



Acknowledgements

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- National Trust Australia WA
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Aboriginal Site Protection

Heritage sites are very significant to Aboriginal people; they are of great interest to non-Aboriginal people and they are protected by law. The layout of this trail was done in close liaison with the Ngarluma people, the Traditional Owners of the land. We trust that giving people a better understanding will engender greater respect for Aboriginal culture.

Indigenous Habitation

Sites identified along the trail indicate that these hills were inhabited on either a permanent or seasonal basis by Aboriginal people. Sites include engravings, stone quarries, artefact scatters, a Thalu site, shell midden with grinding material, and an area of grinding patches and basal grinding stones. The engravings consist of a wide range of motifs and styles, and involve a number of different engraving techniques.

Karratha's Development

The whole face of the Pilbara changed as a result of the Commonwealth Government's lifting of the iron ore export embargo in 1960. Known reserves of ore were further investigated and proven to be massive deposits of high grade ore. Four companies secured large long-term export contracts resulting in the planning of major new mines, towns, ports and railways. Hamersley Iron constructed its port on King Bay and built the town of Dampier to accommodate its workforce. The first ore was exported in 1966, and by 1968 it was obvious that the town was insufficient to house proposed massive expansions. The State Government determined that future development would take the form of an open government town (unlike the company town of Dampier) and after investigation of the area the gently sloping land surrounding these hills was described as the most suitable location for a new town that would eventually become the 'regional capital' of the Pilbara. Named after the station from which the townsite was excised, Karratha covered an area previously known as 'White Gum Creek'. 'Karratha' originates from the indigenous word meaning 'good country' or 'soft earth'.

Planning for the construction of Karratha commenced in 1968 with the first residents were able to move in by mid-1971. The residential cell of Bulgarra was the first developed, followed by Pegs Creek in 1976, Millars Well in 1980, Nickol in 1981 and Baynton in 1987.

While Hamersley Iron was developing its iron ore project, on the nearby tidal flats Dampier Salt Company was constructing the largest solar salt fields in the southern hemisphere. The discovery of major natural gas reserves on the North West Shelf in the early 1970s heralded another major phase in the consolidation of the Pilbara's development. Woodside Offshore Petroleum has invested \$11 billion in the exploitation of these reserves in the 1980s with the construction of the North Rankin 'A' gas platform, a 135km submarine pipeline, a domestic gas plant, a 1600km pipeline to supply natural gas to Perth and the South West and a liquefied natural gas plant at Withnell Bay to produce Liquefied Natural Gas (LNG) for export to Japan.

Further development of the gas reserves occurred during the 1990s which underpinned the development of five gas towers at the Karratha Gas Plant followed in 2012 by the completion of Woodside's \$14 billion Pluto Gas Plant on the Burrup Peninsula. Further diversification has occurred with the development of an ammonia and ammonium nitrate plants and a pilot project for biofuels.

Natural Environment

The Karratha Hills are an isolated range of steep sided low hills composed largely of metamorphosed (physically and chemically altered) igneous rocks, originally part of a volcanic complex. These rocks, some 2,700 million years old, were intruded by dykes of dolerites (ridges of coarse, dark igneous rock produced by the cooling of volcanic/semi molten material) about 2,200 million years ago. Some cherts (flint-like forms of quartz) and metamorphosed quartz rock sediments form the low ridges to the south and west of the main range of hills. The surrounding plains are largely underlain by granites with varying depths of recent river and coastal marine sediments.

The hills are an erosion resistant remnant shaped by an extensive system of joints and faults, the relative resistance to erosion of the individual rock types, and depositional features, especially on the lower flanks and small valleys.

The dolerite dykes and quartz and pegmatite veins (coarse crystalline types of granite) are more resistant to erosion than the altered volcanic rocks and stand out as ridges and knolls. Some of the more striking examples are the dolerite dyke near Galbraith Road and the one separating Karratha College and the Hospital. Because of their smaller size, the quartz veins and pods tend to form discrete knolls or humps on the slopes except in the lower hills to the south and west where low angular ridges are found.

Natural Vegetation

The vegetation, like the animals of these rocky hills, relies on moisture for survival, and adapts itself in various ways for protection against the sun. Plants which can tolerate extreme aridity are found on the hill slopes where rain penetrates only a small distance while more water dependent plants are found in the valleys and gullies.

After heavy rains (mainly in summer) trees and shrubs turn a deeper green and many flower, while a host of small plants spring up and flowers of all colours appear. Most of these plants are ephemeral - they grow from seed, flower and seed again all within a few months before dying to survive only as seed until the next rains.

You can view relatively pristine vegetation from the trail, something which is becoming rarer today. Some weeds, however, can occur along the edge of the trail and the creek line. Kapok (Aerva javanica) distinguished by its fluffy white flowers along fingerlike branches, was used by camel drivers to stuff their saddles. Buffel grass (Cenchrus ciliaris) was introduced to the region by pastoralists as a fodder grass. You can limit the spread of these weeds by staying on the trail.

