



Traditional Ecological Knowledge of Nyangumarta Warrarn Indigenous Protected Area







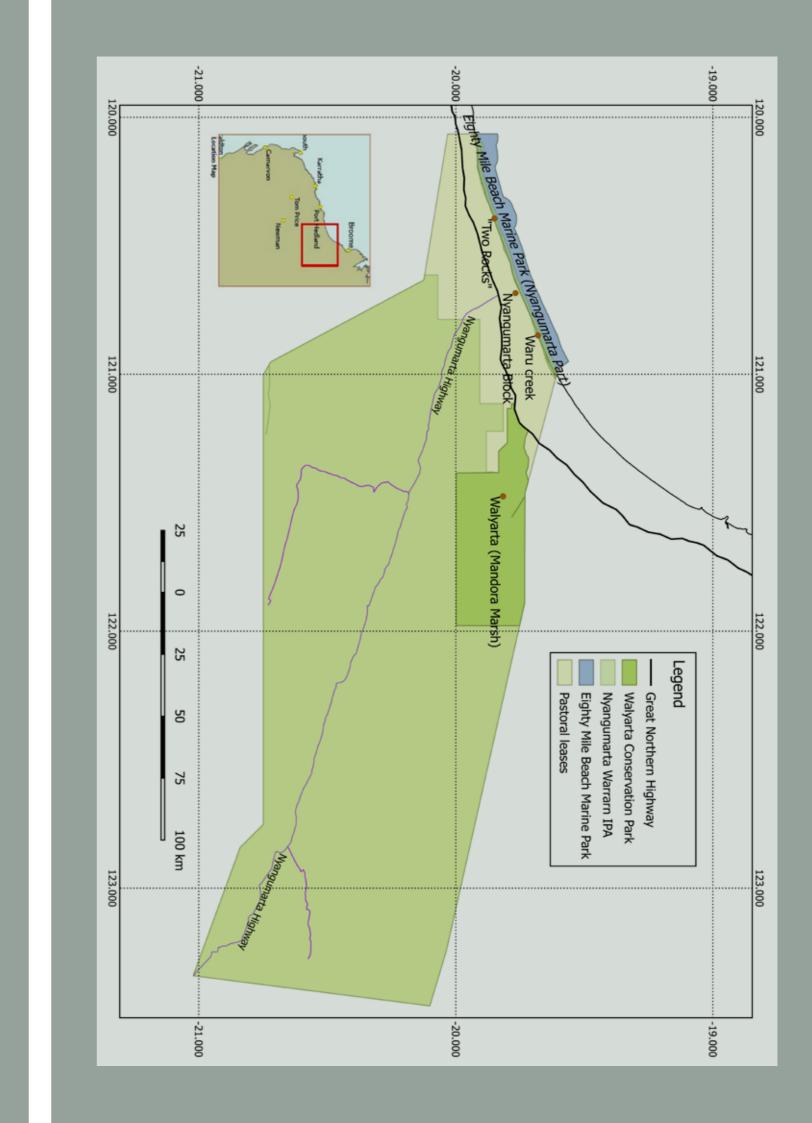












Warning: This document may contain pictures or names of people who have since passed away.

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The traditional ecological knowledge contained in this publication was recorded by Vicki Long, ethno-botanist (Vicki Long & Associates), with the assistance of Brian Geytenbeek, linguist.

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Movember 2016

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INTRODUCTION

Background

The Nyangumarta Warrarn Indigenous Protected Area (IPA), dedicated by the Nyangumarta Traditional Owners and officially recognised by the Commonwealth of Australia on the 23rd of April 2015, is a large area of 28,420 km² located in North Western Australia. The biodiversity and cultural resources of the many habitats within the IPA are managed by the Nyangumarta Rangers. In an effort to enable the Traditional Owners to meet their cultural obligations and aspirations toward their Country, the Yamatji Marlpa Aboriginal Corporation (YMAC) has given support to the Nyangumarta land management program, including training of Rangers.

Traditional culture is passed down through generations





orally, by demonstration and through life experience. More formal Ranger training programs involving the Elders strengthens knowledge and builds on their capacity to manage their lands effectively. The Nyangumarta community considered it would be valuable to record the Elders' traditional knowledge of the use of plants for medicine, food, ceremony, artefact and other purposes within the IPA. To achieve this, YMAC organised two ethno-botanical field surveys involving both the Elders and Rangers. These were conducted along the Nyangumarta Highway (Kidson Track) (2014) and within Walyarta (Mandora Marsh) and along the coast line (2015).

