

The Natural History and Cultural Heritage of the Karratha District

Aboriginal Culture and Heritage

Archaeological dating suggests that Aboriginal people have inhabited the Pilbara region for the past 40,000 years.

Discoveries in other parts of Australia suggest they arrived on the continent sometime between 45,000 and 60,000 years ago. By the time Europeans settled in Australia, the whole of the continent had been occupied, from the deserts to the high mountains, with people speaking several hundred languages and associated with tribal territories. The evidence of their past lives and activities are present throughout the landscape and comprise a significant cultural heritage asset.

Aboriginal culture and land tenure are inextricably interwoven with the creation period known as 'the Dreaming'. According to Aboriginal belief, mythic beings traversed the country performing heroic deeds, creating physical features, plants and

Pansy Hicks on Ngarluma Ngurra



Photo by Sharmila Wood 2013

animals, and providing a moral basis for Aboriginal social institutions. Many parts of the landscape remain as testament to these ancestral beings whose spiritual essence resides in places and objects fundamental to the continued well being and order of the social and natural world. This is the basis of the close and enduring relationship existing between Aboriginal people and their traditional lands, forming the focus and control of all aspects of Aboriginal life.

The Dreaming remains alive through performance of rituals and ceremonies, Aboriginal people are directly linked through their actions to the land and their ancestors. Talu sites are one aspect of this, they are important places for the maintenance and increase of species. Another is the spiritual link and encoded meaning in the rock art.

Aboriginal Land Tenure

Traditional Aboriginal land tenure differs significantly from the European concept of land ownership. Rather than individually holding rights to the use and sale of the physical land surface and its contained features, Aboriginal lands were owned collectively by groups whose tenure over specific tracts was socially acknowledged and accepted by others. Specific family groups may inherit rights but also obligations in respect to specific tracts of country. The holding was based primarily on their ownership of the religious associations of the territory, including spiritual sites, stories, songs, ceremonies and sacred objects. The responsibility placed on succeeding generations is to protect sacred places, care for country and to pass on the spiritual traditions and practices, but never to dispose of the land or desecrate the place.

Clan territories may be seen as group ownership with primary spiritual association through local descent inheritance. Permissions must be sought to hunt and forage over other people's territories, although rights may be reciprocal between groups. Being in another's territory without consent or reason, could result in reprisals and recompense. At times and when conditions were favourable larger gatherings occurred, often involving ceremonial performances, exchange of goods and affirmation of ties, including 'marriage'

alliances. Ties of marriage influence associations between different tribal groups, with some members spending extended periods outside their own territory, particularly when going to their spouse's homeland.

Effects of European Settlement

With the rapid development of the pastoral industry in the 1860s, coastal tribes of the Pilbara suffered sudden and dramatic disruptions to their traditional culture and lifestyle. Although peaceful relations appear to have existed initially, the construction of fencing, fouling of waterholes by stock, depletion of native animals and the desecration of sacred sites eventually led to a violent reaction against the settlers. Invariably the Aboriginal people fared worse in these clashes, and at least three large-scale massacres are known to have taken place in one tribal territory alone. The traditional tribal lands of a number of Aboriginal groups were taken over by the pastoral industry and European diseases such as smallpox and measles also took a heavy toll. The loss of their land and the violence which ensued had a devastating effect on local Aboriginal people, in particular the Yaburara people, who were almost completely wiped out by the Flying Foam Massacre.

The survivors of the early years were encouraged to settle in "blacks' camps" on pastoral stations, and this helped many to maintain some form of contact with their traditional lands. The settlers and the Aborigines became dependent upon each other, with the pastoralists enjoying cheap labour and at the same time placating any unrest which may have arisen. As the hunting opportunities diminished, Aborigines worked for rations and later wages. The pearling industry also recruited many Aborigines to work as divers. With traditional lands overrun and their former lifestyle no longer possible, many of the inland people moved to the coast to take advantage of the relative security of European settlement.

