

PREHISTORIC PETROGLYPHS OF THE DAMPIER ARCHIPELAGO, NORTH WESTERN AUSTRALIA

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INTRODUCTION

«The tides I met with a little while after gave me a suspicion that there might be a kind of Archipelago of isles...» (Dampier: 21/8/1699). Thus the English navigator William Dampier recorded the discovery of the Archipelago which now bears his name. In the same journal Dampier described an encounter with the native people of a nearby area. Almost two centuries later, in 1861, a party led by explorer F.T. Gregory, met natives in the area of Nicol Bay, but at the time little interest was taken in the Archipelago beyond providing an anchorage for a few pearling parties.

Since the turn of this century the Aborigines of the West Pilbara have gradually ceased to occupy their traditional grounds, having moved to the various settlements and pastoral stations that were established throughout the mainland. Little historical trace of this migratory movement remains. In the 1960's, the discovery and subsequent exploitation of massive iron ore deposits 250 km inland, focussed new attention on the archipelago as a site for a deep-water port. At the same time a large area of tidal flats on the coast was developed for solar salt production, consequently for the first time much of the islands and adjacent lands became accessible and before long surveyors and engineers who had occasion to move about the island in the course of their work reported the existence of large numbers of petroglyphs on the rust coloured rock hills within the archipelago.

Since then, sufficient progress has been made in assessing the rupestral art in the area to enable the authors to state with confidence that it ranks among the most important of its kind in Australia.

DESCRIPTION OF LOCALITY AND CLIMATE

The Dampier Archipelago is a group of islands off the north west coast of Western Australia (20° 30' S; 116° 30' E), approximately 1700 km by road from the State capital of Perth. It comprises about ten large islands and many small ones. Typical features of most islands are the steep and rugged hills consisting of enormous rock piles intersected by valleys. The rocks of the islands are largely Proterozoic basalts and Proterozoic intrusives of which the most common, a granophyre, is the type upon which most of the petroglyphs were made. Some petroglyphs are also to be found occasionally on the rather coarse grained gabbro and the intrusive dolerite dykes. Sand beaches and associated dunes are present in most islands: some, on the surface display a wealth of stone artefacts mixed with bones, shells and the remains of camp fires.

The climate of the area is dry sub-tropical, with temperatures ranging from warm to hot and with maximums recorded at 50°C during the hottest months: November to March. Rainfall is low and unreliable, averaging 200 to 300 mm per year, however heavy rains are usually associated with tropical cyclones which are quite common during the hot season. The maximum tidal

range (spring tides) in the archipelago is 4.8 m and consequently even at neap tides the currents within and about the islands are substantial.

VEGETATION AND FAUNA

The native vegetation of the archipelago comprises a number of associations dependent upon soils and situation. Large shade trees, the coolabah (*Eucalyptus patellaris*) together with various shrubs, grow in the beds of seasonal water-courses; smaller trees such as the kurrajong (*Brachyhiton australe*) grow sparsely on the rock piles. Tussock grasses such as spinifex (*Triodia pungens*) and other seed bearing plants that are known to have had some value as food resources for the indigenous people are generally found on the flats and lower slopes. Mangroves abound on sheltered shores, particularly the black mangrove (*Bruguiera conjugata*) which is predominant in muddy tidal creeks. The attractive red and black Sturt pea (*Clianthus of formosus*) flowers profusely between July and October.



Fig. 31
Kangaroo, turtles, animal tracks and other motives. Different techniques and styles, superimpositions and variety of degrees of paining. Several periods are present on the same rock. (Gum Tree Valley).

The archipelago has two species of kangaroo type marsupials which are almost unique to its islands: the Dolphin Island Euro (*Macropus robustus rubens*) and the Rothschild Rock Wallaby (*Petrogale rothschildii*) which inhabit certain islands. Other mammals include native rats, mice, bats and marine mammals such as the Dugong (*Dugong dugon*) and the Dolphin (*Tursiops truncatus*).

A wide variety of land and sea birds, ranging from large sea eagles to small finches, include species which breed in the area.

Reptiles are also numerous and in addition to snakes, lizards and goannas include also the Green turtle and the Hawksbill turtle, both of which lay their eggs on the sand beaches.

From the numerous shell middens that are scattered all over the archipelago it is obvious that the sea provided a major source of food for the indigenous population. A bivalve shell of the *Anadara* sp., the large baler shells (*Melo* sp.) and a variety of other shells are to be found in these middens. Furthermore, the shallow coastal waters would have been ideal ground for spearing and netting of fish that are abundant in these water, both in variety and numbers.

