 2002: 8 ff.). The first of the large-scale archaeological surveys of industrial land was that linked to the North West Shelf Venture Karratha Gas Plant (DAS, 1984; Vinnicombe, 1987). This was carried out after blanket consent to destroy sites was provided by the State Government Minister of the day under Section 18 of the *Aboriginal Heritage Act, 1972*. The project, surveying a total area of about 12 km<sup>2</sup>, was directed more toward finding, recording and salvage than assessment and management. Today, while it is standard for heritage surveys to be conducted prior to commencement of construction, identification of the existence of Aboriginal cultural material rarely curtails any proposed industrial developments. There have been carried out over 160 heritage surveys, many involving multiple groups over the same parcels of land, including the Rio Tinto iron ore port facilities upgrade that was commenced in 2003 (2.2 km<sup>2</sup>; Gunn, 2007). These commercial surveys of development lands covered a total of 34 km<sup>2</sup>; however, apart from the DAS survey, much of the data generated by them is not publicly available.

Vinnicombe (2002: 9–17) and Mulvaney (2010; 2015b) have provided extended discussions of published and unpublished field surveys and other research focussed on the Dampier petroglyphs. They provided descriptive analyses, information on the varied techniques used to make the petroglyphs, documentation of motifs and subjects, including anthropomorphic figures, fauna, and non-representational or schematic imagery, post-contact subjects in the rock markings, the content and scope of composite panels, and the potential of patination studies to date the petroglyphs. This research, building on the perceptive observations of Lorblanchet, has amply demonstrated the significance of the area in terms of Indigenous Australian and world heritage values and the continuing need for comprehensive management of those heritage values, an aspect neglected despite the numerous surveys and recommendations (Vinnicombe, 2002: 9–17; Bednarik, 2002c, 2006: 33 ff.; Mulvaney, 2010, 2015a,b; Mulvaney & Hicks, 2012).

Despite the many millions of dollars spent by commercial

developers on heritage investigations within Burrup Peninsula, very little of the Dampier Archipelago has been subject to detailed archaeological investigation. After Virili had drawn to the attention of the Western Australia Museum the existence of a midden in Skew Valley, Robert Bevacqua (1974) of the museum made test excavations there, and these were extended by Lorblanchet. The research conducted under the direction of Lorblanchet at Skew Valley and Gum Tree Valley provided the first detailed and scientific study of Dampier rock art and its associated archaeology. His research provides not only detailed recording of the petroglyphs but also sets them securely in their archaeological context. Lorblanchet's work remains one of the few site-specific and multi-discipline investigation conducted in the archipelago. His contribution to our knowledge of the Dampier petroglyphs and its wider results is discussed further below.

### From the European Palaeolithic to Aboriginal Australia

Michel Lorblanchet was born 7 February 1937 in Saint Denis, part of the Lot region of southwestern France, an area rich in Palaeolithic painted caves (Anon. n.d.a). After graduating in History, Geography and Prehistoric Archaeology at the University of Montpellier, Lorblanchet in 1969 joined the French national centre for scientific research (CNRS) to study the Palaeolithic rock art of France, and was a student of André Leroi-Gourhan the Sorbonne University (Paris). Leroi-Gourhan and Annette Laming-Emperaire, the two leading specialists of cave art studies, were members of the jury of his doctoral thesis. In November 1972, Lorblanchet completed his doctorate in prehistory (*Thèse de Doctorat de 3ème cycle soutenue à la Sorbonne avec mention Très Bien. Sujet de la thèse: "L'art pariétal paléolithique"* [Sorbonne Doctorate: "The rock art in Quercy: Sainte-Eulalie, The Wonders, A research method for analysing decorated caves"].) Two years later, Lorblanchet was "placed by the CNRS at the disposal of Australia for three years" (Lorblanchet, n.d. [1975a]).

Lorblanchet had been recruited by Peter Ucko, Principal (chief executive officer) of the then Australian Institute of Aboriginal Studies (AIAS), who, when a lecturer in archaeology at University College London, had been co-author of an influential book on European Palaeolithic rock art (Ucko & Rosenfeld, 1967). Between 1974 and 1977, Lorblanchet was employed as a research consultant at AIAS to conduct research into indigenous Australian rock art.<sup>6</sup> Lorblanchet, his wife Maguy and two young children, arrived in Canberra early in June 1974. Immediately after this, Lorblanchet was sent by Ucko to participate in a fieldtrip of six weeks' duration to Flinders Archipelago with anthropologists Athol Chase, Peter Sutton and Bob Layton, along with three Indigenous site custodians, Bob Flinders, Johnny Flinders and Billy Megreen. About this venture, Lorblanchet wrote (pers. comm. to GKW 10 March 2014):

I was sent there as an archaeologist ... it was extremely fruitful for me. I learned a lot; I discovered Aborigines, and their special way to speak English ... I discovered life in the Australian bush; I enjoyed fishing and hunting. I had liked fishing since my childhood and fishing was the best way for me to communicate with these Aborigines ...

Subsequently, Lorblanchet spent three field seasons recording painted shelters on Cape York Peninsula with Dr André Rosenfeld of The Australian National University (Rosenfeld, 1975, 1981). (Bob Layton and Darrell Lewis were members of the recording team.) Following this, he

worked with Dr Peter Coutts (Victoria Archaeological Survey) in the Grampians (Coutts and Lorblanchet, 1982), before being asked to undertake his major Australian work on the Dampier petroglyphs. He conducted the fieldwork on which this monograph is based at Dampier between 1975 and 1976, and made two further fieldtrips there in 1983 and 1984.

Dr Peter J Ucko (1938–2007), the second Principal of the Institute, was appointed in 1972 (resigned 1981). Ucko's appointment had coincided with the term of a reforming Australian government which provided funds for an extension of the Institute's role as a research institution in its own right, setting its own research agenda rather than reacting with funding support to amateur and university-based researchers. This included developing in-house research resources and employing professional, academically trained staff to conduct research that could be directed to fill gaps in knowledge.<sup>7</sup>

Ucko, unimpressed by the level of professionalism in rock art research in Australia, took steps to redress the matter early in his tenure with the senior appointments of two specialists, Robert Layton—'Social anthropology of rock art'—and Michel Lorblanchet—'Prehistory and rock art'—and by giving priority to grants to support recording of rock art sites and mapping of sites of significance. Layton (e.g., 1985, 1986, 1992) was to emphasize a contemporary cultural context approach to research, and Lorblanchet to bring a systematic, detailed and disciplined approach to fieldwork and interpretation from his training in European Palaeolithic studies. (Stephanie Moser has written extensively on professionalization of Australian archaeology and the role of the Institute [pertinently here 1995: 200–201]; also Ward, 2014.)

The view of rock art research and researchers was indeed not favourable at this time. In the mid-1970s, however, the involvement of Ucko and Rosenfeld, and the new appointees, contributed toward changing perspectives. Also influential was the international symposium held in Canberra in 1974; it brought together many rock-art researchers, setting the course for Australian rock art studies in particular and culminating in a seminal publication of the proceedings (Ucko, 1977). Lorblanchet arrived in Australia too late to participate in the 1974 Institute conference (he provided a paper (Lorblanchet, 1978) for the conference symposium volume edited by Ucko), but he soon appreciated the prevailing view evident there: "... something astonished me: Bob Layton, and especially me, we were treated pejoratively as 'rock art people'" he wrote in a pers. comm. to GKW 3 March 2014.

I was told often that rock art is not an independent discipline and can only be understood through ethnography ... . At the Institute, I astonished many people with my emphasis on recording; several laughed heartily when I unfolded my large-size tracing of Glenisla shelter (Grampians) with 2000 red strokes mixed with animal and human figures. For many of the AIAS people it was a waste of time and money!

Lorblanchet's observations, made while travelling for several weeks with anthropologists and Aboriginal custodians who were re-visiting Great Barrier Reef sites, taught him the necessity of cross-checking ethnographic information when the custodians were distant in time and residence from the field locations.

The archaeological study of rock art was just developing in Australia. Ucko wanted to accentuate it; Lorblanchet's work contributed significantly to this development by emphasising the role of detailed recording and systematic excavation.

## Lorblanchet's Dampier researches

As Lorblanchet has written in his introduction to this account of the researches at Dampier, the Dampier Salt engineer-manager recognized the significance of the petroglyphs on the lease held by his company (Chapter 1; Lorblanchet, n.d. [1975b]). Enzo Virili requested assistance from the Western Australian Museum to record the petroglyphs. The then Registrar of Aboriginal Sites (a statutory position under the Western Australian *Aboriginal Heritage Act* of 1972), Warwick Dix, worked with Virili (Dix & Virili, 1977; Virili, 1978), in July 1975 and wrote (from the Western Australia Museum) to Ucko to seek assistance from the Institute for the recording program (WD to PJU 4 July 75 [1974/0016-1: 31, 33, 36]). Lorblanchet's involvement was approved by Ucko and he made an initial visit to Dampier in August and September 1975 (Lorblanchet, n.d. [1975c, 1975d]). The following year, he spent more than four months excavating and recording the petroglyphs in two valleys near the southern end of Dampier Island. With support from CNRS and AIAS, Lorblanchet made two further visits, in 1983 and 1984, a total of three months' duration, to extend his researches with studies of the petroglyph concentrations on the block slopes above Gum Tree Valley.

Having sought permission from the WA Department of Aboriginal Sites to survey and excavate (Lorblanchet to new Registrar of Sites, Bruce Wright [1974/0016-1: 51 16 March 1976]). Lorblanchet spent an extended period (April–August 1976) at Dampier. His intention was to be there for about five months, giving priority during April to excavation of the midden at Skew Valley along a 25 m face where it had been cut by road works; he planned then to spend May, June, and early July recording petroglyphs on the slopes above the midden; and in August to excavate a Gum Tree Valley midden.

After finding accommodation in Karratha, Lorblanchet immediately commenced excavation at Skew Valley (ML in Dampier to PJU 19 April 1976 [1974/0016-1: 56]). Excavation of the Skew Valley shell midden resulted in the removal of an estimated ten tonnes of sediment (Lorblanchet, n.d. [1975c, 1978], 1992a). Two main layers comprised the midden, the upper containing mainly bivalves, and the lower gastropods (Fig. 11). Artefacts were identified throughout the deposit. Importantly, carved blocks were uncovered, and samples of shell and charcoal collected for radiocarbon age estimates (Figs 12, 13).

Detailed recordings (by tracing and day- and night-photography) were made of several hundred petroglyphs in Skew Valley and five sampling areas delineated in Gum Tree Valley, with carved surfaces plotted on maps. The small AIAS field crew received assistance from archaeological students from the University of Western Australia, Aboriginal Sites trainees from the Western Australian Museum, students and teachers from Karratha High School, and various visitors and casual employees. The proposed excavation at the Gum Tree valley midden was abandoned due to limited resources and lack of time (ML to PJU August 1976 [Dr M Lorblanchet File 1974/0016-2: 17]).

In November 1976, Lorblanchet (n.d. [1976a]) outlined to Ucko a "Plan of a monograph on some Dampier engraving sites" by himself and Virili (ML to PJU 2 November 1976 [1974/0016-2: 20]) from whose company he sought and received the offer in principle of generous support to cover the cost of colour plates for inclusion in the publication (ML to and from Virili November 1976 [1974/0016-2: 22, 24, 25]). The plan gave priority to a report of the Skew Valley midden and the accompanying series of analyses of excavation materials and contexts; the second part was to



**Figure 11.** Photograph accompanying an initial report to AIAS and showing the Skew Valley excavation immediately adjacent to the salt transportation road. Source: AIATSIS Lorblanchet file.



**Figure 12.** Annotated photograph of the Skew Valley excavation accompanying an initial report to AIAS and showing the carved slabs among *Anadara* shells and rubble. Source: AIATSIS Lorblanchet file





**Figure 13.** Photograph of buried block with carving uncovered in the Skew Valley excavation with tracing of section of motif that accompanied an initial report to AIAS. Source: AIATSIS Lorblanchet file

describe and discuss the petroglyphs recorded in Skew and Gum Tree valleys.

On his return to Canberra, Lorblanchet dealt with the various analyses of the excavated materials, examining the ten boxes of marine molluscs, interpreting the differences in soil composition between the two main layers of the Skew Valley midden, negotiating the analyses of the shell and charcoal radiocarbon samples by the Radiocarbon Dating Laboratory of The Australian National University (ANU), dealing with aerial photography and site mapping, identifying stone samples, and conducted patination studies. He arranged for David Horton to do analyses of faunal materials, and Maguy Lorblanchet (n.d. [1978a, b]) contributed a review of historical records and statistical analyses of the shell species from the excavations (these are two among several papers contributed to a draft final report on the Skew Valley excavation). Lorblanchet then packed and returned materials to the Western Australia Museum, and sent copies of reports to the Department of Aboriginal Sites (various file entries [1974/0016-2: 26-56 ff.; 1974/0016-3]).

Having resigned his research position at the Institute from the end of August 1977 (ML to PJU 1 June 1977 [File 1974/0016-3]). Lorblanchet returned to France to continue his employment with CNRS. Early in the following year he sent his contribution—“*Du naturalisme à l’abstraction dans l’art pariétal préhistorique paléolithique européen*”—to the ‘Ucko volume’ in which he traced the progression of naturalism to abstraction in European prehistoric rock art (Lorblanchet, 1977a).