Further disruptions occurred during the gold mining boom from the late 1880s, the 1946 Aboriginal stockmen's strike and the 1968 adoption of the pastoral awards which ensured equal wages for Aborigines but led to fewer being employed on stations. Urban migration was significantly boosted

as a result and lands are now occupied by people of mixed tribal origins. Fortunately the sacred traditions have been passed on to the newcomers, who exercise a broad custodial role over these lands.

In 2005 the Ngarluma and Yindjibarndi people were granted Native Title over lands in the Shire of Roebourne.

Aboriginal Use of Resources

Land use was influenced by a number of factors, particularly the availability of water. Following good rains groups spread far and wide, but as the number of water sources diminished movement was restricted to rivers and other permanent water holes.

To the early European settlers the Pilbara was a harsh and inhospitable environment. The traditional inhabitants, however, thrived on the natural resources, which they were able to find in plentiful quantities. Kangaroos, emus, goannas and echidnas were hunted, freshwater mussels collected from river pools and water holes, fish speared by men and shellfish collected by women and children. Various plants also constituted a significant part of the Aboriginal diet. Spinifex seeds, for example, were harvested and ground into flour.

A number of other local plants were also used for eating, medicinal purposes and the making of implements and weapons, including the wood from Wirewood (*Acacia coriacea*) which was used for spears and boomerangs. Edible seeds were gathered from Snakewood (*Acacia xiphophylla*) Kanji Bush (*A. pyrifolia*) (also used for gum), White Mangrove (*Avicennia marina*), and Sturt's Desert Pea (*Swainsona formosa*). Fruits included Rock Fig (*Ficus brachypoda*) and Wild Tomato (*Solanum species*). The wood from the River Gum (*Eucalyptus camaldulensis*) was used for making clubs and among its surface roots could be found edible grubs.

Aboriginal Site Protection

Although some of the earlier Aboriginal/European violence stemmed from destruction of sacred sites, the pastoral era posed a relatively minimal threat to site integrity. The large scale destruction



of sites which resulted from the 1960s iron ore boom prompted changes by way of the 1972 *Aboriginal Heritage Act*. However, during the 1970s documentation and protection of Aboriginal sites was carried out with little Aboriginal consultation.

The current more enlightened consultative approach has heralded a change from “protection of Aboriginal sites” to “Aboriginal protection of sites”.

It is important to recognise the significance of sites to Aboriginal people as well as their interest to non-Aboriginal people. In the case of this trail there has been close liaison with the Traditional Owners, the Ngarluma people. 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 used for habitation on a permanent or seasonal basis and include engravings, stone quarries, artefact scatters, a Talu site (species maintenance/increase 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.

Recent History

Early European History

In 1622 the Trial, an English East Indies Company vessel, was wrecked on the reef now known as Tryal Rocks, near the Montebello Islands. This is Australia's oldest known shipwreck. Dutch vessels also navigated the Northwest coast during the early to mid 1600s in association with the Dutch East India Company's spice trade. In 1628, DeWitt sailed along the coast in the Vianen from about Onslow to Cossack, naming the land on Dutch maps as 'De Witt's land'. Dutch explorers noted nothing of value in the region, similarly English navigator William Dampier, who recorded land along the Northwest coast in 1699, confirmed their views of a flat barren land with few safe anchorages and unfriendly inhabitants. Frenchman Nicholas Baudin visited the Northwest in 1801 on his vessel the Naturaliste, charting the islands of the Archipelago and naming Legendre and Delambre Islands.

The first Australian-based visits to the area were by Lieutenant Philip Parker King between 1818 and 1822, when he named his local anchorage 'Nickol Bay'. However, it was not until 1861 that an extensive survey of the area was made by Francis Thomas Gregory. Based at Nickol Bay, Gregory spent five months exploring much of the Pilbara and his enthusiastic reports of the region's pastoral potential marked a major turning point in the area's history.

Walter Padbury established the first pastoral enterprise in the North West, when he landed his stock near Cossack in May 1863, before moving them to the De Grey River area, along with his station manager Charles Nairn. In August of that year John Wellard settled at Andover Station and in the following March John and Emma Withnell arrived with their flock of sheep and cattle. Their single roomed hut at Ieramugado Pool, marked the humble beginnings of the town of Roebourne. Karratha Station was established in 1866 by Dr Baynton and Harry Whittall-Venn.