INDIGENOUS HABITATION PATTERNS

In recent historical times Aboriginal occupation of the mainland adjacent to the Archipelago was by Ngarluma language speaking people. However, Aborigines who still live nearby allege that a different people occupied the Archipelago, and that they are now long gone. Whatever the case, it is very unlikely that the same social distribution prevailed throughout the millenniums over which the petroglyphs were made. Some traditionally oriented Aborigines remaining

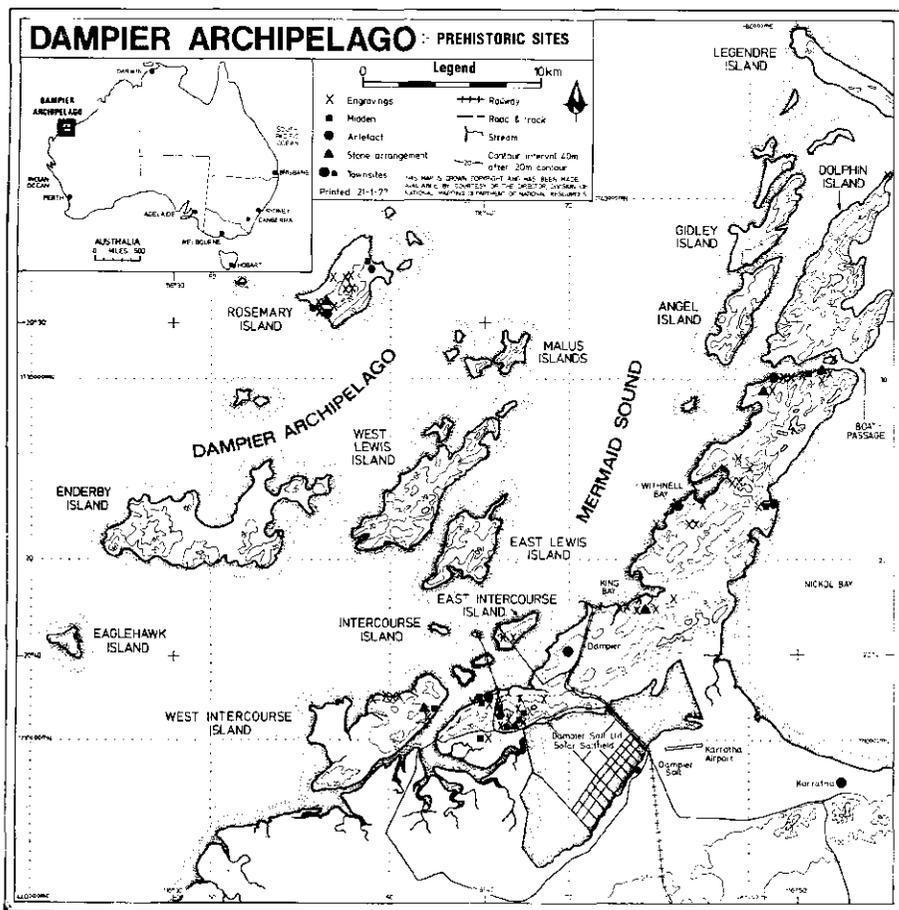


Fig. 32
Distribution map of Dampier Archipelago prehistoric sites.

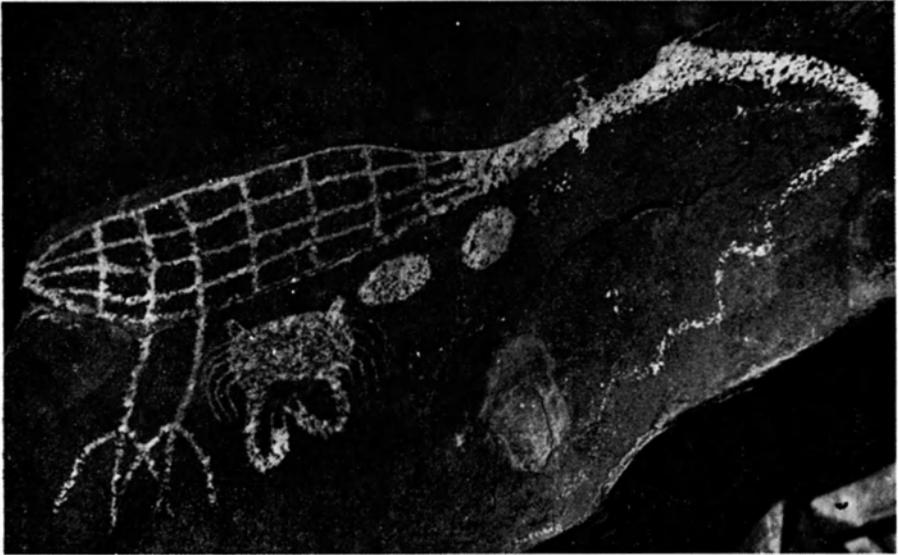


Fig. 33
Bird with snake, eggs and crab: abraded (S.V.).

in the area attribute the rupestral art to ancestral spirits or mythical beings who lived in the Dreamtime.