IPA Environment

The IPA is situated in the southern part of the Canning Basin and encompasses a range of diverse habitats. It extends some 310 km inland to the east through the Great Sandy Desert from the coastline of the Indian Ocean at Eighty Mile Beach. The Nyangumarta Highway (formerly known as both Kidson Track and Wapet Road) is the only east-west access dissecting the IPA area. Walyarta (Mandora Marsh) sits on the northern boundary. Rainfall in the IPA is unreliable, both within a year and between years. Humidity is low and temperatures range from warm to hot year round inducing high evaporation rates (Burbidge and McKenzie 1983). These are significant factors influencing the state of the wetland and the ecology of the area.

Nyangumarta Highway (Kidson Track)

The Nyangumarta Highway (Kidson Track) lies within the IPA in the south-west portion of the Great Sandy Desert. The section of the Nyangumarta Highway (Kidson track) travelled for the ethno-botanical survey consists of an almost level sandplain, gradually rising up from the coast, with very occasional low linear dunes and gravelly rises. Pindan sand plain occurs within 100 km from the North West Coastal Highway. Some minor drainage depressions occur but there are no organized drainage features.



Walyarta and Eighty Mile Beach

A Ramsar wetland site, known as the Eighty Mile Beach Ramsar site and includes Eighty Mile Beach extending from Cape Keraudren to Cape Missiessy and the Mandora Salt Marsh (DEC 2009). Eighty Mile Beach lies within the Dampierland bioregion within the Northern Province, while Walyarta in Mandora Marsh is within the Great Sandy Desert bioregion, Eremaean Province (Beard 1990). Eighty Mile Beach is classified as one of only five arid coasts in the world (V&C Semeniuk Research Group 2008). The beach is characterized by an almost

uninterrupted extensive stretch of intertidal sand and



mud flats paralleled on the landward side by a quartz sand beach and coastal dunes. A few tidal creeks lined with White Mangrove (*Avicennia marina*) occur to the south (DEC 2009).

Mandora Marsh, which occurs just east and at the northern end of Eighty Mile Beach, is comprised of a series of floodplain depressions with a linear dune system. It contains two large seasonal wetlands, one of which is known as Lake Walyarta, the other East Lake, and a series of permanent mound springs (DEC 2009). The seasonal wetlands rely on direct precipitation and local run off following heavy rainfall (DEC 2009). When inundated with water, the lake is fresh but alkaline. As water evaporates it becomes increasingly saline, eventually forming a dry salt pan (Graham 1999).







Vegetation

Botanically, the survey area lies within the Canning Botanical District, although within 100 km from the coastline there is a gradual transition into the Northern Province (Beard 1990).

Vegetation along the Nyangumarta Highway (Kidson Track) is broadly described as *Acacia* ssp (*A. ancistrocarpa*, *A. monticola*, *A, tumida*, *A. colei*) and Grevillea ssp (*Grevillea refracta*, *G. wickhamii*) tall open shrubland to patchy open tall scrub over *Acacia hilliana*, *A. stellaticeps* with occasional *Jacksonia aculeata* scattered to open low shrubland over *Triodia* ssp hummock grassland (including *Triodia epactia*, *T. pungens and T. schinzii*) with occasional tussock grass *Eragrostis eriopoda*. There are scattered *Corymbia* trees with *Erythrophloeum chlorostachys*, *Owenia reticulata*, *Codonocarpus cotinifolia* (VLA 2014).

The Eighty Mile beach dunes immediately paralleling

the coastline, support beach spinifex (*Spinifex longifolius*) and scattered shrubs of *Acacia ampliceps, A. bivenosa*. The area immediately landward of the beach dune is flat, degraded and dominated by the introduced buffel grass (*Cenchrus ciliaris*) (VLA 2015).

Walyarta in Mandora Marsh supports scattered to open low samphire shrubland with scattered small *Melaleuca alsophila* trees. Between Walyarta and the other large wetland lake, East Lake, is a permanent creek of saline water, lined with White Mangrove *(Avicennia marina)*, known as Salt Creek. Included in the survey area and to the south of Walyarta are a number of fresh water springs supporting tall Paperbark *(Melaleuca ssp)* forests. These springs are raised peat bogs consisting of a central mound of saturated peat 2-3 m in elevation and surrounded by a moat, generally with water in it (DEC 2000)

Language

A comparison of the language names given during the 2014 and 2015 ethno-botanical surveys against those listed in the Nyangumarta – English Dictionary, English – Nyangumarta Wordlist and Topical Wordlists (2008) (the Dictionary 2008) shows there are many discrepancies. Brian Geytenbeek, a linguist who has worked with the Nyangumarta people translating their language since 1972 and the chief contributor to the Dictionary (2008) explains the potential reason for this. Apparently, in the mid 1800's when Europeans arrived and took over vast areas of land for pastoralism, the Nyangumarta people moved slowly westward out of their traditional lands toward the coast and other nearby lands. They adopted words from the people on whose land they settled, and no doubt had previously incorporated some words from language groups who shared borders with their own. Eventually, two predominant groupings, each with their own dialect, emerged: the "Coastal Nyangumarta" and the "Inland Nyangumarta".