Karratha Station 1872



The township of Roebourne was proclaimed in 1866, and named in honour of Western Australia's first Surveyor General, John Septimus Roe. Cossack was gazetted in 1872 and established itself as a port for Roebourne and the centre of the North West pearl-shell industry. Cossack flourished for a number of years, but by the early 1900s the pearling industry had shifted to Broome, and with its harbour silted over, the town was all but deserted by 1910.

The pastoral industry flourished initially but then experienced fluctuating fortunes. Life in the area was difficult and disease, water shortage, cyclones, isolation and fickle markets caused great hardships. The discovery of copper at Whim Creek and gold near Roebourne in 1888 resulted in a boom period bringing in much new wealth to the area. However, with the decline of the Pilbara and Ashburton goldfields the area once again became dependent on the fortunes of the pastoral industry until the 1960s.

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 twin jetty infrastructure at East Intercourse Island and Parker Point 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 chosen as the location for the future 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'. The name Karratha originates from the indigenous word meaning "good country" or "soft earth".

Planning for the construction of Karratha began in 1968, construction commenced the following year

and 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. Further developments in the 2000s included Hillcrest Estate in Baynton and new subdivisions at Nickol West and Baynton West. Lots at newly developed Madigan Estate and Jingarri Estate became available in 2012. Planning has commenced for Mulataga, a whole new suburb of Karratha to the east of Bulgarra expected to yield up to 2000 dwellings.

In 2010, the Shire of Roebourne, in partnership with LandCorp and the State Government, launched the "Karratha: City of the North Plan". This is a roadmap for the transformation of Karratha from a resource town to a regional city of 50,000 people. Substantial new community facilities such as the Pam Buchanan Family Centre, Frank Butler Community Centre, the Youth Shed, Cattrall Park Redevelopment and Bulgarra Sporting Precinct were completed in 2012 with the new Karratha Leisureplex completed in 2013. Major works on revitalizing the city centre commenced in 2012.

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 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. Further development of the gas reserves occurred during the 1990s which underpinned the development of a total of five gas trains at the Karratha Gas Plant followed in 2012 by the completion of Woodside's \$14b Pluto Gas Plant on the Burrup Peninsula. Further diversification has occurred with the development of ammonia and ammonium nitrate plants and a pilot project for biofuels. With such diversity of resources and industries there is certain to be a long and prosperous future for Karratha.

Natural Environment

Geology and Physiography of the Karratha Hills

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.

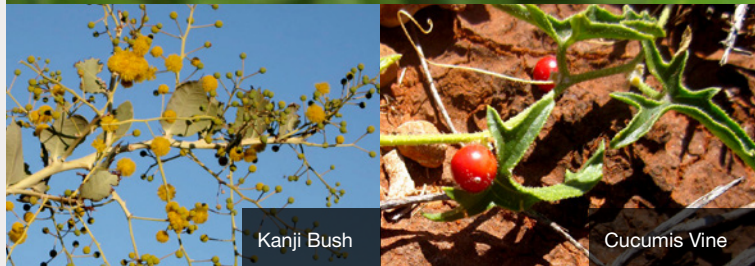
The hills are a remnant shaped by an extensive system of joints and faults, the relative resistance to erosion of the individual rock types, and depositional features, especially on the lower flanks and small valleys.

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.

The most conspicuous and abundant plants are the *Triodia* grasses, commonly referred to as spinifex. These grow in large clumps, with needle-like leaves projecting in all directions. There are three types of *Triodia* found along the trail. Gummy spinifex (*Triodia epactia*) with sticky resin on its leaves is most common on hill slopes, with some limestone spinifex (*Triodia wiseana*). Along the creek line one finds the taller hard spinifex (*Triodia angusta*). They are home and food sources for many animals including the Antechinus, Painted Firetail Finch, Spinifex Pigeon and other birds and rodents.