It is becoming more apparent and current archaeological studies may demonstrate that the people who customarily occupied the area numbered at the most a few dozen families who may have assembled together at infrequent intervals for the exploitation of seasonally abundant foods, or for the performance of major rituals.

At most times a small group would have moved about the area independently fishing, hunting and gathering such foods as were available: their movements on the islands almost certainly dictated by tidal currents and most of all by the availability of drinking water. During drought conditions they would have withdrawn to the few permanent water pools in the lower basins of the mainland rivers.

These conclusions are supported by the visual assessment of various degrees of weathering of a great number of petroglyphs that together with the extent of associated shell middens and stone tool making sites, indicate that they are the result of land usage by a small number of people over a long time, rather than by large numbers of people at once.

The excavation of a shell midden was carried out recently in the Skew Valley Site under the auspices of the Australian Institute of Aboriginal Studies and the direction of Dr. Michel Lorblanchet. Prior to that, no archaeological excavation of a site had been made anywhere in the north-west of Australia, from which more accurate information could be obtained in order to determine the seasonal movements and the types of food used by the indigenous tribes. It can be accepted however that, as in the north of the State where observations have been recorded (Love: 1938, and others) most available foods were exploited. The Skew Valley excavation has produced some important material which will be analysed during the forthcoming months and which promises to provide some

positive information on the life patterns of the Aboriginal inhabitants of the area.

The Aborigines evolved a way of life that was adjusted with the particular environment of the Archipelago: through ingenuity and skill, they managed to maintain a constant balance with the available natural food. Methods of hunting with spear and spear thrower, throwing stick or boomerangs, trapping and netting were developed; gathering of molluscs, eggs and edible seeds would have been used as elsewhere in Australia. Indeed this is testified by various depictions among the petroglyphs, by the remaining debris of chipped stone and shell heaps, and by the numerous seed grinding surfaces of stones.

PETROGLYPH SITES

With the term «Aboriginal Site» we intend to refer to a distinct area that shows evidence of having been occupied by Aborigines. These sites are generally focussed on a particular location and most of the visible evidence is concentrated there. With but a few exceptions they are situated in valleys surrounded by massive boulder screes of rock outcrops; these valleys are crossed by creeks that collect and convey seasonal rain waters from adjacent basins to the sea. Several rock pools are formed at depressions in the beds of these creeks by the deposition of eroded limestone that acts as a sealant to the fissures on the pools' floor. It is in the surroundings of these pools that the vegetation is



Fig. 54
Two fish: abraded outlines and interior lines: fully pecked tail. Possible superimposition of another motif (S.V.).

thicker and the coolabah trees larger in size, thus attracting the bird life and providing it with nesting grounds. The shade projected by the trees would help considerably in minimising the evaporation of water in the pools — which otherwise could exceed 20 mm per day during hot summer days — and thus contributing towards the preservation of water for weeks or even months after the rains.

It is in the vicinity of these pools that Aboriginal camp life is most evident in Petroglyphs, shell middens and scatters of stone artefactual material. The sites are found throughout the coastal strip of land and the islands of the Archipelago, with the exception of Legendre Island which is of low, flat limestone.

TECHNIQUES

In this area of Australia the techniques applied to petroglyphs appear to be confined to scratching, abrading, pecking or puncturing and gouging. Numerous composite techniques however were developed, which include the combination of two or more of these, also variations in depth of groove, intensity and direction of the percussion, and the density of the percussion marks. Thus, composite techniques would have derived from the puncturing and subsequent abrading of an outline; by the conjoined puncturing of the outline and the interior pecking of the figure of a petroglyph and so on, with numerous possibilities.

At the same site, a variety of techniques suggests explanations such as changes over time and quite simply, perhaps, different artists at the same time. However, when more than one technique has been used on the same petroglyph or on a composition of various subjects in the same panel, it may indicate that some subjects could be more significant than others. Most, if not all of the numerous techniques used by the prehistoric Aborigines in this type of rock art over the continent of Australia, are represented in the petroglyphs of the Dampier Archipelago.

SUBJECT MATERIAL OF THE PETROGLYPHS

B.I. Wright (1968) showed that of nearly 5,000 petroglyphs examined in the Pilbara region, some two fifths depicted anthropomorphic figures. The only motifs nearly as common were the representation of the tracks of various animals, including human foot and hand prints. Most recent recording of sites in the region has not revealed so far any significant trend likely to alter this pattern. At a single site however the pattern of distribution may not conform to such an overall configuration: one Pilbara site for example has over 40 anthropomorphic figures and only one other representation, of a bird; on the other hand a group of engravings at a site within Gum Tree Valley represents scores of turtles and other marine molluscs but no anthropomorphic figures.

It is premature to discuss distribution patterns for the Archipelago. Work at present has been confined largely to the exploration of the area, and marking of sites on maps and aerial photographs and a brief recording and description of each site for the purpose of assessing its importance in the face of industrial development. Work is in progress on a very detailed study of one of the

Fig. 35

Striped mammal; tentatively identified as a Tasmanian Tiger: deeply pecked and abraded (Happy Valley).