Local Fauna

The rocky, spinifex covered slopes of the hills and shrubs and trees of the valleys between provide a home for a surprising number of animals. The Euro or Wallaroo (called 'Biggada' by Aborigines) is the most common mammal to be seen on the trail. Euros are a small type of kangaroo especially adapted to living in arid areas. These hills are typical of their usual habitat, having large and often overhanging rocks or ledges which provide shelter from the extreme heat. By late afternoon, the rock mass heats up and only then will they leave for the shade of the trees. In an effort to further reduce their temperature, Euros lick their forelimbs to cool the blood flowing close to the surface. To avoid solar radiation they usually graze at night, but in the cooler months can be seen grazing on grasses at most times of the day. They emit a distinctive loud hiss if disturbed.

The Yaburara Heritage Trail

The parking area at Karratha Road outside the Karratha Visitors Centre, and Karratha Leisureplex provides space for caravans and other larger vehicles.

How to get there

Karratha is 1,535 km north of Perth via North Coastal Highway (National Route 1).

The Yaburara Heritage Trail is a 3.5 km, grade 4 walk highlighting the Karratha district's natural history and cultural heritage and in particular the heritage of the traditional owners of this land, the Ngarluma people, and their neighbours the Yaburara people. It covers rugged country with some steep climbs and descents and features a number of Aboriginal sites including rock engravings and artefact scatters.

The trail commences from the water tanks over looking the Karratha town centre and access is via the information bay on Karratha Road, next to the Karratha Visitor Centre.

There are also two short branch trails and three longer branch trails - a secondary trail around the base of the hills, a recreational trail following the ridge top and a nature trail along two major valleys. Allow two to three hours to enjoy the full trail at a leisurely pace.

Important information

- Much of the Heritage Trail is rough with loose rocks and could be potentially hazardous to trail users. Persons using this trail do so at their own risk.
- Stay on the trail. By walking off the trail you may trespass on a heritage site, spread weeds and damage vegetation.
- The main trail does not return to the starting point and trail users may wish to arrange transport at the end of the trail near the Karratha Leisureplex.
- The trail should only be attempted by those who are reasonably fit and able bodied. There is no seating or shaded area for rest breaks.
- Sturdy but comfortable footwear is essential.
- No water supplies are available along the trail.
- Take adequate precautions against sunburn and heat stress.
- No rubbish bins are available along the trail. Please carry any litter with you.
- Careful consideration should be given before attempting the walk in hot weather.
- Under the Aboriginal Heritage Act it is an offence to damage or alter any Aboriginal site or to remove any Aboriginal object from a site.
- This trail is for walkers only. It is illegal to use 4WDs and motorbikes on this trail.





Woolly Corchorus



Honey Hakea



Caustic Bush - Northern grevillea



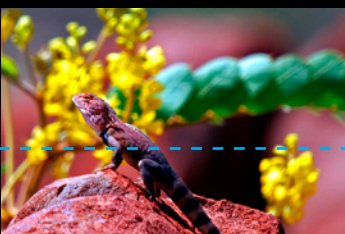
Kanji Bush



Clerodendrum



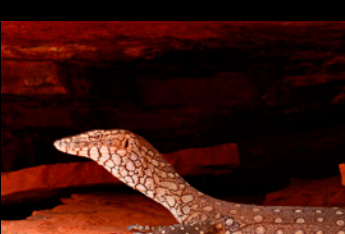
Trichosanthes cucumerina



Lizard



Cucumis Vine



Perentie



Perentie



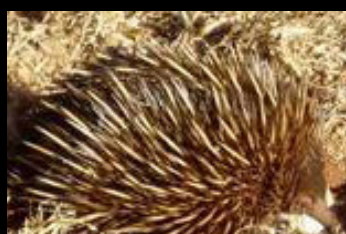
Spinifox Pigeon



Local birdlife



Euro



Echidna

Key

- Point to Point Trail
- Rotary Trail
- Short Loop Trail
- Waterfall Trail
- Long Loop Trail
- Point of Interest
- Parking

Waterfall Trail

9 Aboriginal Shell Midden

The white shells littering this rocky slope were caught in Nickol Bay and carried here for extraction of the shellfish. This activity was carried out by the women and children of the tribe. After rains the fresh water rock pools ensured that this would have been a favourite camping area.

10 Aboriginal Quarry and Petroglyph Site

There are signs of quarrying for stone implements in the rocks at the base of this ridge. There are also several indistinct petroglyphs.

Rotary Trail

5 Aboriginal Artefact Scatter

The gentle slope at the base of this hill contains some remnants of Aboriginal artefacts. Stone materials quarried from higher up were carted to this spot where they were used as implements for making tools and weapons. After being used they were simply left on the ground. As with all Aboriginal sites, it is an offence to remove or in any other way interfere with the site or objects.

