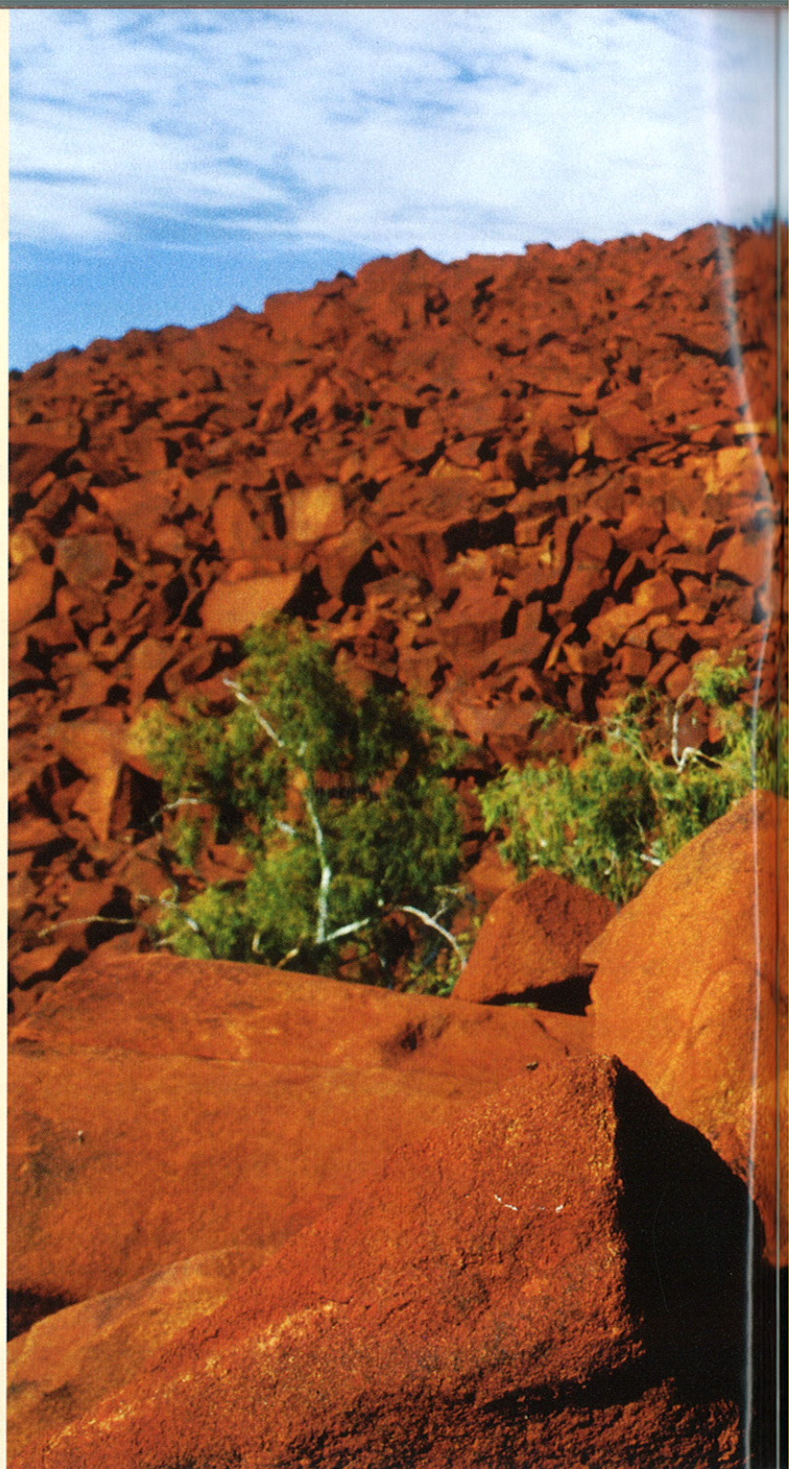


# Making their mark: Pilbara rock art

The immense open-air rock art gallery of the Dampier Archipelago and Burrup Peninsula, near Karratha and Dampier in Western Australia's Pilbara region, is Australia's largest monument to Indigenous culture.