Fig. 36

Nest of eggs: possibly turtle's, very accurately pecked (GTV-E067U).



most important sites of the Archipelago, known as Gum Tree Valley site, but results of this work will not be available for some time. Nevertheless, from our observations we consider that the motifs depicted in the petroglyphs of the Archipelago are notable in at least two ways: there is firstly an emphasis on marine life which is quite understandable and secondly, there is an astonishing variety of motifs, not repeated elsewhere in the Pilbara.

Motifs can be categorised broadly as:

- Zoomorphic figures;
- Anthropomorphic figures;
- Material representations, such as weapons;
- Geometric figures;
- Unidentified figures.

ZOOMORPHIC REPRESENTATIONS

Animals are usually depicted naturally; that is to say the creature appears to have satisfactory proportions, roughly natural dimensions, and has no features which would not normally be ascribed to that animal. In general, animals are represented very faithfully and schematisation of style has not been applied in their depiction. In the case of a linear outline drawing, the representation is very simple although depictions of kangaroo for example remain eminently recognisable. Mammals are usually represented in profile view although some perspective distortion occurs at times; the placing of two eyes on a side view of a head being a common example.



Fig. 37
Group of four birds: scratched over other patinated figures (G.T.V.).

The common large mammal is the Euro, a type of kangaroo; it is represented on the petroglyphs of all the islands which it inhabits. Representations of similar but smaller marsupials may depict wallabies and almost certainly do so on islands such as Rosemary, which have exclusive populations of rock wallabies. Similar but still smaller figures may be tentatively identified as representations of marsupials such as the rat kangaroo and the possum.

The dingo, which is curiously little represented in the Archipelago, can also be identified. A similar but striped mammal has been identified tentatively as the Tasmanian Tiger, a Thylacine which has been absent from the mainland for many thousands of years (Ride; 1971) but was at one time widely distributed.

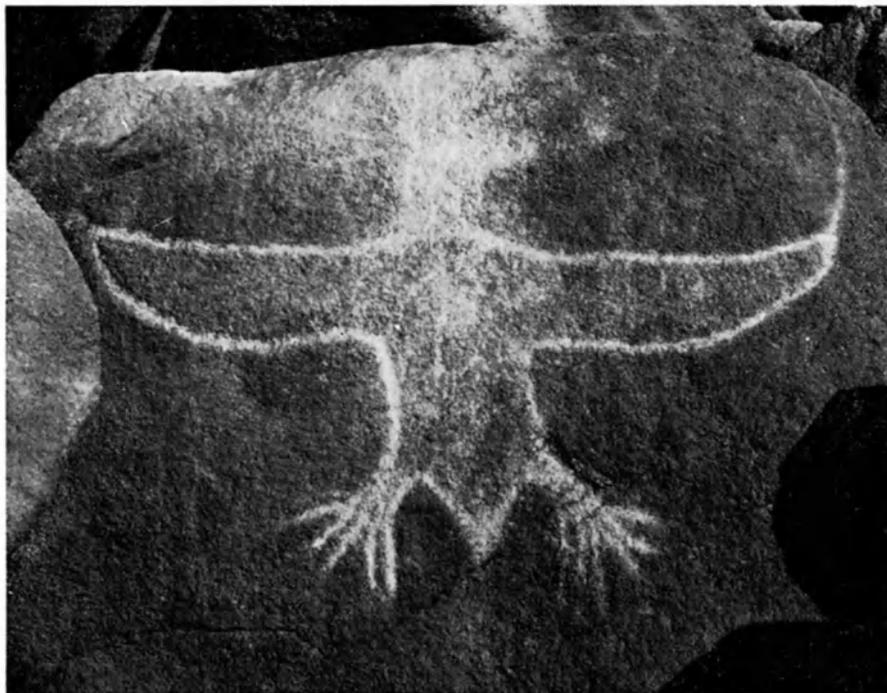


Fig. 38

The Eagle at the Main G.T.V. Site. Note the headdress and superimposed human stick figure on the chest.

Reptiles such as turtles, lizards and snakes are represented in plan view. This is a logical choice of the most characteristic view, but also reflects the usual viewpoint of the observer, as sea turtles and small lizards are seen from above. However, some petroglyphs could represent either a lizard or a fish. Many petroglyphs of turtles have patterns which suggest differentiation between species on the part of the artists. Some petroglyphs depicting a series of round pits and mainly connected with or located in the vicinity of turtle figures have been tentatively identified by the authors as turtle eggs. Most representations of fish cannot be identified as the species, although some clear examples of shark, sawfish, and other local species have been noted.