### Second Dampier season

Despite what must have been onerous duties at Pech Merle, a major Palaeolithic site near Cabrerets, Lorblanchet attempted to pursue his interest in and obligations to the Dampier petroglyph research. Late in 1978, he wrote of his intention to come to Canberra in July and August 1980 to finalize the monograph on the archaeology of the Skew Valley midden, and that he was awaiting some reports from collaborators. Ucko replied “Obviously we would be absolutely delighted to have you back here in order for you to complete your manuscript”, and encouraged a grant application to support the proposal. Delays in the development work at Cabrerets lead to the postponement of the proposed trip until 1981, and later (ML to PJU 5 June [1978]; PJU to ML 11 September 1978; ML to PJU 4 October 1978; PJU to ML 25 January 1980; ML to PJU 7 June 1980 [Dr M Lorblanchet—Grants—individuals 1974/0016-4]).

In mid-1983 Lorblanchet sought and was offered an AIAS grant to continue his research at Dampier in May 1984 (For \$6000: “Study of the rock engravings of gum tree Valley (Dampier, Western Australia)”; Admin to ML 30 May 1983 [Dr M Lorblanchet—Grants—individuals 1974/0016-4]). The then Deputy Principal, Warwick Dix (previously Registrar of Sites at the Western Australia Museum; appointed deputy principal in March 1981 with responsibility for the National Site Recording Program), wrote in October 1983 that funds totalling \$9550 and loan of equipment were available (WD to ML 24 October 1983 [File 1974/0016-4]). Dix also wrote to CRA resource company, then owner/

operators of the solar salt works (9 December 1983 [Dr M Lorblanchet Dampier Project—publications—academic File 74/16 (A)]) seeking support, particularly in provision of accommodation for the research team, stating that:

Dr Michel Lorblanchet ... carried out considerable detailed archaeological research at the site known as Gum Tree Valley. Unfortunately Dr Lorblanchet had to return to France prior to completing all this research. However he is returning in May 1984 and would like to spend two months at the site. ... I cannot overestimate the importance of Dr Lorblanchet's work. He is an internationally recognized scholar ... The 1984 fieldwork will provide the final details required to complete a major (and long awaited) monograph on the Dampier sites. His research is funded partly by the French Government and partly by the Institute. ...

Dix wrote similarly to the Department of Conservation and Environment, Perth, and to the Environmental Coordinator, Woodside Offshore Petroleum, Perth, about availability of accommodation.

Obtaining permission to conduct research in the Pilbara required the consent of relevant Aboriginal persons. The Acting Registrar of the Department of Aboriginal Sites responded to Dix (V[era] Novak, Acting Registrar, to WD 5 January 1984 [File 74/16 (A)]) that:

As you are probably aware the Aboriginal people in the Pilbara have expressed their concern about research undertaken at Aboriginal sites. We suggest that the Roebourne Aboriginal Community be consulted about the project prior to its commencement ...

Subsequently, Dix wrote (3 February 1984 [File 74/16 (A)]) to Herbert Parker in Roebourne, then the regional representative of the National Aboriginal Council and senior law man, advising that Lorblanchet intended to be in in Dampier for six to eight weeks and reminding him that:

A couple of years ago Michel arranged for two Aboriginal people from Australia to visit France and work with him on the prehistoric sites in the area of his museum and that was very successful. He wants to involve Aboriginal people in Australia on the Dampier project and I would be glad to have your advice about any people who have an interest in a study of rock engravings and in prehistory who might wish to either visit the site during the study or work at the site for time. The period is May and June this year.

When the results of Dr Lorblanchet's study have been published we hope to publish through this Institute.

I look forward to hearing from you soon so that we can make firm arrangements.

Lorblanchet confirmed his travel plans: He would arrive in Sydney on 5 May, spend a few days in Canberra, then fly to Perth and drive to Dampier, arriving on 16 or 17 May 1984 (ML to WD 20 May 1984 [File 74/16 (A)]; the costs of travel to and from Australia was covered by CNRS). Later, in his correspondence with AIAS (from Karratha, to WD 26 May 1984 [File 74/16 (A)]), it is clear that relations with local Aboriginal persons went smoothly:

... We have met Herbert Parker, the Aboriginal leader at Roebourne—we spent three hours with him—I explained to him ... what we do in Gum Tree Valley—he had received your letter and was very kind (Peter Randolph and Charles Nicholson were also helpful)—they introduced us to another Aboriginal, a Nurdunera [?Mardunira] speaker in Roebourne—this man said that the site at Gum Tree Valley was very old—he did not remember—and it was an open, non-sacred site,—we made an appointment to take them (Herbert Parker and Patterson Algie) to Skew Valley and Gum Tree Valley soon—they all agreed with our work (Patterson knew this site).

Ben Stagg is a very good assistant—interested, always in good mood, and willing to help—he is an enjoyable companion. ...

The first three days were rainy—the wet season was not finished—but we already spend a good week of work at the top of Gum Tree Valley—we found magnificent old engravings and 100 [?] artefacts around them—everything was recorded and photographed—I do enjoy this fieldwork and I hope it will last like that until the end of July ...

(Palmer (1975: 153) had written that “While Aborigines agreed that the archipelago was in the territory of the Ngarluma people, in some cases it was thought that it was shared with the Mardudunira ... but the general opinion of my informants was that the Ngarluma started at the Peewah river ... and extended west as far as the Maitland river ... Neighbouring groups were Indjibundi and Mardudunira whose descendants [sic] in the post-contact breakdown would have had access to Ngarluma traditions ...”).

In early July 1984, Lorblanchet wrote (from Karratha 8 July [1984] [File 74/16 (A)]) to Dix:

... my work in Gum Tree Valley is always enjoyable. ...

There remains two weeks of work at the entrance to Gum Tree Valley and at Skew Valley—next week, when recording is finished, I would like to invite a few aborigines to come and visit the engravings with me (Herbert Parker, Algie Patterson and maybe others from Roebourne).

I found a lot of prehistoric dwellings in Gum Tree Valley (huts) and I like to ask them what they think of them. I also like to hear them talking about the traditional life (everyday life) on the coast (the ... like fishing, hunting, shellfish gathering ... etc...)

Algie Patterson knows a myth related to some hills nearby. ... When do you come Warwick?

Dix had intended to join Lorblanchet in the field but the absence of the Principal at that time meant that he should not leave Canberra. Dix had had experience working with Aboriginal persons in the region, and it is interesting to speculate whether further information might have been gathered about the sites visited had he been able to make the trip.

In September 1984, Lorblanchet reported to the Principal that “thanks to AIAS my fieldwork in Western Australia was very successful ... I am now preparing a detailed report on this work; please find enclosed a summary of this report” (ML to Eric Willmot 7 September 1984 (File 74/16 (A)); Lorblanchet, n.d. [1984]). Over the next few years, Lorblanchet provided to the Institute a series of reports detailing his field researches and subsequent analyses and these were housed in the Institute's library; these reports provide the basis of the current monograph.

## Lorblanchet's legacy—Australian links

### The Dampier research in context

When Lorblanchet set out to conduct his archaeological study of the petroglyphs on Dampier Island, there were just a handful of enthusiastic private investigators and even fewer professional rock art researchers in Australia. Some early research had been undertaken by people employed at museums and other government institutions, such as Fred McCarthy, Charles Mountford and Robert Edwards. The late 1960s and early 1970s, as with other aspects of anthropology and archaeology, saw an increased attention on the considerable wealth of rock art in Australia. AIAS, established in the early 1960s, had been providing research grants for archaeological and anthropological research but,



**Figure 14.** Skew and Gum Tree Valley at southern end of Burrup Peninsula, salt ponds to south and Hampton Harbour to north. Scale: 500 m. Source: Produced by KJM adapted from Langate; Dampier\_2256 August 2004.

while a new course had been set by Ucko in the mid-1970s, it was to be another decade before substantial support was to be allocated to investigations of various aspects of rock art (Ward, 2009).

Lorblanchet's initial work, funded by AIAS, commenced just three years after the Western Australia *Aboriginal Heritage Act* of 1972 had been enacted. The foresight of the Institute in supporting field research has been a foundation initiative in the formative development of Australian rock art studies. Having engaged Lorblanchet, the Institute sent him into several parts of Australia, where he gained an invaluable insight into the techniques of production of rock art and to its socio-cultural associations.

The Skew Valley and Gum Tree Valley midden sites are 1.2 km apart (Fig. 14). The former opens out onto the waters of the archipelago; the latter, southern midden is tucked into a valley 600 m from the saline mudflats stretching between Dampier Island and the mainland. Both are surrounded by barren rock slopes containing many thousands of petroglyphs. Though this pattern is repeated innumerable times throughout the archipelago, Lorblanchet's work, begun four decades ago, remains the only investigation of its type to be carried out within the Dampier Archipelago.

This lack of research may seem unusual; after all, places of comparable archaeological potential in other parts of the world have witnessed many scholarly treatises and much expenditure of funds to understand and protect such places. Until relatively recently, the Dampier Archipelago was a remote location and is still a relatively expensive place to carry out research. To date there have been just two Doctoral theses, one Masters Qualifier thesis and seven Bachelor of Arts Honours theses. Almost all the detailed archaeological investigations have been focussed on the industrial lands of Burrup Peninsula, much of it financed by the companies

intending to develop the land. The reports of these surveys chiefly comprise an inventory of what cultural heritage is present rather than detail analytical appraisal or research with any theoretical basis.

Lorblanchet's research was set in a period of Australian archaeological enquiry when it was only recently appreciated that people had been on the continent for at least 30 000 years (e.g., Bowler, 1971). In the Pilbara there had been just a few excavations that had provided only Holocene dates. By the time of his second field season, in 1983, it was known that people had been in the Hamersley Range, inland Pilbara, for at least 20 000 years (Maynard, 1980); today there are many sites with dates over 40 000 and one reported 42 000 BP (Sinclair & Wright, 2012; Morse *et al.*, 2014).

The character, scope and precision of Lorblanchet's fieldwork and analyses will be apparent to readers of this book. It will suffice here to point to significant areas, many of which were innovative in the context of Australian studies.

### Field methodologies and analytical rigour

Lorblanchet brought with him to Dampier a firm attention to methodology. His intention to establish a basic chronology not only of the occupation of the area but also for the petroglyphs was realized by systematic excavation of the Skew Valley midden (Figs 15, 16) to reveal its stratigraphy in relation to buried blocks containing carvings and to obtain materials suitable for radiocarbon dating from secure contexts related to the petroglyphs.

We have mentioned the evidence that he 'brought to light' of the shift in diet from the consumption of shellfish from mangrove habitats that was evident in the earlier Holocene period (about 7000 years ago), to a wider range of shellfish from both rocky and sandy shorelines of more recent times (4500–2000 years ago—Lorblanchet & Jones,



**Figure 15.** Skew Valley midden area with Dampier Salt haul road at right of image, August 2011. Source: Photograph GKW.

2018, this volume). One of the early insights resulting from Lorblanchet's excavation of the Skew Valley midden, this transition from the gastropod *Terebralia* sp. to the bivalve *Anadara* sp. is a feature that has been observed in all subsequent midden excavations.

Lorblanchet's persistence with the dating of shell remains recovered from the middens and retrieved from among the carved blocks brought further important results. The date of about 22 000 years ago that he obtained from a large marine gastropod shell—probably being used as a water container—having been carried a considerable distance inland is one of the significant discoveries made during his fieldwork (Chapter 7: *The Top Group cultural remains*, Table 7.17, Addenda A and B).

On the subject of chronology, the weathering of the blocks of Dampier's fine-grained granophyre and gabbro—the surfaces of which gradually became coloured red-brown, and thus provide the conditions for production of the imagery—suggested the possibility of relative dating using the various degrees of weathering evident in the petroglyphs.<sup>8</sup> Relative chronological indicators based on weathering are notoriously problematic even in homogenous materials; Lorblanchet was not satisfied with visual observation and division of patination into three categories—'deeply patinated', 'patinated' and 'fresh', and he developed a technique using photography and a light meter to provide a refined and a more secure, numerical, basis for comparison of petroglyph patination (Chapter 1: *Study of patination of the motifs*). There is a discussion of the results of these evaluations for each of the sample areas and an insightful summary (Chapter 8). Through this application of both visual and mechanical observation, Lorblanchet established a value in the use of contrast state between the motif and its support as a means of identifying chronological ordering of the petroglyphs.<sup>9</sup>

### Petroglyphs and their archaeology

Better to manage research effort in an area with a population of thousands of petroglyphs, Lorblanchet elected to sample several discrete 'test zones' chosen according to differing topographical and ecological criteria including habitation evidence. In each of these sample zones he mapped evidence of habitation—artefacts, shell remains and 'huts' (that is, the cleared areas and stone supports for bower shelters)—and mapped and recorded not only the locations of each petroglyph but also the various parameters used to describe and to delineate relationships among the petroglyphs, including subject matter, their distribution and orientation, the carving techniques used, and the degree of weathering of carved surfaces. It is still the only study that has made a detailed investigation of all cultural material present on the block slopes, not just recording the petroglyphs.