by Roz Hagan



**T**he Dampier Rock Art Precinct lies within the islands of the Dampier Archipelago including the Burrup Peninsula, where the ancient mountains of the Pilbara meet the Indian Ocean. At about 27 kilometres long and five kilometres wide, the Burrup Peninsula—formerly an island—is the largest landmass in the archipelago. Along with its associated islands and coastal strip, it is home to at least three threatened animal species and 39 threatened or endemic plant species. A variety of habitats exist in this semi-arid region, including sandy beaches, rocky shores, saline mudflats and areas of mangrove swamp. The massive gabbro and granophyre boulder

piles form the archipelago's most distinctive topographic feature, ranging in colour from an orange-red to a deep purple, giving the landscape a unique and characteristic appearance.

## History

From the time when 'the world was soft' (creation) until the 1860s, the Dampier Archipelago was the spiritual and literal home of the Yaburara people, close relations of the Ngarluma. However, because of the archipelago's ceremonial importance and spiritual ambience, many people from other tribes were attracted to the area. In 1868, 26 Yaburara people were murdered on the islands in a series of

raids, which became known as the Flying Foam Massacre. These incidents caused enormous losses to the Yaburara people and, in the following period, the area lay practically abandoned until the early 1960s, when substantial iron-ore deposits were discovered in the Pilbara region. Hamersley Iron subsequently established the town of Dampier, which has a harbour and iron-ore processing facilities. Ironically, the Dampier site was chosen to avoid damaging the smaller rock art concentration at the first choice of Depuch Island, as it was claimed that no rock art existed in the area. The massive concentration of many hundreds of thousands of figures was 'discovered' between 1960 and 1970.



The Burrup Peninsula was originally an island known as 'Dampier Island', and prior to that was known as Murujuga, meaning 'hip bone sticking out'. In the 1960s, a causeway was built connecting the island to the mainland and, in 1979, it was renamed after the island's highest hill, Mount Burrup. During the early 1980s, approximately 1800 decorated boulders were removed from the site of the North West Shelf gas processing facility near Withnell Bay and placed in an enclosure near Hearsons Cove, thus removing them from their historical context and restricting access to them. Since then, construction projects, industrial developments and associated

infrastructure have caused the loss of thousands of images.

### The art

The Dampier Rock Art Precinct has the largest concentrations of petroglyphs (rock carvings) in the world, with estimates of the number of motifs ranging from 300,000 to well over a million images. Petroglyphs occur in other parts of Australia, but nowhere do they even remotely approach those of Dampier in terms of sheer numbers. Some of the petroglyphs in the Dampier region may be up to 18,000 years old. Most of the engravings are on boulders near watercourses and rock pools, along

**Above** Petroglyphs decorate many of the rocks of the Dampier Rock Art Precinct in the Burrup Peninsula.

*Photo – Michael Pelusey*

the shoreline, near stone resources suitable for making artefacts and along geological fracture lines that provide the most practical corridors for movement from one area to another. The majority have been engraved on granophyre, the predominant rock in the area, while only a few gabbro and granite boulders have been used, probably because of their coarser texture.



Petroglyphs are formed using a wide range of tools, from fine points to wide chisels. Art in the Dampier area can be generally divided into two types—shallow graffiti and deeply engraved. The shallow graffiti designs are formed by removing the weathered surface layer or crust of the rock, exposing the lighter colour underneath. Over time, colour gradually returns to the engraved surface (repatination) and, because there is little depth to the engraving, the petroglyphs sometimes become almost invisible. The deeply engraved designs consist of grooves, usually between five and 12 millimetres deep, formed by pecking, scoring or rubbing and, although they also repatinate, the depth to which they are carved means they retain greater visibility.