It seems reasonable to assume, in view of the intimate knowledge of the envi-

ronment possessed by the Aborigines, that at the time any particular petroglyph was made all present would have recognised which species was depicted, at least to the extent that species were differentiated. Observed today, through the eyes of a very different culture, only a few examples can be identified with confidence. A number of crustacea may have been represented, but only the crab has been positively identified. Crabs, like reptiles, appear in plan view. Birds, the emu in particular, are generally shown in profile, with very few exceptions in full



Fig. 39
Possible representation of an owl (Rosemary Island).



Fig. 40
General view of motif in previous figure.

frontal view. In the latter case the wings are usually outstretched and the head turned in profile.

The full frontal view of an owl could appear anthropomorphic, and this has given rise to the suggestion (Wright, 1968: p. 60 and Basedow, 1914: p. 14A.B.) that some possible anthropomorphic figures represent owl-men.

A number of animal tracks including human footprints are represented, although possibly not as commonly as at inland sites. Tracks are usually represented quite accurately in shape, size and detail. Some of them have gigantic proportions. The shape of the track is also displayed quite often by twisting the perspective view of the foot in the representation of an animal.

Rare exceptions occur to the general pattern of naturalistic representation of zoomorphic figures in petroglyphs. A remarkable example of such exceptions is found in Gum Tree Valley: it shows the figure of an eagle wearing what appears to be a headdress. This petroglyph shows evidence of considerable retouching and therefore it is quite in order to assume that it had a substantial significance for the people who traditionally visited this site.

ANTHROPOMORPHIC REPRESENTATIONS

The term anthropomorphic in this article refers to all those petroglyphs which appear to represent the human figure or a derivative of the human figure. Since we do not know and have no way of knowing whether many figures were



Fig. 41

This anthropomorphic figure was described by an Aboriginal informant as an «Ancestral figure». Pecked and abraded (G.T.V.).

intended to represent humans or mythical spirits, sub-human or non-human forms, the arbitrary classification «anthropomorphic» must suffice at present. The anthropomorphic figures range from larger than life size to very much smaller: the latter being the most numerous. They may be reasonably natural in silhouette as are most animals depicted on petroglyphs; on the other hand



Fig. 42
Anthropomorphic figure with eyes, hands, feet and large genitals. Also with weapon
and headdress (G.T.V.).

there may be an abbreviation of features or on the contrary a complication of form so that in some cases identification is doubtful. The common example of such simplification is the «stick» figure which is a reduction of the entire human form to the basic lines of body and limbs.

Another device for abstracting the human image is to depict only a few facial features, essentially the eyes. Petroglyphs showing disembodied human-like



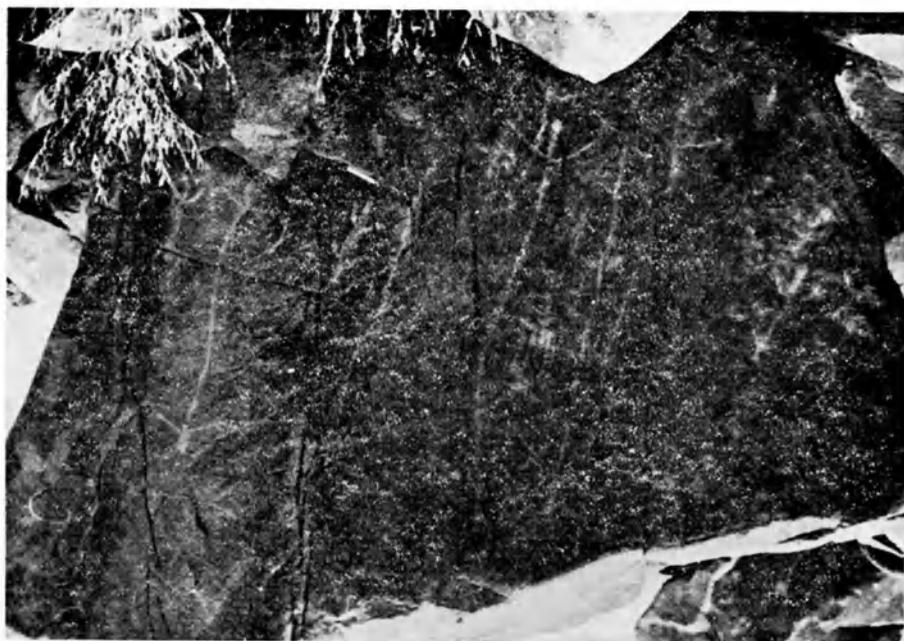
*Fig. 45
The anthropomorphic figure at Lower G.T.V. Site, affectionately nicknamed «Spooky». This figure is surrounded by human figures, kangaroos, turtles and manta-rays.*

faces, though quite rare, are known in the Archipelago and have not been found elsewhere in the Pilbara.

Anthropomorphs in the Pilbara are represented in both frontal and profile view, in the Archipelago however, the profile view is rather the exception. Characteristics which differentiate between some anthropomorphic figures include modification of natural features and embellishments or addition of features. A particular example of modification is shown in which the head of the figure is considerably flattened. Also, the figure may be depicted in some form of activity or in association with other figures.