Lorblanchet insisted on the value of detailed recording of motifs using tracing and photography—as opposed to use of photography only (Fig. 17). Using cellulose acetate film, sometimes in trying, windy conditions, and using oblique lighting at both ends of the day and sometimes under artificial lighting, he and his teams traced the individual markings forming each petroglyph motif. Faced with the hundreds of petroglyphs in the Skew Valley and Gum Tree Valley sample areas, he developed a technique combining photography and tracing (Chapter 1: *Sampling the petroglyphs*; Fig. 1.9). The value of this detailed recording is evident not only in the line drawings by Lorblanchet that illustrate this book, but also in the bases that such recordings provided for analysis of the characteristics of the various motif categories, their superimpositions and re-marking over time. In this we are presented with detailed studies of the treatment of specific motifs, not just a bland reporting of subject numbers and position. Lorblanchet continued to use this approach to the study of rock art in his subsequent researches in Europe and elsewhere.



**Figure 16.** Skew Valley showing seasonal water course, June 2009. Source: Photograph KJM.



**Figure 17.** Lorblanchet tracing a carved slab at GTVT in 1976. Source: Photograph by Rainer Sakic, a member of the initial field team.

The detailed mapping and recording of related distributional data contributed to Lorblanchet's realization of the great density of the rock art and other archaeological features. The recognition of this significant aspect of the Dampier petroglyphs supported the July 2007 entry of a large part of the Dampier Archipelago onto the Australian National Heritage List.

The spatial distribution of archaeological evidence can provide data revealing aspects of past human behaviour. Lorblanchet's teams mapped petroglyph locations in relation to each other and to other manifestations of occupation within the sample zones. The relationships between petroglyphs and various layers of the Skew Valley midden as revealed in the excavation were important in dating the petroglyphs and suggesting not only changing subsistence patterns and their relationship to the evidence for habitations, but also the changes over time in proportions of types of motifs and relationships among the categories of figures (Chapter 8).

### **Petroglyph typology, patination, carving techniques and other attributes**

Key to much of Lorblanchet's analysis of the Dampier petroglyphs was his delineation of a typology of motif subjects (Chapter 1: Fig. 1.10) to summarize the recorded images categorized as representing human figures, various marine creatures and terrestrial animals and their tracks, and a variety of geometric motifs.<sup>10</sup> These motif categories, combined with other observations such as distribution of stone tools and other occupation debris, provided the bases for some strong conclusions about the past occupations and uses of the several zones comprising the study area. This methodology contributed, for example, to Lorblanchet's ability to distinguish relationships between habitation areas and concentrations of petroglyphs and led to his differentiation of 'decorated dwellings' and 'task-specific' sites (Chapter 8).

The contribution of the study of patination of the carved surfaces to a relative chronology has been mentioned. The degree of weathering of motifs, systematically evaluated by observing the colour contrast—the difference between the colour-density of the motif and the colour-density of the surface of the rock into which it had been carved, also was found to be related to the motif subject and changes over time in the frequency of their occurrence. Detailed consideration of the orientation of the carved surfaces—vertical, sloping or horizontal—suggested that petroglyph orientation could be related to age, to their proximity to an adjacent midden, their visibility to site occupants, and, in turn, suggested different cultural significances of various categories of motif.

Lorblanchet's study of the two main and several less common carving techniques used in production of the petroglyphs showed that this factor was related to the degree of patination of the motif and thus to the change over time in proportions of the various categories of motif.

Analyses of the Dampier petroglyphs demonstrated correlations between motif subject and orientation, carving technique, degree of patination, and other factors such as superimposition of motifs; these correlations were important bases for interpretation of site chronology and function.

Central to Lorblanchet's analyses was his study of the relationships among the various motif categories, what he describes as "their modes of association, how they cluster or disperse on the rock surface" (Chapter 8: *Relationships among the categories of figures*). He developed an 'Index of Association' for each theme represented to show the degrees of affinity and modes of association of motif types. He found differences in the thematic assemblages between the various

sites from which he inferred differences in site function and, overall, evidence of an ancient human occupation with changes over time in subject, styles of depiction, carving techniques, and site use.

### **Renovation, living surfaces and a dynamic culture**

Analysis of motif relationships, Lorblanchet says, should be foremost among the aims of the rock-art researcher, comparable to the concern of the archaeologist for patterns in the distribution of excavated artefacts and structures. Such relationships combined with temporal considerations contribute to a dynamic interpretation of rock art—the motifs on a carved block or painted wall can be interpreted as constantly changing through time. In Lorblanchet's view, a decorated surface is 'living' and any reading of the surface—assisted by evidence of superimposition for example—must take this into consideration. This realization was prompted by his studies at the Dampier sites and appreciation of ethnography relating to Australian rock art. It is an approach that he described as "parietal dynamism", one that he contrasted to the "structuralist-static stance" of his intellectual forebears, and that he transferred productively to his studies of the European Palaeolithic (e.g., Lorblanchet, 2010).

Lorblanchet's excavations of the Skew Valley midden had revealed a range of stone tools in association with the petroglyphs. The relationships between petroglyphs and the evidence of occupation at the Dampier sites were of major interest, and the recovery of the shell layers, buried carved slabs, stone tools and identification of habitation sites were important to the researchers. During his excavation of the Skew Valley midden, where he uncovered tools of the earlier Australian tradition and buried petroglyphs (Chapter 2, Part I: *Carved blocks uncovered in the excavation*), Lorblanchet saw that both tools and imagery showed what he realized were important changes in form and function across the periods of occupation. Moreover and significantly, both were used and re-used over time—"I discovered that they had a dynamic use through time; it was for me a fundamental discovery," Lorblanchet wrote (pers. comm. to GKW 2 March 14) that:

... and it completely changed my mind on European prehistory: it appears to me that European [archaeologists] had fixed views on prehistory, whereas Man is always flexible, adapting himself to the time and to different needs; very often LIFE is lacking in the European perspective on prehistoric man and prehistoric artist ... indeed, the term 'bricolage' is apt and "implies a form of genius" !

This understanding of the adaptability of early Australians, reflected particularly in the forms of the tool assemblage at the Dampier sites and now more broadly across Australia, influenced Lorblanchet's approach to and appreciation of the evidence of the European Palaeolithic.

### **Reports to AIAS**

Lorblanchet reported to the Institute on his Dampier researches in a series of field reports (e.g., Lorblanchet, n.d. [1975a, 1976c, d, 1983, 1984], by lodging photographs (e.g., n.d. [1977]), and in short items in the Institute's newsletter (e.g., 1977b). The Institute's library holds a draft monograph comprising an extensive account of the excavation of the Skew Valley midden accompanied by specialist reports (n.d. [1978]), and finally, between 1985 and 1988, Lorblanchet provided detailed and illustrated accounts of the recording and analysis of the Skew Valley and Gum Tree Valley petroglyphs (n.d. [1985, 1987, 1988]). All but one part of the



**Figure 18.** Panorama of Gum Tree Valley looking westward with Dampier Salt haul road in middle distance, August 2015. Source: Photograph KJM.

detailed accounts of the petroglyph recordings and analyses sent from France were written in French.

Lorblanchet, understandably, was more comfortable writing in his native language. As well, while working in Cabrerets, he had difficulty in finding someone with both other-language competency and sufficient an understanding of his research to render his technical work into English. It is probably fair to say that Lorblanchet's BSPF paper and unpublished reports did not make the contribution to Australian archaeology and rock art research that they might have done if they had have been more accessible to English-language readers.

The 1984 "Summary of field work carried out from May to July 1984 at Dampier (Western Australia)" contains references to field assistance, liaison with the chair of the Pilbara Aboriginal Bush Meeting, a discussion of field methods, and an outline of the results of the field season. Lorblanchet identified six sampling areas based on concentration of petroglyphs, the first at Skew Valley and the remainder in the nearby Gum Tree Valley (Fig. 18). In each area, petroglyphs and artefacts were catalogued and mapped. Over 700 motifs were traced; 52 attributes were recorded for each carving, including subject, orientation, technique of production, state of preservation, and any superimposition. As well as tracing, petroglyphs were photographed in monochrome and colour. The black and white films were developed each evening, both to allow assessment of the recordings, and to be used in the recordings—in tracings onto printed enlargements (30 × 40 inch). Lorblanchet wrote (pers. comm. to GKW 29 May 2014) that:

The tracings were made in the field [in front of] the carved rocks ... I used tracing directly on the carved rock only for the largest and most complex panels. My method—immediately printing photographs and tracing [from] them—allowed me to do many more tracings than if I had done direct tracing at each block, which is much more time consuming. I wanted to get quickly an overall view of GTV rock art.

Structures—including areas interpreted as huts—were described and included on a map with middens, grinding surfaces, shell scatters and other cultural remains (Lorblanchet, n.d. [1984]).

Following his 1984 fieldwork at Dampier, Lorblanchet visited Port Hedland and Woodstock (Western Australia) and Kakadu National Park (Arnhem Land); inspired by

these "places well known for their Aboriginal rock art" he wrote (n.d. [1984]):

1) I was amazed by the richness and the variety of the art and by the fact that the rock art is linked to an unchanged environment. The subjects depicted on the rocks for the most part can still be found near the sites.

Moreover some of the artists are still alive. This situation exists nowhere else in the world.

2) Australia Aboriginal Art is part of a world cultural Heritage and unlike other Nations which are poor it seems that Australia has the money and the opportunity to protect and study such a wealth of art.

3) Naturally many things would need to be done in the way of preservation of these works against both natural and human destruction.

It is also distressing that so few people are undertaking research on such a huge mass of data. I was surprised that so few Aborigines were employed as rangers, curators and researchers on this art and also that there was no adequate introduction to the art for the visitors except a small museum at Kakadu Park.

At the same time there needs to be a balance between visitation by tourists and work by researchers considering also the effect of large numbers of visitors on the environment.

A Museum-Research Centre, should be created both at Kakadu Park and Dampier which are the most impressive clusters of sites I have ever seen.

Lorblanchet's observations were perceptive; many of his 'desiderata' are now extant.

## Lorblanchet's legacy—international connections

### French correspondent

As a French national public servant/researcher 'on loan' to Australia, Lorblanchet remained attached to CNRS and reported to it regularly (e.g., Lorblanchet, n.d. [1975a]), and was expected to resume his duties with CNRS when he returned to France. Shortly after he had provided to AIAS an outline of the proposed November 1976 monograph, Lorblanchet was recalled to resume, in September 1977, the

redevelopment of the Lemozi Museum in Cabrerets (Set).<sup>11</sup> Cabrerets is a *commune* in the Department of Lot in southwestern France. The village lies at the confluence of the rivers Célé and Sagne at the foot of the steep Rochecourbe cliffs (it is said that its name derives from the word for goat in Occitan). Pech Merle had been discovered in 1922 by two youths and the initial study of the rock art had been made by Amédée Lemozi, pastor of Cabrerets (Lorblanchet, 1970).<sup>12</sup> The extensive cave contains much well-preserved imagery. Lorblanchet had been curator between 1970 and 1974 (when he left for Australia) and he had developed detailed plans for a new museum on the site; the construction of the new Pech Merle museum and research centre was almost complete when he was recalled to the post (Anon. n.d.a).

Lorblanchet was divided on this matter; clearly, promotion to the prestigious position was attractive, but he was committed to his Australian research. After much discussion with Ucko and others he decided to return to France (pers. comm. to GKW 29 May 2014. “I hesitated a lot to go back; the Australian potential for me was so large that I could have stayed for ever in Australia and I would have there an immense fascinating work to do ... but I had a family and young kids ... It was a very hard choice for me ...”) He would attempt to continue to write up the Dampier research while in France: In March, Lorblanchet wrote to Ucko: “I would like to assure you that I am fully conscious of the tremendous opportunity you offered me to realize myself as a researcher in being responsible for the future work at Dampier” (ML to PJU 30 March 1977 [File 1974/0016-2 (unnumbered)]).

Lorblanchet returned to France in 1977 to the Centre de Préhistoire du Pech Merle at Cabrerets. At the Centre, Lorblanchet divided his time between his job as *chargé de recherches au CNRS* and the organization of the displays and interpretative materials. The development of Pech Merle included a guided walk through the cave, a museum, extensive displays and teaching areas. Lorblanchet’s task in the creation of the museum was central but his role as curator was an unpaid second job; ‘I worked a lot ... !’ he wrote (pers. comm. to GKW 29 May 2014).

In 1985, after nearly a decade of management and museum work, Lorblanchet left the Centre to concentrate on his research, including the Dampier materials (ML to WD15 February 1986). He was appointed *directeur de recherches au CNRS* in 1995; he retired in 1999 and lives near Saint-Sozy in the Lot Valley. Lorblanchet retains an association with CNRS (as *directeur de recherche honoraire au CNRS* [honorary director of research]), for which he led a major collaborative study of the Roucadour cave site from 2002–2007.

Lorblanchet has been described as “One of the most productive scientists of his generation. A world specialist in the study of decorated caves and rock art” (Anon., n.d.b; Anon., 2009). As well as reports and this monograph on his Australian researches, he is the author of many papers and several books on European Palaeolithic art including *Les Grottes Ornées de la Préhistoire: Nouveaux regards* [The Decorated Caves of Prehistory, New perspectives] Editions Errance, Paris 1995; *La Naissance de L’art: Genèse de l’art préhistorique dans le monde* [The Birth of Art], Errance, Paris 1999; *La Grotte Ornée de Pergouset (Saint-Géry, Lot): Un sanctuaire secret paléolithique* [The Painted Cave of Pergouset, A Palaeolithic sanctuary]. Documents Archéologie Française 2001; *The Prehistoric Art of Quercy*, Loubatières Edition 2004; *The Birth of Art: Genesis of prehistoric art in the world* (The Origins of Art), Editions Errance 2006; *Art pariétal: Grottes ornées du Quercy* [Rock Art: The decorated caves of Quercy], Editions du Rouergue-

Arles 2010, and is collaborating with Paul Bahn on a book on ‘the First Artists’.