6 Aboriginal Talu Site

Talu sites are species maintenance/increase sites and are spread through out the land, each being the location of a different mythical being and the site for special ceremonies related to that being. They may be identified by specific physical features, or piles of stones, or other special distinguishing

criteria. Totemic ceremonies are performed at these sites to 'will' an increase in the numbers of vital aspects of life, such as children, animals, fish, grasses, and plants.

An important Talu site related to the Giant Fruit Eating Bat or Flying Fox known as Warramurangka is located on the side of this hill. The exposed dolerite rock outcrop running down the face of the hill is a major ceremonial feature of this area. It forms part of the mythical path of Warramurangka as it passed from the Burrup Peninsula to the Fortescue River during the Dreamtime.

7 Aboriginal Engravings, Quarry and Artefacts Scatter

The prominent dolerite ridge on the left (west) side contains a number of excellent engravings (petroglyphs),

and parts of the eastern ridge show obvious signs of quarrying. The northern end of the plateau area also contains various artefacts scattered across the ground.

8 Rotary Lookout

This lookout provides commanding views of the western end of Karratha. The residential cell of Pegs Creek abuts the base of this hill, with Millars Well next to the left, Nickol in the middle distance, and the new area of Baynton close to the hills to the west. The Karratha College campus is nestled within the foothills to the left of this lookout, and the white-roofed complex beyond the ridge next to the College is the Nickol Bay Regional hospital. This lookout commemorates the role the Rotary Club of Karratha played in the development of this trail.

An excellent example of a kangaroo petroglyphs is clearly visible on the side of the large rock near the approach to the lookout, providing an excellent photo subject in the morning or around midday. Another large petroglyph covers a flat rock on the left of the trail about ten metres before the lookout.

11 Aboriginal Grinding Stones

Flat rocks adjacent to this creek were used for many years for grinding spinifex and other seeds. They are recognisable by their slightly dished and smooth polished surface. This task was generally carried out by the women of the tribe and demonstrates the well balanced nature of the Aboriginal diet, despite the apparent harshness and aridity of the district.



Point to Point Trail

12 Survey Trig Point

The Survey Trig Point to the right of the trail marks the highest point of these hills, at a height of 129 metres.

13 Double View

This point provides a 360-degree panoramic view of the district. To the north lies the town of Karratha, the mud flats, Nickol Bay and the Burrup Peninsula. To the south can be seen the Karratha Industrial Estate in the left foreground, the North West Coastal Highway in the mid ground, the table top hills adjacent to the Harding River Dam in the left background, and the Chichester Range in the middle and right distant background.

Short Loop Trail

1 Dampier Salt Shakers Lookout

This lookout provides excellent views of the Karratha town centre and its residential areas. It also gives a clear indication of the topography of the Nickol Bay area - the high rocky hills, the gentle slopes of the developed town area, the low tidal flats subject to tidal inundation (especially during cyclonic tidal surges), the shallow and muddy Nickol Bay, and the high rocky hills of the Burrup Peninsula. The Burrup's Aboriginal name is 'Murujuga', which means 'hip bone sticking out'. An orientation plaque on the lookout gives directions and distances to many relevant points in the district. The lookout also commemorates the Dampier Salt Shakers - a local marathon team, which became well known throughout the Pilbara and

Eastern States during the 1980s, and which supported the development of the trail.

2 Hillside Vegetation

These rocky hill slopes support an interesting variety of vegetation. Among the exposed dolerite rocks on the other side of this ridge the following can be seen:

- Near the top of the ridge is Clerodendrum (*C.lanceolatum*) with lightish green foliage and beautiful white trumpet flowers.
- Close by is the shiny green foliage of the Kurrajong (*Brachychiton acuminatus*) with deeply lobed leaves and black seed pods.
- Further down the slope is the Sandpaper Fig (*Ficus opposita*), a deeper green shrub with sandpaper-like leaves, used by

Aborigines for tool making. It also has edible fruits.

3 Aboriginal Rock Art

Like many rock outcrops throughout the Pilbara the ridge is rich in petroglyphs which depict animals, humans, objects and totemic themes. They represent a number of artistic traditions and techniques of production. Most are hammered into the rock surface and were produced in the last 6,000 years, although some may be very much older. Please respect the Indigenous engravings (petroglyphs) - do not deface or stand on them.

4 Valley & Creek Line

Along these creek lines there are two significant trees - the Bloodwood

and the Coolibah. The smaller of the two, the Bloodwood (*Corymbia hamerselyana*), has scaly grey and pinkish bark. The coccid bug often infects the seed pods of the Bloodwood tree, forming a large gall called the Bloodwood Apple, which was a common food for the local Aborigines. Coolibah (*Eucalyptus victrix*) is clearly distinguished by its smooth white bark. It was 'under the shade of a Coolibah Tree' where the 'Jolly Swagman sat by a Billabong' in 'Waltzing Matilda'.

Eucalypts protect themselves against the elements by turning their leaves with the edge towards the sun. This ensures minimum direct light and therefore minimum water loss. The waxy coating on their leaves and the eucalyptus oil inside repels animals.