*Fig. 44
Elongated «stick» figures, very large (Pinderi Hills, No. 1 Site).*

*Fig. 45
Human figures with enlarged bodies, abraded (V.C.).*



Elongated heads, triangular in shape and greatly enlarged, or modifications of the entire body's proportions to create a thin or rotund figure, are clearly to be considered deliberate exaggerations, with the purpose of accentuating relevant features or emphasising the whole figure. In a few cases material objects are enhanced to such a degree that the human figures in the same panel are disproportionately small compared to the main subject.



Fig. 46
Coital composition and other figures. Note male figure above, with headdress, finely pecked (Initiation Valley).



Fig. 47
A more obvious coital scene pecked (S.V.).

The single most common embellishment of the human figure is the addition of a headdress. As this it known to have been a very important aspect of ceremonial regalia, it is not surprising that many petroglyphs of human figures show a headdress of some type. These include lateral extensions of the ears, radial lines with or without knobbed ends, single or double sinuous lines «antennae» style, elongated extensions or enlargement of the head, sausage shape or round. Directly associated with headdress are body markings: lines which appear to represent body painting, cicatrice marking or ribs and viscera are to be found; circles or infilled areas about the stomach appear on some figures and on others we noted the same effect, created by the reverse technique of leaving an untreated surface within an otherwise fully pecked out figure. Enclosure of all or part of the figure within a loop is a device with no obvious explanation and which recurs throughout the Pilbara. A curious feature of some figures near the coast is an apparent double set of arms which may represent some aspect of ceremonial dress.

A variety of activities is displayed among the petroglyphs, such as hunting, dancing, fighting, running, climbing and sexual intercourse.

In hunting scenes the human figure is usually minified in relation to the figure of the prey; the coital composition is frequently abstracted to a virtual symbol of two stick figures and may be little more than a straight line intersected perpendicularly by four shorter lines.

Weapons, such as boomerangs and spears, form the majority of objects associated

with human figures, though other artefacts such as carrying bags, or dilly-bags are seen. There is one petroglyph which may show a profile view of men paddling a raft or canoe, but it is not conclusive. The absence of petroglyphs depicting some form of water transport is quite remarkable, in view of the distance of the outer islands from the mainland. However, it may well be that our eyes, accustomed to particular shapes of water crafts, cannot discern among «unidentified» motifs one that would have been perfectly familiar to the pre-historic indigenous man.