### Toward a Dampier monograph

In July 1987, Lorblanchet had written to the then Principal, Warwick Dix (ML to WD 13 July 1987 [1974/0016-4]; Dix was appointed Principal in March 1985 and served in that capacity until 1991), that he was “carry[ing] on with my work on the Dampier material which seems to me more and more fascinating. ... As you know the data brought back from the field needs much more time to be properly studied and published. (I spent altogether almost a whole year at Dampier)” and described the difficulties he was experiencing:

—I must carry on to do research in France and I must also keep collaborating into congresses and meetings, sitting on committees plus some administrative jobs.

—I have language problems: it’s difficult for me to write up in English. I find neither a good translator nor an English specialist able both to correct the English and to understand archaeology. Last year I had sent you a chapter on the engravings on the top of Gum Tree Valley. Unfortunately the English was bad ... Peter Randolph has corrected it and made it more publishable. It was for him a lot of work! ...

To publish the part on Skew Valley I would very much like to wait until the end of my study, when the data from all the sixth test zones are studied. Because I need to compare the different test zones. If I publish Skew Valley separately, without comparing with the data from the other five test-areas, the risk is for me to do wrong statements and to be obviously incomplete. ...

I do understand that I have the commitment to produce a book quickly, but Gum Tree Valley deserves a very thorough work which needs all my attention. It’s impossible to do it correctly in a hurry.

By now, I have completed the study of Skew Valley and the Top of Gum Tree Valley (these are the main parts of the whole study) and I am working on the centre of Gum Tree Valley (the Eagle Group).

To show you that the work is in progress, I send you my text on the engravings of Skew Valley with the recordings (the whole complements the text on the excavation I had left with the Institute). It’s still in French if you knew somebody able to translate it (and the following chapters too) ...

I do apologise for the long delay but I’m doing all my best and want to carry out a thorough work.

In September 1976, Lorblanchet presented a comparison of Australian and European Palaeolithic rock art to Oceanic prehistory section of the ninth Congress of the International Union of Prehistoric and Protohistoric Sciences in Nice (Lorblanchet, 1976) (ML to PJU 19 September 1976 [1974/0016-2: 5]) where he interacted with various Australian archaeologists including Professor John Mulvaney and Dr Rhys Jones (John Mulvaney to PJU 16 October 1976—re Cambridge activities and mentioning, re Nice conference, that Lorblanchet “gave a good paper and generally proved an excellent ambassador for Australia. Very full marks.” [Lorblanchet File 1974/0016-3]). His collaboration with Jones resulted in a substantial initial publication of his Dampier work based on his presentation to the Nice UISPP Congress in the *Bulletin de la Société préhistorique française* (BSPF) (Lorblanchet & Jones, 1979). It provided a description of aspects of the Skew Valley excavation, placing them not only in their local context but broadening the discussion to comparisons



with stone tool assemblages from several other excavated sites across tropical and temperate Australia. (The Skew Valley excavation is described in Chapter 2, Part I, and our translation of the paper written with Jones is Chapter 2, Part II).

Another important paper dates from this time; Lorblanchet wrote an account of his understanding that many Dampier petroglyphs had been re-marked at different times in the past and that, as a result, interpretation of their meaning/s could change accordingly and perhaps significantly. The Ms—“*Les gravures de l'ouest Australien. Leur rénovation aux cours des âges*” [Western Australian petroglyphs: their remarking over time]—held by the Institute library is dated 1976 (Lorblanchet, n.d. [1976b]); later it was published in the *Bulletin de la Société préhistorique française* (Lorblanchet, 1980a). Also in BSPF is a short communication summarizing his research on Australian rock art (Lorblanchet, 1979). In another brief paper, “*Premières recherches a Dampier (Australie de l'ouest)*” [First researches at Dampier (western Australia)], published in a Spanish journal, Lorblanchet (1980b) analysed Gum Tree Valley petroglyphs to demonstrate three distinct styles of imagery and related them to consecutive periods of the site.

Lorblanchet subsequently made presentations at two Australian conferences, to the Archaeology Section of ANZAAS (The Australian and New Zealand Association for the Advancement of Science) in Perth in 1983 and to the first international AURA Congress (the Australian Rock Art Research Association) in Darwin in 1988, and these were later published in English. In the former, Lorblanchet (1983) outlined his Dampier research and discussed the chronology of the Skew Valley and Gum Tree Valley petroglyphs; he argued for the identification of “Three artistic periods in Gum Tree Valley” in terms of categories of motifs and as supported by radiocarbon age estimates, a change over time in shellfish exploitation (reflecting sea level change), and a change in the stone tool assemblage.<sup>13</sup>

In the second contribution, Lorblanchet (1992a) outlined his six Dampier study areas, related the available age estimates to dating of the petroglyphs, the discussion of which is reprised here in Chapter 2, Part I: *Carved blocks uncovered in the excavation* and subsequent chapters. He developed his ideas about the possibility of the rock surface weathering providing non-chronometric dating of various categories of carved motif, discussed the evidence for variations in site function, and outlined a chronology of occupation of the area in terms of two main periods, the first of Pleistocene date. His paper was accompanied by maps, an illustrated table describing a typology of the motifs, numerous diagrams and line drawings of a limited sample of the motifs. It was a useful and accessible summary of his work to date.

To the illustrated popular scientific publication, *Les Dossiers Histoire et Archéologie*, Lorblanchet (1985, 1989) contributed an overview of Australian rock art for a general French readership, emphasising its abundance and widespread occurrence across the continent, “its incomparable richness”, and reviewing the various types, subjects and styles of rock art. He compared tropical sites with those of the temperate zone and desert, and noted the contrast between the naturalistic rock art of Arnhem Land, Kimberley, Pilbara and Queensland and the smaller, more geometric designs of Panaramitee and large figurative Sydney Basin petroglyphs, discussing its dating and problems in researching such a body of representation when it is at the same time both a prehistoric and a living art form.

In France, while returning to his study of the European

Palaeolithic, Lorblanchet continued to write about Australian rock art; as in Australia, where his European training benefited his Australian researches, his Australian experience influenced his approach to the interpretation of the ancient French portfolio with which he was now working.

### Return to the future of the European Palaeolithic

Australian rock art specialists were familiar with the French and Spanish cave sites and their motifs evoking animals hunted by early *Homo sapiens*, and a relative chronology based on iconography—unlike in Australia where there appeared to be a lack of, or at least a less sure, iconographic sequence. Chronometric dating techniques becoming established and applicable to dating rock pictures were adopted early in Australia and France; in Europe, new dates were to question the orthodox models.<sup>14</sup> To his Australian research, Lorblanchet brought a strong archaeological perspective based on his studies of Palaeolithic rock art.

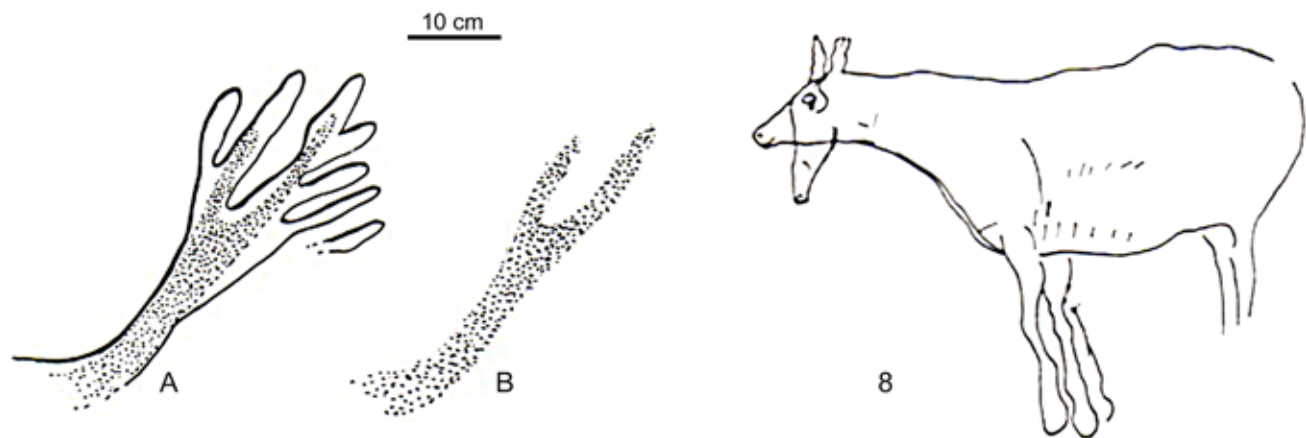
When he returned to France, Lorblanchet took with him an approach to the European Palaeolithic decidedly influenced by his Australian experiences, and this is evident from his research writing and its presentation at Pech Merle and elsewhere. It began before his return. Following his first visit to Dampier, Lorblanchet (n.d. [1975e], 1976) drafted a paper that he entitled “*Quelques considérations sur l'art rupestre Australien et paléolithique*” [Thoughts on the rock art of Australia and the (European) Palaeolithic] in which he argued that his studies of Australian petroglyphs and pictograms show that a wall with rock art is ‘a living wall’, that is, over perhaps many years such a panel would be kept ‘alive’—culturally meaningful—by re-activating the motifs, by retouching. The same motif could have been regularly re-marked (‘renovated’) or new marks added to an existing painting or carving. There was the possibility that a researcher could misinterpret motifs if this likelihood was not recognised. Australian rock art was not only diverse, but it was also changing.<sup>15</sup>

Lorblanchet wrote (pers. comm. to GKW 20 March 1914) that this initial analytical paper:

... was simply a way to say that—newly arrived—I was discovering Australia, and to present my first (superficial) view on both Australian and Palaeolithic rock art. And the first aspect of Australian rock art that I was discovering was *the renovation of the paintings*... it is why I said that the rock wall was constantly retouched, re-animated, through generations: it was ‘living’ and it was quite different for me coming from Palaeolithic cave art that was considered a ‘fossilized art’—made once for all ... . A carved panel at Dampier may be considered as an image relating to the Dreaming and so have lasting significance to contemporary Aborigines—thus it is still ‘living’ to them. And over perhaps many years such a panel would be kept meaningful—‘living’—by retouching, reactivating, the motifs.

Moreover, he considered that European researchers of Palaeolithic rock art could benefit from an understanding of the Australian situation. Studies of Aboriginal rock art could inform a dynamic perspective on rock art. Lorblanchet (1976) argued to his European colleagues that there was a need for complete and accurate recording, and for close re-examination of superimposition in representations with multiple outlines in the European Palaeolithic.

In his 1980 BSPF paper, “*Les gravures de l'ouest australien: leur rénovation au cours des âges*” [Western Australian petroglyphs—their re-marking over time],



**Figure 19.** Two examples of ‘renovation’ of images. *Left*—Dampier petroglyph: (A) successive marking producing multiple “digits” on the “kangaroo paw”; (B) Detail of the most recent marking producing but two digits. *Right*—Dordogne petroglyph showing successive marking producing multiples of “head” and “limb”. Source: adapted from Lorblanchet (1980: figs 5, 10).

Lorblanchet (1980a: 463–464) summarized the Australian evidence for repainting of pictograms and retouching of petroglyphs and the ritual context of, at least, the former, in a paper published several years before the controversy about repainting in the Kimberley that was discussed vigorously at the first AURA Congress in Darwin (e.g., Mowaljarlai *et al.*, 1988; Ward, 1992; O’Connor *et al.*, 2008). “Refreshing the paint ... was controlled by the desire to keep intact the magical power of rock images”, he wrote. The meticulous records made of Skew Valley and Gum Tree Valley petroglyphs resulted in identification of successive, superimposed, markings and confirmed that extending such observations to petroglyphs was justified. Lorblanchet concluded that not only was renovation of petroglyphs a characteristic of Australian rock art, but also that “... the meaning of the rock art was not only diverse but *changing*” (1980a: 476); moreover, it appeared that there was similar evidence for re-marking in the European Palaeolithic (Fig. 19):

Awareness of the complexity of such a combination and dynamism of rock art are both a consequence and a justification of the current development of decryption methods based on the use of modern methods of observation whose employment has been widespread for a long time in other scientific fields.

However, as Lorblanchet (1980a: 474) wrote:

... the interpretation is difficult: how to know, without the help of different states of patination, whether we are dealing with simple immediate modifications of the outline of the motifs, or the expression of movement, or successive reuses of the motifs, as we can see in Australian Aboriginal rock art.

His understanding of Australian rock art helped him to question, to re-orientate his study of European cave art; he then had to develop and apply different approaches and different techniques to try to answer these questions. As he wrote (pers. comm. to GKW 29 May 2014):

What I learned in Australia diversifies and enriches my archaeological approach to rock art; Australian art teaches me to think but it does not bring an immediate single answer to my point of view on Palaeolithic parietal art. Moreover, I realized that these multiple lines in palaeo art, especially in Magdalenian, are often the expressions of movement of the animals and it is effectively maybe a strong difference with Australian art where the movement is expressed differently, more symbolically (cf. comparisons in *l’Anthropologie* [1988] or *Man and Environment* [1991b]).