Spinifex ant workers are often seen moving along well defined trails from their nests to the spinifex clumps. In the sharp, tough leaves of the plant the ants are busy farming small sap-sucking insects, known as mealy-bugs. These excrete the sticky resin of the spinifex, which is then taken by the ants



Honey Hakea



Clerodendrum



Euro



Spinifex Pigeon

and used to glue together grains of sand for use in the construction of the tunnels of their nests. Large clumps of this resin, usually found at the base of spinifex clumps, were prized by local Aborigines who used it as glue for making weapons and tools. The seeds of the spinifex are harvested by ants and stored in piles beside their nests. Aborigines would grind the seed to make flour for 'damper'.

Caustic Bush (*G. pyramidalis*) can be found on the rocky slopes. It is advisable not to touch this plant as its sap and the resin exuded by the young fruit causes acute irritation. Also to be seen are the hardy, blue-grey coloured Kanji Bush (*Acacia pyrifolia*) which has an edible white gum called kardanggu and seeds which can be eaten straight from the tree.

Plants, like animals, need protection against their competitors and against heat and wind. A common defense mechanism of many plants on the rocky slopes is a complete covering of felt-like fur on their leaves. This insulates the plant from the drying wind and intense sun. The younger more succulent leaves close up, preventing water loss by minimising surface area. The Woolly Corchorus (*Corchorus walcotti*) with its bright yellow flowers and woolly leaves is one plant which exhibits both these features. As well as a furry coat, the deep purple flowered Solanum or Wild Tomato has long, sharp spines to guard against grazing animals, and the Triumphetta (*T. appendiculata*) protects its seeds with a very spiny case.

The Caper Bush (*Capparis spinosa*) is a small shrub with beautiful white flowers which last only for a night, falling as the sun comes up. Its ripe fruit is good food but the seeds are very bitter and not recommended eating. The rocks are also covered with numerous creepers (many of which die off in the hot weather) including Cucumis (*Cucumis maderaspatanus*) and the pure white, fringed feather like flower of (*Trichosanthes*

cucumerina). The Snake Vine (*Tinospora smilacina*), which covers rocks and climbs in bushes and trees, was used by Aborigines as twine and also wound around the belly to alleviate stomach ache.

The small clustered grey-green leaves and the cork like bark of the Pilbara 'pan-tropical' tree distinguishes the Terminalia (*T. canescens*), and is a remnant of a time when the Pilbara was tropical in climate. It grows best in the creek lines, (an excellent example is in the valley at site 4.)

Besides Triodia, other native grasses are important for animals on the hill slopes. These usually grow in more sheltered areas where some rain is able to penetrate.

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 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 the shrubs and trees of the valleys 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 Short-beaked Echidna or Spiny Anteater is another common animal of this region but is most unusual because, like the Platypus (the only other monotreme or egg-laying mammal) it lacks nipples and feeds its young with milk that oozes through pores in the mother's pouch. The Echidna feeds on ants and termites, using its long nose to probe into nests and tunnels, and its long sticky, saliva coated tongue ensures an instant meal. Its coat is covered with long spines and if disturbed the Echidna will roll into a ball of radiating spines. Though not often seen, look for its distinctive cylindrical droppings, the bulk of which are formed by soil and nest material ingested along with the ants.

Two very small but interesting mammals include the Little Red Antechinus or Spinifex Antechinus and the Pebble Mound Mouse. The former is unique to the Pilbara. It is an inquisitive little rodent-like creature found among the spinifex tussocks. It is largely nocturnal and can sometimes be seen late in the afternoon. The Pebble Mound Mouse is even less likely to be seen but its distinctive home, a large, relatively flat mound of pebbles (up to 1.5m in diameter), is a more common sight. Each pebble is carefully placed by the mouse around the entrance to its burrow providing insulation and moisture.

The Ring-tailed Dragon hunts insects during the day and relies on its concealing colours for survival. Being cold-blooded it depends on the heat of the sun, exposing its body as fully as possible toward the sun in early morning and will often press its body close to surrounding rocks for warmth. As the day heats up, the dragon will change its posture, face the sun, so as to present the smallest possible area, and hold its head up high so that its light coloured belly reflects the sun's rays.

The Perentie, at up to two metres long, is the largest goanna in Australia, and has powerfully built limbs and a long muscular tail. Its diet of small mammals, birds and reptiles provides it with much of the moisture it needs.