Finally, many figures are shown in relation to other figures in the same compo-

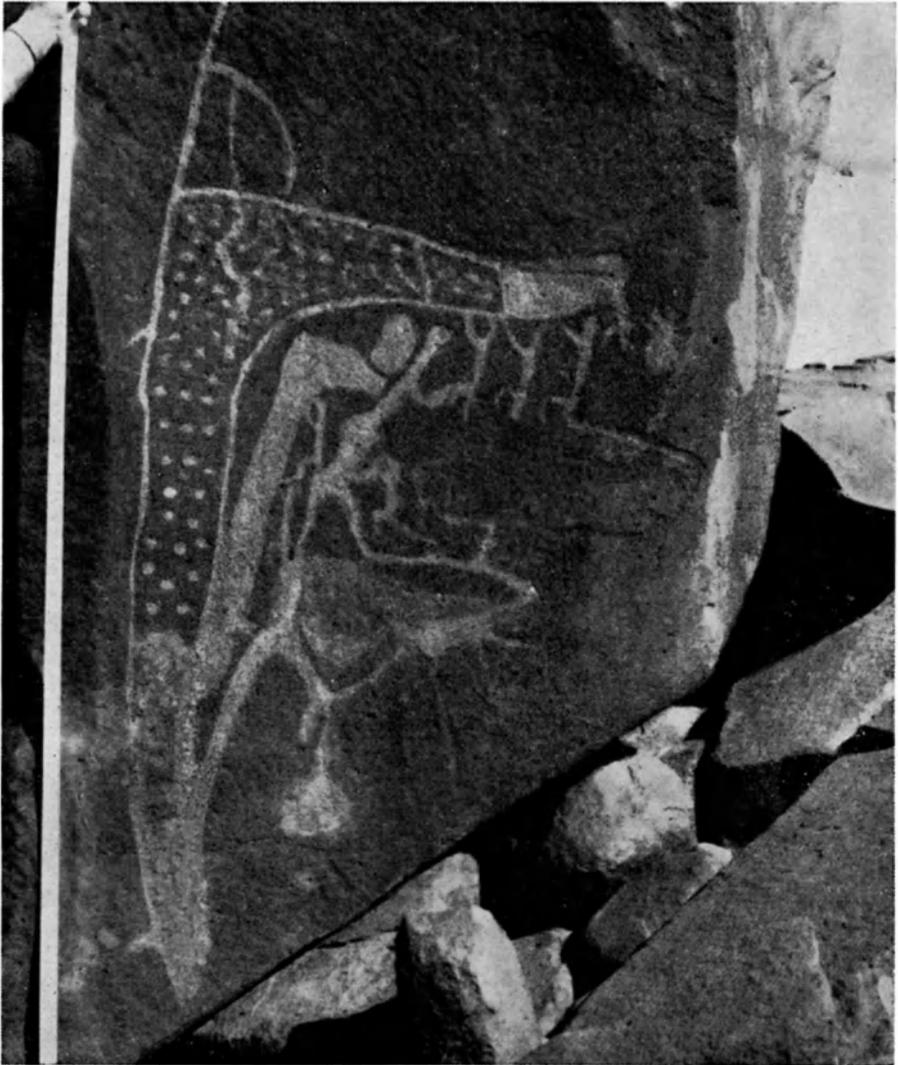


Fig. 48

Lower right corner of a large petroglyph in Hu. V., showing a variety of techniques and motives. The main figure is a boomerang.



Fig. 49
An isolated petroglyph on the mainland shore. Possibly a male «stick» figure with headdress, pecked and abraded.

sition. A row of men may represent a dancing scene, or a man may be shown with his wives, children or his dog. The implication of broader relationships between petroglyphs, i.e. beyond the obvious composition of a man joined by a line (spear) to a fish or another human figure, are not known.

For several years the writers have experienced the subjective impression that each site or concentration of petroglyphs is dominated by at least one major petroglyph or anthropomorphic figure, but some recently discovered sites have not fulfilled this condition.

CULTURAL MATERIAL REPRESENTATIONS

Weapons are the most frequently represented aspects of the material culture; they may appear as individual figures or in association with human figures, but are also often shown adjacent to or superimposed on animals to depict a hunting scene.

In some cases, throwing sticks (boomerangs) are decorated. Again it must be stated that the writers observations are based only on identified motifs.

OTHER REPRESENTATIONS

Geometric figures are common on petroglyphs all over the world and numerous figures of this type are also depicted on the petroglyphs of the Dampier Archipelago. Isolated and concentric circles, various elaborations on circular and semi-



Fig. 50
Unidentified motif: Circle with radial lines; very weathered (S.K.).

circular motifs, curvilinear patterns of single and multiple meandering lines occur quite frequently. Less frequent are patterns of lines which are quite clear but inexplicable, and which are not known to occur elsewhere. Concentric arcs are common in many sites. Considering that: «...Symbols were mankind's most effective weapons of survival when confronted by an inimical environment. In no other field was prehistoric man's imagination so abundant as in the invention



*Fig. 51
Unidentified motif, pecked and abraded, with possible central anthropomorphic subject (Virili Cove).*