### An Australian understanding of the European Palaeolithic

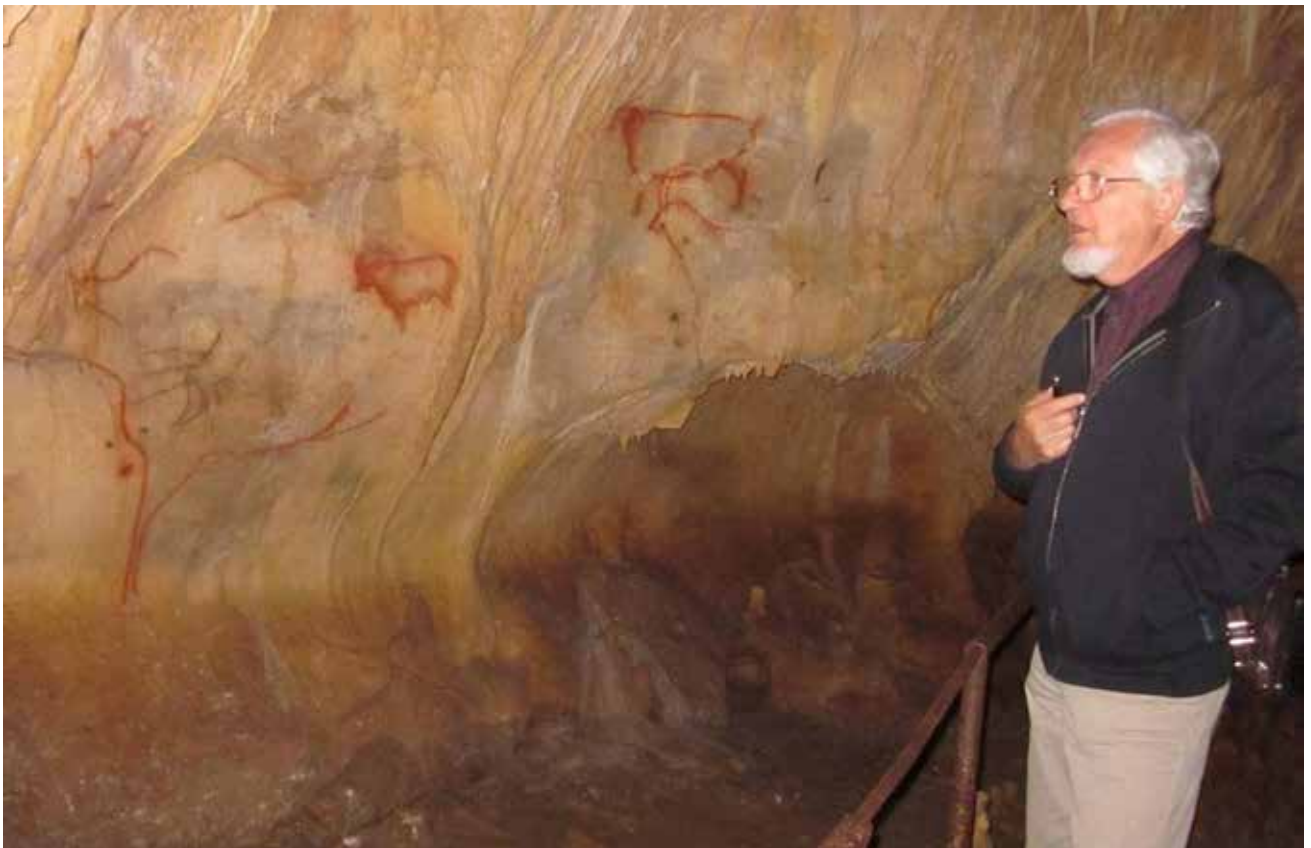
Perhaps Lorblanchet’s major contribution to the understanding—influenced by his Australian experiences—of the rock art of the European Palaeolithic is seen in his major paper in *L’Anthropologie* (1988). In “*De l’Art pariétal des chasseurs de rennes à l’art rupestre des chasseurs de kangourous*” [From reindeer hunters’ cave art to kangaroo hunters’ rock art], a revised and expanded version of which was published in *Man and Environment* (1991b). It is a substantial paper, comparing the techniques and styles in both worlds of making rock art in which he draws upon his extensive knowledge of both and uses a wide range of examples to explore ethnographic, archaeological and aesthetic similarities (1988: 311, 1991b: 34–35):

In order to assess the universality or diversity of the human mind in time and space, it is first crucial to know whether, at their two ends of the world, the reindeer and kangaroo hunters independently became creators of forms at the same moment, if they experienced the same first graphic infancy, and whether their arts then followed the same evolutionary paths.

He described what he saw as the differences in styles and mental approaches to the realization of representation—the three-dimensional approach of the European Palaeolithic seeking to decorate the planar surface with volume and naturalism, contrasted with the Australian tendency toward simplification and schematization: there was “a strong mental opposition between the two worlds”. The Australians “rejected volume, did not represent depth, and turned towards ornamentation” (1988: 311, 1991b: 35):

Perhaps the exuberant dynamism of certain Australian drawings is more of a simple playing with form, a simple means of obtaining new shapes by resorting to animation, than a faithful analysis of movement. The reindeer hunters, on the other hand, achieved the third dimension. In so doing, they discovered almost all the graphic skills and knacks of European artists. The perspectivists of the Renaissance, trompe-l’oeil ... all start in the Palaeolithic. It was also at this time that the search began for perfection of line through a constant purification and idealisation of form, later developed in Greek art and throughout the history of western art.

Lorblanchet also discussed the trend away from the early twentieth century use of ethnographic parallels to the detailed internal analysis of the imagery itself as developed



**Figure 20.** Lorblanchet discussing European Palaeolithic decoration of a planar surface. Wall of Cougnac Cave, Payrignac, September 2010. Source: Photograph: GKW.

by his teachers, Laming-Emperaire and Leroi-Gourhan, and described as being based on two complementary processes: detailed recording of the images (seen as comparable to an archaeological excavation) and the statistical analysis of the features and characteristics of each image and set of images. He was prompted, however, by what he had learnt in Australia, to look beyond his mentors' approach, to explore the use to "internal analysis" of further information derived from sources external to the subject imagery, using "successive tests, multiple complementary verifications" (1988: 311, 1991b: 35). He sees this approach to "universality or diversity of the human mind" as compatible with modern historical research, one of a searching for similarities and differences in general principles. This "multiplicity of illuminations" can benefit the study of prehistoric art (Fig. 20). While the internal analysis approach has limitations and dangers, it "remains the basis of our research, but it can be enlightened by multiple external data" (1988: 314), and, he concludes, while there are substantial differences between the Australian and European cases, his study reveals general principles of human symbolic behaviour in hunter-gatherer societies: "... the art of the Australians tells us about the art of our own origins through its contrasts"; and the reverse may also be true (1988: 314, 1991b: 35).

In another paper (1985) addressed to a general but informed French readership Lorblanchet addressed the matter of "*Symbolisme des empreintes en Australie*" [Symbolism of (human and animal) prints in Australia]: "Unlike the rock art of other regions of the world, Australian rock art is rich in prints and stencils. They appear on the decorated walls of the entire continent in tens of thousands of sites and often constitute unique motifs". And he sought to explain "this exceptional abundance".

At the second AURA Congress, held in Cairns in 1992, Lorblanchet convened in collaboration with Paul Bahn a session entitled "Rock Art Studies: The Post-Styletic

Era". His presentation "From styles to dates" reported the results of his research at the Cougnac cave (Payrignac, Lot, France)—evidence from test excavations and analyses of the pigments used in the drawings—and served as the basis for a critical discussion of the prevailing wisdom in Aurignaco-Perigordian studies: The adoption of chronometric dating methods would replace analysis of style in ordering the sequence of rock art imagery (Lorblanchet, 1993a—Lorblanchet acknowledged his co-editor, Paul Bahn, for translation of his paper). The influence of Lorblanchet's Australian experiences again was evident. The prospects for further radiometric dating referenced contemporary Australian results in which organic materials extracted from pigments could be used (Lorblanchet, 1993a: 69–70). He adopted the perspective of the 'living site' and he was willing to interpret the cave art as the result of ritual activity. Detailed observations of pictures and site attributes suggested that the Cougnac Cave was likely to have "... been reserved entirely for cult activities centred on the paintings" (1993a: 62). "... the life of a decorated cave, like that of any living organism, is complex and varied. ... The function of a decorated cave—sometimes a secret place, secluded and reserved for initiates only, and at other times a public 'temple' frequented by a whole group—must have evolved over time" (1993a: 68–69). Ethnographic observations could be drawn upon (1993a: 69):

The impression of uniformity within Palaeolithic art, ... is merely the reflection of a relative stability in its natural context, which evolved slowly, and in the hunter-gatherer way of life in the Ice Age. One also needs to realise—as we are shown by peoples who still produce rock art—that the importance of certain graphic traditions in no way implies a permanence of beliefs. The same motif may have different meanings not only over time but at a single moment and within a single group, depending on the cultural or ritual context in which it is used.

## Australian experiences inform understanding of the European Palaeolithic

While the study of rock markings “must always ... be linked with that of the archaeological context: a decorated cave is a complex mechanism that must be studied in its totality”, formulaic interpretations avoided: “All these new analyses ... show that the traditional approach to Palaeolithic parietal [cave wall] art rests on theoretical concepts that are simplistic and almost ‘algebraic’”, an appreciation of Aboriginal Australia was seminal (1993a: 69):

When one looks at how the rock art sites of non-western societies function—for example, at the fundamental attachment of Australian Aborigines to the site and the natural setting which is filled with a particular mythological significance that, over generations, always remains loaded with meaning and attraction; at the way in which walls and pre-existing drawings are maintained and renovated, with new myths being invented to reinterpret long forgotten figures made millennia before, and prehistoric motifs being considered today most often as the imprint left on the rock by Dreamtime spirits—we should be able to overcome more easily our old ways of thinking, accept at last that the Palaeolithic caves do not always speak a mathematical language, and welcome the data from pigment analyses and integrated studies of the European decorated caves with more open minds, in order finally to rediscover the sense of reality and life that we are so sadly lacking. In other words, we need to realise that a decorated cave was a ‘living entity’, evolving through time, and not simply the subject of intellectual games for 20th-century urban academics.

In a contribution to *L’Encyclopaedia Universalis* in 1993, Lorblanchet discussed the distribution of rock art in Australia, characterising various regions in terms of type of markings and range of content of figurative depictions. Where there was information available, he linked motifs to their significances to traditional owners of the culture, the Wanjina and their role in the seasonal pattern of rainfall, for example. He noted that the prevailing model of the sequence of styles—Panaramitee, simple figurative, then complex figurative—had been questioned, and he emphasized the potential significance of local geographic circumstance in contributing to the observed distributions. He saw, particularly, the role of rising sea levels in concentrating populations and impacting on socio-cultural factors (1993b: 20):

Rock art is a communicative system. The very harsh living conditions of the Pleistocene desert regions compared to our times called for strong cohesion between groups, leading to a social mechanism of reconciliation and the adoption of similar visual markers; that is, the adoption of the same rock art style. The more difficult the survival conditions, the more vast is the tribal domain. Inversely, in a benign environment with population growth, where social strife arises (this was the case where post-Pleistocene marine transgressions reduced habitable land) tribal territories contract, local social identities assert authority and a regionalisation of styles emerges.

To advance the study of Australian rock art, “dialogue among archaeologists, anthropologists, and Aborigines loyal to the dreamtime would shed light on prehistoric art”.

Lorblanchet draws upon his Australian experiences in other academic papers and books (e.g., 1988, 1991a,b, 1999, 2002, 2010), contributions to encyclopaediae and other works for the public (1985, 1989, 1993b, 1997), and in interviews (e.g., Anon., n.d.b; Lewin, 1993; Lorblanchet, 2007).

The understanding that Lorblanchet gained from his observations in northern Australia (where he had had the technique demonstrated to him, and later had observed the practice at a demonstrations of painting at the 1988

AURA Congress in Darwin, and at Parliament House in Canberra [pers. comm. to GKW 3 March 2014]), that hand stencils—and a variety of other images depicting limbs and artefacts—could be produced by the blowing technique, expelling pigment from the mouth, led him to reinterpret some French parietal imagery. In France, he experimented with this ‘spitting technique’ in caves (those without evidence of occupation), placing himself in the same situation as Palaeolithic painters and using a stone lamp, charcoal and red ochre (Fig. 21). Lorblanchet used the blowing technique for a variety of motifs including animals, dots and hand stencils (cf. Lorblanchet, 2010: 117); he experimented with this technique also at Lascaux and at Chauvet with the aim of demonstrating that use of this technique was feasible to produce the paintings seen at each site.

Lorblanchet developed this idea in the American journal, *Archaeology*, in 1991, describing how he reconstructed the Pech Merle ‘spotted horse’ painting by drawing upon the techniques that he had learned in Australia; he described the likely four phases of production, how ground charcoal—masticated and diluted with saliva and water—and ochre pigments without a binder were transferred to the vertical wall using a combination of spitting, blowing and stencilling. Experimentation is an important part of Lorblanchet’s work (cf. his latest paper on folded fingers—Lorblanchet & Rigault, 2014).