The Spinifex Pigeon is easily recognised by its rust-red crown, tall pointed crest and the bright red ring

Pebble-mound Mouse



Echidna



Perentie

around its eye. It is a seed-eating bird which mates when seed is plentiful, performing a colourful bowing courtship display. The Painted Firetail Finch is a relatively shy bird which inhabits the rocky spinifex slopes and prefers to nest in the spinifex hummocks rather than in trees, as does the more common Zebra Finch found on the plains. Large flocks of raucous Little Corellas can be seen, especially at the time of year when the Acacia pods are ripe. Birds of prey to be seen include the Brahminy Kite, Nankeen Kestrel and Brown Falcon.

Snails also inhabit this area and their shells can be seen along the trail. These are an especially arid adapted species and suddenly appear after the rains to feed and mate. As the country dries up again many die, but others manage to burrow into the damp ground where, like many species of desert frog, they are protected in a cocoon from the harsh sun and dehydrating winds. Rain may not occur again for months, even years, but the species in this way are able to survive.

The Trail

The Yaburara Heritage Trail is a grade 4 walk and is recommended for experienced bushwalkers.

The parking area at Karratha Road outside the Karratha Visitor Centre provides space for caravans and other large vehicles. A parking area for smaller vehicles has been provided at the top of the hill near the water tanks.

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 at the lookout gives directions and distances to many relevant points in the district. The lookout also commemorates the Dampier Salt Shakers – a local barrow push marathon team, which became well known throughout the Pilbara and Eastern states during the 1980's. Dampier Salt Shakers trained along the hill ridge, thus initiating the trail and were instrumental in its formal development.



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.

Part of the reason for this richness is the region's profusion of boulders suitable for rock engravings. The dolerite dykes have been eroded and the soil stripped to leave behind piles of weathered boulders. The unweathered rock is blue grey, but as the minerals weather the rocks turn pale buff brown and in the more weathered outer zones a rich dark reddish brown. Deposition of the black 'desert varnish' may further enhance the range of hues available. Even the weathered skin of the rock is very hard, so if the surface is chipped back, the mark is very visible and durable.

These properties were utilised by the Indigenous inhabitants, who used other pieces of dolerite or chert to chisel designs into the rock. Although they cannot be dated directly, it is estimated by association with other datable features that some of these petroglyphs are around 5,000 to 6,000 years old, and may be much older.

Please respect the Indigenous engravings (petroglyphs) - do not deface or stand on them.

4 Valley and Creek Line

Along these creek lines there are two significant trees - the Bloodwood and the Coolibah. The smaller of the two, the Bloodwood (*Corymbia hamerslyana*), 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.

Also in this creek line and in other areas of tall vegetation, especially in narrow valley areas, can be found the large, strong, golden labyrinth of the nonvenomous Golden Orb Weaver Spider. The docile pale-coloured female spider can often be seen upside down in its web. The male in comparison is small and inconspicuous. Its food refuse is deposited in a long string at the top of the web. Please do not break the webs but step carefully beneath or around them.

Note also the pink limey concrete-like material in the creek bed which is a deposit of dissolved calcareous materials washed down from higher levels. They cement the creek gravels, forming the banks of pools and flow stone in between.

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 throughout 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 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.

There are close parallels between these rituals and various traditional Christian ceremonies, such as the annual fishing fleet blessing and prayers and ceremonies for rain or good harvests.

An important Talu site related to the Giant Fruit Eating Bat or Flying Fox (or 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 (Petroglyphs), Quarry and Artefacts Scatter

The prominent dolerite ridge on the left (west) side contains a number of excellent 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. This lookout commemorates the role the Rotary Club of Karratha played in the development of this trail.

An excellent example of a kangaroo petroglyph 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.

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. After rains the fresh water rock pools ensured that this would have been a favourite camping area.

10 Aboriginal Quarry & 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.

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 and demonstrates the well balanced nature of the Aboriginal diet, despite the apparent harshness and aridity of the district.

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.

The Karratha Leisureplex marks the end of the Yaburara Heritage Trail.