Images engraved into rocks of the area serve a variety of purposes. Some are part of increase sites for particular species or events. Senior members of the community were responsible for maintaining the sacred significance of sites within their country, and for performing ‘increase rites’ and other rituals that ensured the perpetuation of the animal and plant species and the continuity of the seasons. Other images relate to Aboriginal ancestral creation beings, spirit figures, ceremonies and rites of passage. Some ceremonial and rites of passage places are specifically for men or women, while others are open to all. Although many engravings have spiritual significance, others were representations of everyday life or events. The Aboriginal artists depicted a wide range of subject matter and the Dampier precinct has a high percentage of marine-based motifs including whales, dugongs, fish, turtles and seabirds. Other designs represent wallabies, kangaroos, snakes, echidnas, people hunting and sacred images.



**Above left** Modern industrial infrastructure skirts a scree pile of ancient art.

*Photo – Bill Belson/Lochman Transparencies*

**Left** Many rock engravings represent everyday life, like hunting kangaroos.

*Photo – Michael Pelusey*



The Dampier Rock Art Precinct also features significant stone arrangements (single standing stones or clusters of stones). Standing stones were used to indicate the existence of fresh water, other natural resources, the site of a special event or a place of spiritual significance. Shell deposits (middens) and grinding patches are also scattered throughout the area.

### Industry and monitoring

The Dampier region houses some of Australia's largest industries, including the North West Shelf Project, Pilbara Iron, Dampier Salt and the new Burrup Fertilizers project. A number of other projects are proposed on the Burrup Peninsula. The heritage value of the Dampier Rock Art Precinct is clearly threatened by ongoing industrial development, through direct disturbance and destruction of heritage sites. Despite almost 40 years of industry in the region, no comprehensive study of the cultural heritage assets of the region had been commissioned. However, in 2003 the Western Australian government signed an agreement with three Native Title claimant groups:

the Wong-Goo-T-Oo, the Ngarluma Yindjibarndi and the Yaburara Mardudhunera people. The agreement extinguished their previous Native Title claims over the industrial and residential areas of the Burrup Peninsula and other land required by the State, but granted them greater control over the non-industrial portions. As a condition of the agreement, the State agreed to commission a Rock Art Study, to identify the impacts of industrial pollution and to prepare a management plan for the area.

As a result, CSIRO, in collaboration with Murdoch University, has been commissioned to complete the first study into the possible effects of industrial emissions on Aboriginal rock art of the Dampier Rock Art Precinct. The project is to be managed by the independent Burrup Rock Art Monitoring Management Committee. The four-year monitoring program, supported by local Aboriginal communities, is interdisciplinary and ambitious in scope. Ambient concentrations and deposition of pollutants will be monitored at seven sites, on the northern Burrup, Gidley

**Above** The iconic spinifex, coolibah and red rocks of the Burrup Peninsula glow orange in the late afternoon.

*Photo – Carolyn Thomson-Dans/CALM*

and Dolphin islands, and at sites closer to sources of industrial pollution. Data collected from each site will include levels of nitrogen dioxide, sulphur dioxide, ammonia, BTEX gases (benzene, toluene, ethylbenzene and xylene), aerosols such as air pollutant particles and dust, as well as rainfall, temperature, humidity, wind speed and wind direction. Microbiologists will examine the role microbes play in rock deterioration, and test whether increased levels of nitrogen or sulphur from emissions promote additional microbial activity. Geochemists and archaeologists will assess the amount of weathering on the rocks by analysing physical, mineralogical and chemical changes of the rocks, using optical and scanning electron microscopes. A mineral mapping tool will also be used to record subtle colour and mineral



**Above** Petroglyphs are created by carving into the weathered surface rock with a range of tools.

*Photo – Bill Belson/Lochman  
Transparencies*



**Left** Aboriginal carvings of emu footprints at Deep Gorge in the Burrup Peninsula.

*Photo – Jiri Lochman*

spectral changes in the surface minerals over time between engravings and the adjacent undisturbed rock surfaces.

The collected gas, particle and weather data will be used to establish the origin of air pollutants and dust, to address concerns about possible effects of current and future industry emissions on the art, and to allow recommendations for the ongoing preservation and

conservation of the rock art of the Dampier Archipelago region.

Although many thousands of images have already been destroyed or moved from the precinct, it is now hoped that, through careful management and cooperation between industry, government and the local community, the rock art will survive for many thousands of years to come.

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