“In Queensland I learned how people painted by spitting pigment onto the rock”, he recalled in an interview (Lewin, 1993):

They spat paint and used their hand, a piece of cloth, or a feather as a screen to create different lines and other effects. Elsewhere in Australia people used chewed twigs as paintbrushes, but in Queensland the spitting technique worked best. The rock surfaces there were too uneven for extensive brushwork just as they are in Quercy.

In his major work on the Palaeolithic cave art in the Quercy region, Lorblanchet (2010: 113–120) enthusiastically acknowledges the role of his Australian research and appreciation of related ethnography in contributing to his analysis of the likely means of production of the hand stencils (i.e. ‘negative prints’) at Pech Merle: “The Australian Aborigines traditionally are the masters of the technique of blowing [pigment from the mouth]” (2010: 114), as does his latest paper, an investigation—based on in-depth archaeological analysis, on the traumas or conditions that could explain such anomalies, and on ethnographic comparisons, especially with Australian examples—of a range of possible interpretations of hand images in the painted caves of Quercy (Pech-Merle, Moulin-de-Laguenay) and Charente (Grotte du Visage) that display folded-over fingers (Lorblanchet & Rigault, 2014; cf. Lorblanchet, 1991a, 1992b).

## Recent research into the Dampier Petroglyphs

Lorblanchet’s excavations at Skew Valley and the detailed record of petroglyphs at both Skew and Gum Tree Valleys, provided the first extensive scientific investigations into the prehistory of the region. Not only did he identify the range of archaeological sites forming the cultural landscape, but he also established a Pleistocene origin for the petroglyphs and described an ancient and extended period of production for the rock art. Since Lorblanchet’s pioneering work at Dampier, many survey projects have been conducted. These have resulted in an increase in the area covered and further detailed recording of petroglyphs; not unexpectedly, this greater spatial and numerical coverage has resulted in many



**Figure 21.** Lorblanchet experimenting in 1997 with blowing painting ('spitting technique'), as in Australian rock art and using hands as screens to control the blown pigment (in a Quercy cave lacking evidence of prehistoric occupation). "I used here a Magdalenian style for the horse with conventional Magdalenian colours for the fur". Source: Photograph: Francis Jach.

more motif categories than those Lorblanchet recorded at Skew Valley and Gum Tree Valley. Indeed, the spatial as well as temporal diversity exhibited by the rock art feature is recognized as one of the National Heritage Values of the area.

The identification of further motif categories in later studies does not suggest that Lorblanchet missed or failed to identify figures. His studies were restricted in time and place, to only the Skew and Gum Tree valleys, not the whole of the Dampier Archipelago, and less than a year in the field was available to him for his concerted study of these two areas. Lorblanchet devised an excellent methodology for these circumstances and, certainly, for Australian studies at the time, innovative and with scientific rigor. His aim of comprehending the variety of the area's rock art, its importance and its chronology is demonstrable. It is his approach to the field of rock art study, his own archaeological training and practice, which has informed those who followed, building on rather than replacing Lorblanchet's legacy.

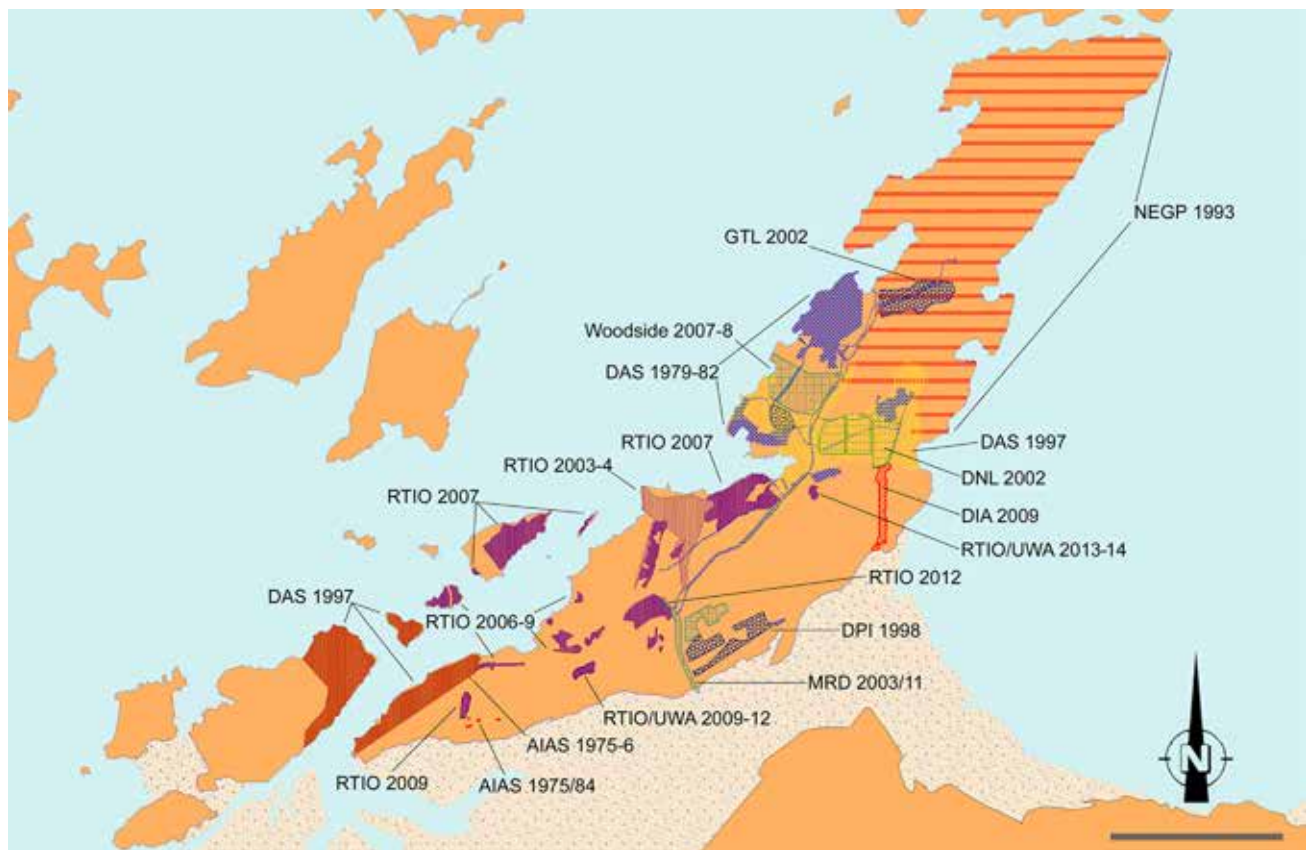
All classification is dependent on the range of images encountered and the subjective understanding, recognition and cultural biases of the recorder. However, the basic premise of subject and graphic elements provides a model of assigning the images to one category or another. Such classification implies neither recognition of the meaning of the art nor an understanding of the original intent of the producer of the image. It is simply a tag to aid in the recording and analysis of the rock art, to identify patterns in the archaeological record.

Lorblanchet stresses that he could not know the "meaning of the motifs" and that he seeks to use an "objective language" in his descriptions—for example 'ghost-like figures' as a signifier of a category of motifs in Gum Tree Valley—just as he uses terms such as 'tectiform' without pretending that he is identifying a drawing of a dwelling, or

'aviform' (as he showed us in the cave at Cougnac) without meaning that they represent birds. "I am doing classification of graphic forms ..." and he writes about imagery on the level of "forms" (pers. comm. to GKW 29 May 2014).

Lorblanchet discussed the Skew and Gum Tree Valley petroglyphs in terms of 47 primary motif classifications or typology (Lorblanchet, 1992a: 49; Chapter 8). During the field surveys managed by the Western Australian Museum of that portion of the archipelago associated with the development of the Karratha Gas Plant, a classification of 495 motif types was established (DAS, 1984), and, more recently, there has been classifications totalling 529 (JMCHM, 2006) and 318 motif types (Mulvaney, 2010, 2015a). These emphasize the graphic design diversity of the Dampier Archipelago petroglyphs, accentuated by the extended timespan of rock art production that ranges from the 1860s across tens of millennia (Mulvaney, 2013a). The choice of classification criteria is predicated on research issues and whether stylistic splitting or grouping is followed. An example can be seen in the variation of Dampier depictions of turtle images (Gunn & Mulvaney, 2008), where basic schema may display several distinctive patterns or graphic elements.

When Lorblanchet started his work at Dampier, there was little appreciation either of the artistic significance of the rock art, or of the wealth of archaeological material which documents the past lives of the inhabitants of the archipelago. Through careful application of recording techniques and analytical methodology, Lorblanchet was able to reveal cultural shifts through time and relate these to associated cultural activities in the archaeological record. This included identification of the re-marking or renovation of the petroglyphs, a cultural practice more commonly associated with Australian pictographs.



**Figure 22.** Map showing areas of Dampier Archipelago subject to formal heritage surveys in the period 1979 to present. Total area of survey is 42.6 km<sup>2</sup> of which 10.2 km<sup>2</sup> was completed as research projects. Scale: 5 km. Source: Map produced by KJM.

### Archaeological recording and salvage operations

Following introduction of the *Aboriginal Heritage Act* in 1972, the vast majority of heritage investigations in Western Australia have been carried out in terms of Section 18 of that Act by which consent can be given to utilize the land on which an Aboriginal site exists; in reality, it is ‘consent to destroy’. This provision included the largest, and at the time Australia’s most expensive, archaeological recording and salvage operation (1979–1982) relating to the proposed construction of a petrochemical plant and allied infrastructure (DAS, 1984; Vinnicombe, 1987). As many as 25 fieldworkers covered an area of more than 12 km<sup>2</sup> and recorded a total 720 sites, of which 544 included carved motifs, with data recorded on 9244 petroglyphs (Vinnicombe, 1987: 17). It was intended, following the construction of the Karratha Gas Plant and on completion of data analysis, that a compilation of academic works be published. For various reasons this did not eventuate; however, several theses presenting some of the results were submitted towards university degrees (Green, 1982; Harris, 1988; Turner, 1981; Veth, 1982). A fourth thesis was submitted which utilized the DAS data in analysis on functionality of various sampling models (Mattner, 1989).

It was also envisaged by Western Australia Museum staff that an open-air museum and visitor centre would be built; in this way at least making something of value come from the earlier salvage and relocation of over one thousand carved blocks rather than them being destroyed along with the other four thousand petroglyphs that made way for a petrochemical plant. (Such a visionary development never happened—the salvaged petroglyphs blocks remain in a fenced compound. Negotiations between Aboriginal elders and statutory bodies resulted in many of the engraved blocks being relocated in mid-2015 to an adjacent ridge.)

Vinnicombe, who was a significant participant in the Karratha Gas Plant archaeological project, continued to conduct surveys on behalf of the Department of Aboriginal Affairs: in the King Bay-Hearson Cove area (10.1 km<sup>2</sup>), the southern portion of Dampier Island (2.3 km<sup>2</sup>), and on the adjacent West Intercourse Island (3.3 km<sup>2</sup>), results of which she published (Vinnicombe, 2002). Her article was the first attempt since Virili (1978; Dix & Virili, 1977) to present an analysis of the archaeological pattern across the archipelago. Vinnicombe not only described the pattern evident in her analysis of 3713 motifs, she identified several important research issues, including the need to document more of the large site complexes focussed on the seasonal rock pools within the valleys.

At the time of writing, some 43 km<sup>2</sup> have been subject of detailed Aboriginal sites survey across Dampier and nearby islands, involving archaeologists, anthropologists and representatives of the local Aboriginal community (Figs 22, 23). Much of the data derived from industry-funded surveys are held in trust by the Aboriginal community and statutory authority, and generally are not available for public access. Only four projects have specifically focussed on recording the cultural material within valley systems, similar to Lorblanchet’s Skew Valley and Gum Tree Valley research. Two of these, funded by Rio Tinto, involved University of Western Australia staff and students and Aboriginal community members.

### Cultural landscape surveys

In 2009, the Department of Indigenous Affairs (WA) funded a recording program at Deep Gorge, located just over one kilometre from Hearson Cove and covering some 50 hectares (JMCHM, 2009). It was not a full data-collecting survey but an inventory of what features were identified within the



**Figure 23.** Construction work along the Rio Tinto rail line in May 2004 with Aboriginal custodians watching to ensure that activities do not impact petroglyphs. Dampier houses in background. Source: Photograph KJM.

specified area. Over seven days, 13 fieldworkers identified 3346 petroglyphs along with other cultural features including shell middens, grinding patches and stone arrangements. Analysis of the spatial variation in subject and style of the petroglyphs formed the basis of a university thesis (Harper, 2010). Interestingly, Harper evaluated the petroglyphs through 45 identified motif classes, much reduced from the more recent trends and harking back to Lorblanchet's own analysis.

The second major investigation, covering 13.5 hectare, focussed on Happy Valley, 3.2 km east of Skew Valley, was sponsored by Rio Tinto, and involved students from the University of Western Australia; it ran for two weeks each year from 2010–2012. The project operated both as a training exercise for students and an engagement with members of the Aboriginal community. At 160 m in length this valley is relatively short; however, it contains 2543 petroglyphs, with an additional 4305 motifs recorded on blocks scattered over the surrounding rocky massive. This includes an area of 6.5 hectare to the east of the valley, surveyed in 2009 by Rio Tinto staff and consultant Robert Gunn. As Lorblanchet first identified in his work at Skew Valley and Gum Tree Valley, the density of rock art at Dampier eclipses that at all other comparable places in Australia and possibly the world. One university thesis has been submitted using the accumulated data, exploring the subjects depicted and their spatial associations (Clayton, 2015).