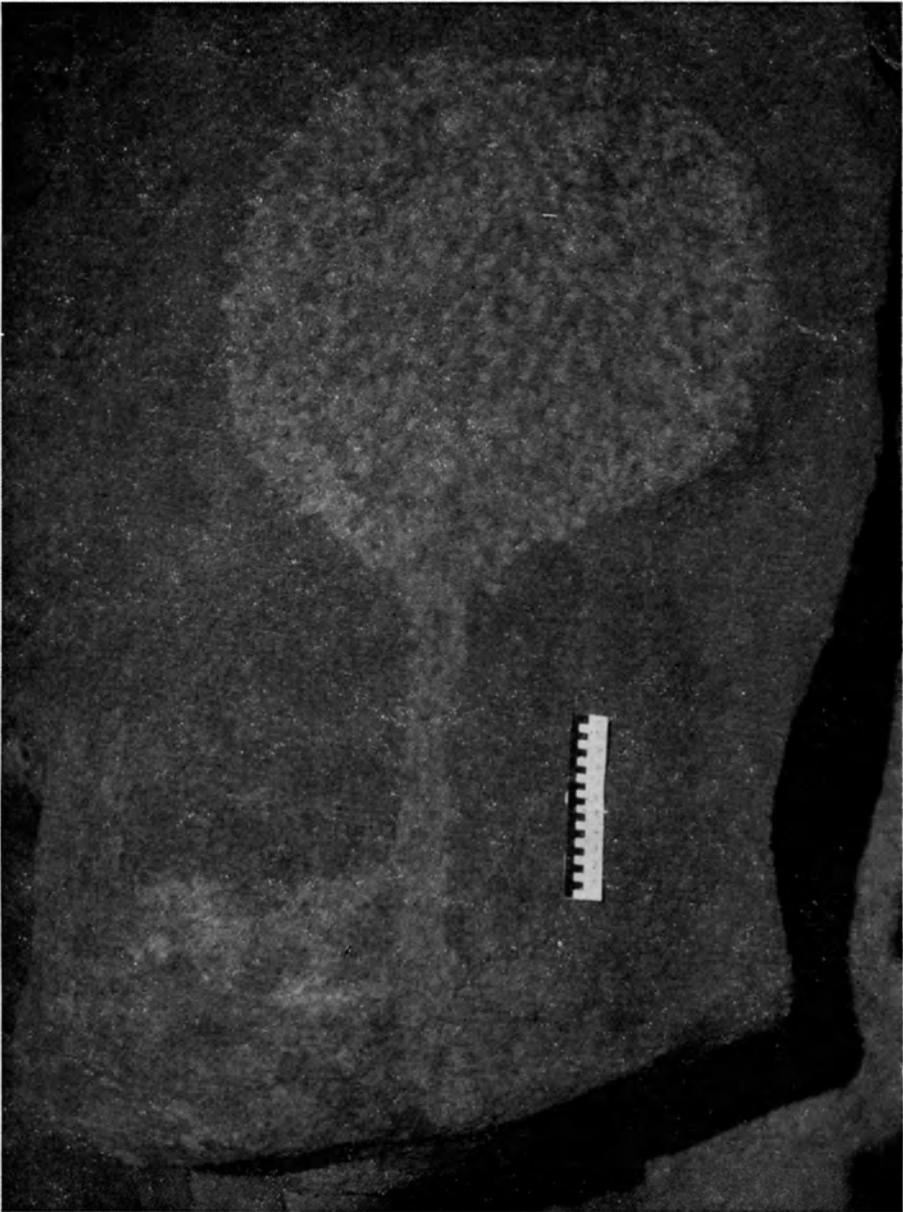


Fig. 52
Sting ray: pecked (B.G.T.V.).

of the symbolic form...» (Giedion, 1962), the writers are inclined to agree that these geometric patterns are symbols for some well defined beings, objects or actions.



Fig. 53
Unidentified motives, very weathered (K.V.).

WEATHERING OF PETROGLYPHS

A great number of petroglyphs in the Archipelago are extremely weathered; they consequently appear to be very old and, despite many efforts they defy interpretation. Attempts to establish a weathering pattern of this type of rock have been made and some studies are currently in progress.

An inscription on the rocks of Depuch Island left by the crew of H.M.S. «Beagle» in 1840, even after more than 150 years seems as fresh as if it had been made on the present day. If this is considered as a parameter in a comparison of weathering degrees, it would certainly take several millenniums before that inscription acquires the same degree of weathering as many petroglyphs that have been observed in this area.

There are several instances of superimposition of two or more engravings. In some cases, both the identity of the motifs and the order of succession are quite clear; in many instances however, the compounded factors of superimposition and weathering considerably aggravate the problem of identification.

When first chipped, the resulting surface of the rock is almost white and superimposition would show up clearly. But after a time, loss of colour differentiation resulting from the gradual oxidation of the engraved surfaces, reduces them to have the same appearance as the underlying engraving; it then becomes harder to distinguish which of the two figures was produced first and in some cases, two motifs that would have been initially easily identifiable, would now seem fused in one inexplicable jumble.

The problems that have to be faced in the study of this enormous wealth of prehistoric art are not restricted only to difficulties of identification and interpretation. There are also economic problems associated with the great distances from major cities where suitable laboratories and facilities are located, and with hindrance caused by the hot summer weather and the ruggedness of the terrain. Years of hard consistent work will be required to produce a comprehensive study on the pre-historic art of the Dampier Archipelago.

Riassunto: Lo sviluppo industriale recentemente promosso nell'Australia occidentale, ha portato alla scoperta e all'esplorazione di località di arte rupestre di grande importanza, specialmente nell'Arcipelago Dampier. In questo articolo si descrivono località nell'area del Dampier, inserendole nel loro ambiente naturale; dell'arte sono trattati tanto la tecnica quanto i soggetti rappresentati. Sono discussi problemi di identificazione e interpretazione e viene presentata una classificazione preliminare dei motivi; si considera la distribuzione degli elementi, l'accentuazione della vita marina e l'eccezionale varietà dei temi rispetto ad altre zone nell'Australia Nord-occidentale. Il testo è illustrato da esempi scelti per lo più perché rappresentativi, ma in alcuni casi perché eccezionali nel complesso considerato.

Résumé: Pendant des travaux récemment entrepris en Australie occidentale, des sites très importants d'art rupestre ont été découverts et explorés, surtout dans l'Archipel Dampier. L'auteur décrit des sites dans la région du Dampier, en les insérant dans leur ambiance naturelle; la technique et les sujets de l'art sont aussi traités. Il discute des problèmes d'identification et d'interprétation, et il trace une classification préliminaire des motifs. La distribution des éléments, l'accentuation de la vie marine et l'exceptionnelle variété des motifs sont aussi considérées. Le texte est illustré par des exemples choisis pour leurs caractères représentatifs mais dans certains cas pour leurs qualités exceptionnelles.

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