The third of the valley surveys focussed on the location known as Queen Victoria Valley, a 330 m long section of rock pools bisecting the block structure formation on which the petroglyphs are found. Over two field seasons (four weeks) at this site, located 800 m southeast of King Bay, 4071 petroglyphs were recorded within an area of 8.3 hectare. As with all these valley surveys, flaked stone artefacts, shell fish

remains, grinding patches, standing stones and other stone arrangements are also present.

In a valley opening out onto the mudflats at the southeastern of Nichol Bay, a two-hectare section was recorded in detail for a university honours thesis (Turner, 2008). Known as Two Chooks Valley, over 16 days in October 2007, Kyle Turner and one of us (KJM) recorded 1803 petroglyphs along with other cultural material including stone structures, lithic assemblages and shell middens. His investigation was into the notion that colour contrast between the motif and the support rock surface can be a relative temporal measure of the petroglyphs. Unfortunately, though some erroneous assumptions and conflation of the data set this study's findings are problematic.

The several buried petroglyphs uncovered by Lorblanchet's excavation of the Skew Valley midden still provide the only chronometric indicator for the Dampier rock art. In his analysis of the Gum Tree Valley and Skew valley petroglyphs, Lorblanchet established a temporal succession to the art corpus, the first time this had been attempted. One of us (KJM) built on this seminal work to refine a chronological sequence, possibly spanning some 30 000 years, for the various artistic traditions evident in the Dampier Archipelago (Mulvaney, 2010, 2013a). As yet, there is still no means of directly dating the petroglyphs, so other avenues of investigation are required.

At Dampier, Pillans & Fifield (2013) have identified erosion rates measured by cosmogenic nuclides as being among the lowest in the world, a result of a combination of resistant rocks, low relief and low rainfall. This, they argue, provides the potential for Dampier petroglyphs to survive for up to sixty millennia. Their results do not date the rock art but confirm the probability, as suggested by other indices, that the petroglyphs span the Holocene and extend into the late Pleistocene.

The Dampier Archipelago is a cultural landscape with both archaeological and contemporary Aboriginal associations; much more awaits documentation and research. Engagement with the Aboriginal community, begun with Lorblanchet, has continued, and now local Aboriginal groups are guiding research direction and access. Aside from the archaeologically oriented analyses, the dramatic character of the Dampier petroglyphs is becoming more widely recognised, encouraged by campaigns directed toward the protection of the petroglyphs (Bednarik, 2002c, 2006, n.d.; FARA n.d.b, NTA(WA) 2006; Chapple, 2007, 2009), and large elegant books with extensive illustrations (e.g., Donaldson, 2009). Media coverage, both print and audio-visual, has reached across the globe; what was once a little-known and isolated place on the northwestern edge of the Australian continent is becoming known as a world-significant locality.

### Initiatives to protect the Dampier Petroglyphs

Aboriginal heritage legislation, enacted in the State of Western Australia in 1972, provided some protection to Aboriginal cultural heritage places and controlled aspects of research into those sites. The *Aboriginal Heritage Act 1972–1980* was less successful in protecting Aboriginal heritage from industrial development, especially after the State minister was given power to override decisions of the specialist committee, and commercial rather than heritage values appear to have been paramount in recent years, especially during the expansion of industry on the Dampier Archipelago (e.g., Bednarik, 2006; Bennetts, 2007; Mulvaney, 2011). In 2002 the Burrup Peninsula was declared endangered and added to the National Trust Endangered Places List. The World Monuments Fund (WMF) placed the Dampier Rock Art Complex on its endangered places Watch List in 2004, 2006, and 2008, and “In 2004, the site received an American Express grant through WMF to finance the necessary research to secure Dampier’s place on Australia’s National Heritage List. WMF also recommended preservation strategies and proposed alternate [sic] locations for industrial expansion” (WMF, n.d.; Bird & Hallam, 2006).

Following various formal appraisals (McDonald & Veth, 2005, 2006a,b), on 3 July 2007 a large part of the Dampier Archipelago was entered onto the National Heritage List (NHL) established under new Australian Commonwealth *Environment Protection and Biodiversity Conservation Act* (EPBC) 1999 (CoA n.d.a; CoA, 2007; AHC, 2012; McDonald & Veth, 2009). This action was the culmination of longstanding efforts to have the area protected and to ensure that the cultural values of the Dampier Archipelago were recognized and appreciated. In all, the National Heritage Place covers more than 370 km<sup>2</sup>. Several of the limestone-base islands and much of the industrialized lands were excluded, although the sea area between some of the islands was included. More than two-thirds of Dampier Island (68.4%: 80.7 km<sup>2</sup>) has been incorporated. Some of the area appears to have been excluded on the basis of projected commercial use even though it was known to contain National Heritage Values.

### Potential outstanding universal value of the Dampier Archipelago site

A few years later, the Australian Heritage Council, in response to a request by the Australian Government for an emergency assessment, undertook an evaluation of “The Potential Outstanding Universal Value of the Dampier Archipelago Site and Threats to that Site” (AHC, 2012), which could serve as the basis of a nomination for the world heritage listing for the Dampier petroglyphs. It reported (Executive Summary, p.2) that:

The Dampier Archipelago is home to one of the richest, most diverse and exciting collections of Aboriginal rock engravings in Australia. The heritage features also include quarries, middens, fish traps, rock shelters, ceremonial places, artefact scatters, grinding patches and stone arrangements. [Petroglyphs] ... with images potentially numbering in the millions. ... provide a fascinating insight into the past. The Ngarda-Ngarli people have a deep cultural and spiritual connection to the engravings. Some [images] depict ancestral beings or spirit figures, while others relate to sacred ceremonies and songs, but many are representations of the everyday life or events of the traditional ancestors.

There is adequate existing research and data to justify that the heritage values of the Dampier Archipelago meet the threshold of Outstanding Universal Value against World Heritage criterion (i) i.e. *The Dampier Archipelago represents a masterpiece of human creative genius.*

The heritage values of the Dampier Archipelago may also meet the threshold of Outstanding Universal Value against criterion (iii) i.e. *The Dampier Archipelago bears a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living. ...*

And that there were four categories of potential threats to the heritage values of the Dampier Archipelago site:

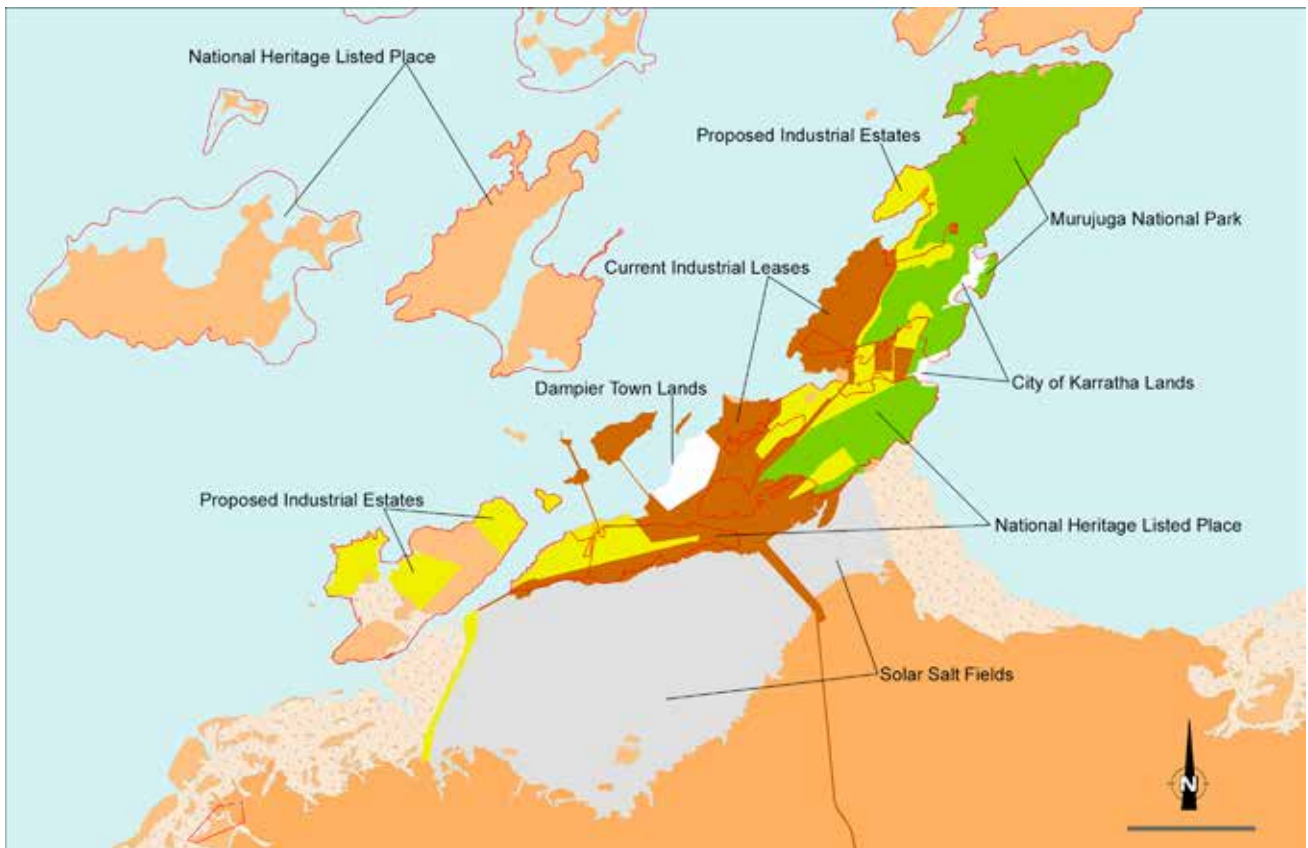
- Industrial development;
- Secondary impacts from industrial development;
- Recreation, tourism and vandalism; and
- Knowledge, management and engagement of the Ngarda-Ngarli people.

Of these four categories industrial development and knowledge, management and engagement of the Ngarda-Ngarli people present the highest risk threat to the heritage values.

Although the area surrounding the site has been heavily impacted by industrial development the site itself maintains high integrity and is in a stable condition.

Any initiative to nominate a place for its various outstanding universal values to the World Heritage Committee is a prerogative of the Commonwealth government as the ‘State Party’ vis-à-vis the UNESCO World Heritage Convention (which was ratified by the Australian Government in 1974). While the Commonwealth is implementing a scheme<sup>16</sup> to devolve much heritage responsibility to other Australian jurisdictions, the initiative to prepare a Tentative List submission as a preliminary step for a World Heritage Nomination would necessarily remain with the Commonwealth. However, the ‘assessment and approval’ aspects of any development likely to affect a national or a World Heritage property would be transferred to the relevant State or Territory with only occasional reporting to and oversight by the Commonwealth. The Western Australian government yet again would find itself conflicted and may decide that it has much to lose from





**Figure 24.** Dampier Archipelago including Burrup Peninsula Land Titles. Source: Map produced by KJM.

further protecting the Dampier area, whether or not it was inscribed on the World Heritage List.

It may be argued that, while World Heritage listing would provide international recognition, the EPBC Act should provide the same strength of protection for a National Heritage listed place as for a World Heritage place (CoA, 2013: 21–22). (However, additional industrial development and new chemical processing plants have been constructed since the National Listing of the Dampier Archipelago.) As always, the concern is with willingness of implementation and the opportunity to over-ride statutory provisions in the interest of competing land-use. The source of concern is the proposed Industrial zones that exist within the NHL property listed area (Fig. 24) (CoA n.d.b.).

In response to concerns raised by members of the International Council on Monuments and Sites (ICOMOS) regarding the protection of heritage values of Burrup Peninsula, the Eighteenth General Assembly of ICOMOS, held in Florence during September 2014, passed Resolution 18GA 2014/25—“Conservation of the cultural landscape of the Burrup Peninsula in Dampier Archipelago, Australia” (ICOMOS, 2014):

**Recognising** that the Dampier Archipelago (including Burrup Peninsula), Australia, is of outstanding heritage significance for its unique cultural landscape of immense cultural and spiritual significance, including in situ rock engravings that have inseparable associations with the Aboriginal people of the Murujuga group;

**Noting** that due to industrial development on the Dampier Archipelago, many organisations have expressed concern about the protection of the cultural heritage included the Burrup Peninsula in its Watch list of the world’s 100 most endangered heritage places in 2003;

**Recalling** that despite damage to around 21.5% of the Burrup Peninsula by industrial activity since the 1960s, the

unaffected area was entered in the National Heritage List in 2007 and a boundary covering 90% of the remaining rock art was delineated;

**Noting** with concern that zoning for industrial expansion areas by the Western Australia Government comprises areas within the area included in the National Heritage List;

**Noting** that, although the area has not been included in the World Heritage Tentative List for Australia, the Australian Heritage Council found in 2012 that the cultural landscape of the Dampier Archipelago including Burrup Peninsula could potentially meet one or more criteria for inclusion in the World Heritage List; and

**Encourages** the Australian national and state authorities to continue to work with the Murujuga Corporation on issues of conservation and management of the cultural landscape, and to establish effective monitoring and protection of the cultural heritage of this landscape, including rock art sites.

The status of the Dampier petroglyphs and other elements of the Murujuga cultural landscape continues to be the subject of discussions locally, nationally and at international fora (e.g., Mulvaney, 2011; Mulvaney & Hicks, 2012; Bednarik, 2013, *no date* a,b; Crook, 2013; Zarandona, 2013; Mulvaney, 2015c).

### **Native title settlement— Murujuga National Park**

The level of Aboriginal engagement in the heritage process has steadily shifted from that of ‘informants’ to ‘participants’ and now as ‘managers’ (Fig. 25). On 17 January 2013, some ten years after initial agreement was reached between the Aboriginal custodians and the State Government, the Murujuga National Park was proclaimed. (Differing views about the Park have been expressed—e.g., WAP&W, 2013; WADAA n.d.; Gerry Georgatos and Jacquelyn Siew, 2013.)



**Figure 25.** Senior custodian, Mr Tim Douglas, during visit to Gum Tree Valley site in September 2013 Source: Photograph KJM.

This is Western Australia's one hundredth national park and is the only one exclusively owned by the relevant Aboriginal group. Their representative body will co-manage the park with the Department of Conservation (currently: Department of Parks and Wildlife), ensuring the long-term protection of nearly 50 km<sup>2</sup> of the Dampier Archipelago. It is the intention of the Aboriginal custodians to regulate access to their cultural sites and to extend their role throughout the whole of the Dampier Archipelago, including industrial lands (Ron Critchley, CEO, Murujuga Aboriginal Corporation, pers. comm. with KJM, August 2013).

As a result of a native title settlement between the Government of Western Australia and the traditional custodians of Murujuga (Burrup and Maitland Industrial Estates Agreement 2002), the Western Australian Department of Environment and Conservation has produced a management plan for the area that is now known as Murujuga National Park (WADEC, 2013).

As an outcome of the 2007 National Heritage Listing, the Rio Tinto company—which operates both the iron ore and sea salt facilities in the Dampier Archipelago—signed a Conservation Agreement with the Commonwealth Government (13 July 2007). This Agreement, made under provisions of the EPBC Act, provides certainty for their iron ore and salt activities, and formalized the company's long-term commitment to protecting the rock art on Burrup Peninsula. As part of the Agreement, Rio Tinto has committed funds for a period of ten years to (CoA n.d.c):

- Identify where possible all sites with National Heritage Values within their leases;
- Present and transmit information about the National Heritage Values;
- Manage National Heritage Values to ensure the values are conserved for future generations; and
- Research and monitor the National Heritage Values.

The National Heritage Values are the specific aspects of the rock art and other archaeological features, for which the Dampier Archipelago is recognized pursuant to Section 324JJ of the EPBC Act (CoA, 2007). This embraces the merit that the petroglyphs include finely executed images of a wide range of terrestrial, avian and marine fauna, which not only can be identified to genus or species level but display a temporal range of style and subject that provides an outstanding visual record of response to environmental change. The profusion and stylistic range of human form, including the distinctive 'archaic face', and dynamic scenes of hunting and ceremony, are also recognized as of National Heritage Value. Other archaeological remains, including high concentrations of stone structures, reflect economic and cultural variability, and emphasize the exceptional significance of the area.

Funding from Rio Tinto supported publication of this substantial monograph on the Dampier petroglyphs. Its production is a direct link to the Conservation Agreement commitments; both Skew Valley and Gum Tree Valley are within the Rio Tinto leases. One of the salt operation's staff, FL (Enzo) Virili, was the first to report these sites to the relevant authorities, and this action began the ongoing collaboration of company personnel in heritage site documentation and protection.

## Further considerations

### Terminology

The island group was given the name Dampier Archipelago by Baudin by way of honouring the value that William Dampier's journals provided this French expedition (Peron and Freycinet, 1824a, 1824b). While the island on which Skew Valley and Gum Tree Valley are located was never officially named, it was generally known as Dampier Island. Due to possible confusion in the late 1970s of the locations of

two gas development proposals, one at Dampier Island and the other at Dampier Land near Broome (Mulvaney, 2010: 14), it was re-named Burrup Peninsula after the island's prominent hill, Mount Burrup, itself named in 1885 after a Roebourne bank employee. Bednarik (2006: 2–3) argued that the traditional name, 'Murujuga', has precedence. The name 'Burrup Peninsula' was gazetted on 26 February 1979; an apparent cartographic misinterpretation led to the named location applying to the portion of the island north of the main Dampier-Karratha road (or possibly a line running between Hearson Cove and King Bay), the southern portion being taken to be part of the mainland (Minister for Planning and Infrastructure, response to Parliamentary question 19 June 2007; Mulvaney, 2010: 14).

Mulvaney (2013b, 2015a: 9) remarked that none of the non-indigenous visitors to the area appear to have recorded what the inhabitants called their homeland, until the 1970s when the name was recorded, probably by Bruce Wright (then the Registrar of Aboriginal Sites, Western Australian Museum) who had a long-standing association with Pilbara Aboriginal peoples and worked closely with them during his field research in the region. He noted that Murujuga may be translated as 'hip-bone sticking up'. Vinnicombe (2002: 3), in her comprehensive backgrounding paper on the petroglyphs and threats to them from development, wrote of the Burrup Peninsula and adjacent Dampier Archipelago:

I have chosen to use the name 'Burrup' without the appended 'Peninsula', as the latter term gives a false impression of what the country was like when it was occupied by the Aboriginal population.

'The Burrup' has been used by others, particularly in writing about the petroglyphs.

In this volume, we use 'Dampier' to refer to what was the island before it was joined to the mainland, the archipelago and the petroglyphs described here because Lorblanchet's researches focus on Dampier Island as it was then known, and because that is the descriptor used throughout his work and writings.

The terms 'engraving' and 'engravings' are sometimes used by Lorblanchet. This was the common term for petroglyphs during the time that he was working at Dampier, but it is inappropriate today, especially in discussions that emphasize the iconographic and 'art-work' aspects of rock art. The term 'engraving' has a particular and precise meaning in art history (e.g., Duro & Greenhalgh, 1993: 117; Dobrez, 2013 has provided a review and some good sense on this and related matters), and does not describe the reductive processes or the resulting marks and representations that have been abraded, ground, hammered, incised, pecked, pounded or scratched onto rock. The term 'carving' is used here as a general term where more specific descriptors of the reductive process are not warranted or known; 'mark' or 'petroglyph' is used to describe the results of carving into the surfaces of the hard rocks of Dampier; 'carvers' happily avoids 'petroglyph-makers'.

The glossary of the influential international organization of rock art researchers has provided this definition: "petroglyph—a rock art motif that involved a reductive process in its production, such as percussion or abrasion"

(Bednarik, 2010). It is interesting to consider the term 'engraving' in the context of French research. While *gravure* in French may have a double meaning: a general descriptor for an 'artificial image', its more precise meaning refers to the result of marking metal, wood or rock—an engraving or etching—but it may be generalized to refer loosely to prints, plates, carving, wood- and stone-cutting, and other image-making. Working backwards may create problems as the English 'to carve' / 'carving' may be translated as *à tailler* or *à couper* and connote cutting the rock in the round, as in sculpture—but would not preclude petroglyph making. On the other hand, 'petroglyph', Lorblanchet comments, is considered old-fashioned in France, belonging in the nineteenth and early twentieth centuries; *gravure* = (reductive process) rock art and he translated this directly as 'engraving' in his writing in English.

We observe that the ever-perspicacious Vinnicombe wrote (2002: 24 endnote):

It is interesting that Withnell [1901/1993] uses the term 'tattoo'. This is a more accurate description of the way in which the petroglyphs were made than the more usual term 'engraving'.

### Marking descriptors of marks

Early in his substantive discussion of the Gum Tree Valley petroglyphs (Chapter 3: *Depictions of humans*), Lorblanchet makes clear his view of outsiders' interpretations of the carved imagery:

It should be noted that I do not think that the carvers necessarily thought of these motifs as 'ghost-like' or as 'phantoms' or of the others as 'stick figures'. Here, 'ghost-like' or 'phantom' means that the form of the motif suggests the idea of a phantom. There is possible no 'true' interpretation—these are just convenient descriptive terms.

'Identification' of the 'meaning' discerned in petroglyphs and pictograms is a domain of deadly dangers for the uninitiated. We see too much ill-considered assumption of emic knowledge by those etically placed. In this context, we think it preferable and in the interest of caution to emphasize that descriptors given to the various graphic representations—the petroglyphic images—discussed in the chapters to follow are indeed, as Lorblanchet writes, merely "convenient descriptive terms". Consequently, the main motif of the 'Eagle Group' is described in single quotes as 'The Eagle' and depictions of the ubiquitous macropods as 'kangaroo', and representations of his progress across the block-scape as 'tracks'. (Lorblanchet's interpretation and discussion of the Dampier motifs and cultural landscape are not necessarily shared by the editors; however, they are in keeping with the times of the original research and analysis, and reflect European notions of art function.) Not to burden the reader with too much single-inverted-commmary, these are omitted from headings and where the text explicitly explicates "a depiction / possible representation of a kangaroo" and so on. (John Clegg's (1991) solution to this problem required the use of exclamation marks, but has fallen out of favour; Roe (1992) and many later authors have used single quotes.)

## Illustrations

Unless otherwise designated, all illustrations were provided by or are based on photographs and line-drawings provided by the author.

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## Note

This monograph first was submitted for publication early in 2015. Subsequently, (1) reviewers' comments on the editors' introduction were received and some minor changes made to the text; (2) Mulvaney's monograph Murujuga Marni. Rock art of the macropod hunters and mollusc harvesters has appeared in print allowing references to the thesis on which it is based to be changed to the published version; and (3) references to some papers still in press at the beginning of that year have been updated

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## Endnotes

- Donaldson (2009: 503–509) has provided an accessible overview of the geology and geomorphology of the Dampier area and the process and products of the weathering of its granophyre and gabbro blocks.
- At Cape Inscription on Dirk Hartog Island, dated 1616 (ship *Endraght*, of Amsterdam, captain Dirck-Hartighs) and 1679 (ship *Geelvinck*, of Amsterdam, captain commander Wilhem de Vlaming). Bednarik (2006: 12–13) reviewing the possibilities of European contact with the region, reported finding a carved inscription at a “major rock art site in the eastern Pilbara” and “about 200 km inland” that he interpreted as comprising European elements, including the possible date “1771”, partly carved with a metal implement and “unambiguously ... around 200–250 years old”.
- Berndt (1964), for the same volume, wrote about the “The problem of interpretation and the significance of the engravings of Depuch Island”.
- Cf. review by Wright (1968) of petroglyphs in the Pilbara regions. A chronology of recent heritage management proposals and inaction is available at National Trust of Australia (WA) Web site (NTA(WA) 2007).
- Mulvaney (2015a) has provided further comments on this aspect and some personal reflections on his involvement in research into and protection of the Dampier petroglyphs.
- The Institute employed researchers at three levels; in order ascending the ANU scale: Research Officer, Research Fellow, and Research Consultant.
- This heady period soon suffered a series of setbacks with an impending change of government: In November 1975, the Principal advised research staff of “the current tight financial situation ...”, of the need to make savings ... and to present for approval detailed fieldwork budgets [1974/0016-1: 38 PJU to ML 7 November 1975].
- Crawford, 1964.
- Mulvaney later applied the concept of contrast state to demonstrate an extended sequence of petroglyph production and explore temporal relationship among the Dampier images from the record of contrast state of superimposed motif pairs: “Matching contrast state and superimposition relationships with the associated motifs types, enables a detailed relative sequence of motif repertoire to be identified” (2010; 2013a: 104–106, fig. 7, table 2).
- Contributions to the discussion of various animal motifs in the Pilbara region (and their dating) have been provided by Brown (1973) and by Mulvaney (2009).
- Secretary of State for Culture/Museums of France/Inspector General of Museums to ML 8 November 1976 [1974/0016-2: 21]; the matter had been raised earlier, following Lorblanchet's return from the Nice conference: PJU 19 October 1976: “Charge de recherches—[?] promotion—Cabrerets / 30 May 1977” [File 1974/0016-2: 9].
- Josseline Bournazel-Lorblanchet (2011) has provided a detailed and scholarly account of the discovery and the first study of Pech-Merle.
- Subsequently, Mulvaney (2010, 2013a: 104, 2015a) has argued that five major and two additional sub-phases of rock art production are discernible in the Dampier petroglyph corpus based on patterns of superimposition and contrast-state in combination with stylistic attributes (form, technique and subject).
- One of the first uses in Europe of radiocarbon analysis applied to prehistoric paintings (using AMS) was on one of Lorblanchet's samples from Cougnac, a black finger print, that was dated to 14 290±180 BP (CNRS, Gif-sur-Yvette). This was done in 1990 (Lorblanchet, 2010: 292–295).
- Re-marking was not unremarked, of course, in Aurignaco-Perigordian studies, as Lorblanchet (1993a: 61) reviewed in his discussion of the new dates for the Cougnac cave drawings.
- The “One-Stop Shop for environmental approvals” abrogation of federal responsibilities in the guise of “simplify[ing] the approvals process for businesses ...” (CoA, 2015).



## Bibliographic detail for the 14 parts of the present volume\*

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