According to Geytenbeek, the "Coastal Nyangumarta" and the "Inland Nyangumarta" share 90% of their vocabularies but there can still be misunderstanding when following speech about unfamiliar things. The Dictionary (2008) is presented primarily as a Dictionary of words commonly spoken by the "Inland Nyangumarta". Many of the words therein are shared by the Coastal people, and where there is any difference, the Coastal word is also given. Geytenbeek also includes Ngarla and Nyamal words in the Dictionary as these have infiltrated into Nyangumarta language

In order to ensure correct language names against plants discussed, a meeting with the Elders and Brian Geytenbeek was arranged at Bidyadanga in August 2016. The purpose of this meeting was specifically to review each plant, the name it had been given and the correct spelling for that name. The names approved in that meeting have been used in this booklet.







Participants

Participant	2014 ¹	2015 ²	2016³
Elders			
Winnie Coppin (WC)	Х		Х
Nyaparu (Margaret) Rose (MR)	Х		Х
Martina Badal (MB)	Х		Х
Rosie Munro (RM)	Х		Х
Susie Gilbert (SG)		Х	Х
Teddy Hunter (TD)	Х	Х	Х
Darcy Hunter (DH)		Х	Х
Rangers			
Lynette Wilridge (LW)	X	X	Х
lan Hunter (IH)	X		
Augustine Badal (AB)	X	X	
Lindsay Hunter (LH)	X	X	Х
Aquinas Nardi (AN)	X		×
Nathan Hunter (NH)	Х	Х	
Roberta Hunter (RH)	Х		
Kerri Hunter (KH)	Х		
Vallerina Aspro (VA)	Х		
Charmaine Wright (CW)		Х	Х
Ishmael Hunter (IH)			Х
Other			
Tamara Murdock (YMAC)	Х		
José Kalpers (YMAC)		Х	
Alistair Vaughn (YMAC)	Х	Х	
Todd Norwell (YMAC)			Х
Jill Hayman (Aurora	.,		
Project)	Х		
Volker Mischker (TASWA	X	Х	
Training Consultants)	^		
Mamoru Matsuki (VLA)	Х		
Vicki Long (VLA)	Х	X	Х
Brian Geytenbeek (linguist)			Х
Pip Short (Greening		X	
Australia) Walyarta only		-	
Shane Sercombe (2 Mile Contracting) Walyarta only		X	

- 1. Nyangumarta Highway (Kidson Track) Survey 2014
- 2. Walyarta Coastal Survey 2015
- 3. Language Meeting 2016
- 4. Lynette Wilridge was the language recorder for both field surveys.

nts

This Book	klet
This booklet	t presents each of the plants discussed during
the two sur	veys and the August 2 nd 2016 meeting.
Information	includes the language name as agreed by all
present in th	ne meeting August 2 nd 2016 (also included is
name given	in the Dictionary (2008)), the scientific and
common na	ames, traditional use of the plant – medicine,
food, cerem	ony, artefact, other – and any relevant stories,
photos, a de	escription of the plant, where the plant was
found and a	scan of the plant for future identification
purposes.	
	oose of this booklet, two very broad ve been used: "inland" to correspond to the
	ta Highway (Kidson Track) surveyed in 2014

habitats have been used: "inland" to correspond to the Nyangumarta Highway (Kidson Track) surveyed in 2014 and "coastal" which corresponds to the Walyarta and coastal survey conducted in 2015. Some plants were discussed during both surveys and these have been placed under a third heading "Species discussed both 2014 (inland) and 2015 (Walyarta / coastal)"

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JUKURTANY

Scientific Name: Corymbia zygophylla

Family: *Myrtaceae*

Common Name: Bloodwood

Nyangumarta Dictionary (2008): No word specifically for C. zygophylla

BT

C

Traditional Uses: We use the nuts as beads to make our hair pretty.

Like the island people use flowers to make the hair pretty, we use the nuts in our hair.

We make a bush clip. You thread the stem through the nut and it becomes a hair clip. You have to make a hole in the nut. It's hard to make the hole (in the nut).

We also use the nuts and make a necklace. We do this for decoration for ceremonies.

This tree is good for bush honey - sugar bag. Bush honey was a favourite when we were kids.

Contributors: MB, RM, NR, LW

Plant Description: Small tree (3m) but can be to 9m high with rough pale to dark grey-brown bark. Leaves don't have stems and are opposite each other. They are dull green and roughly spear shaped. Flowers creamy. Fruits are roundish, cup shaped 2 x 3 cm. Seed red-brown with winged tip.

Contributors: RM, AB, AN

Habitat/Occurrence: This low tree did not occur commonly along the Nyangumarta Highway (Kidson track) . It was recorded as scattered individuals or in very small populations sometimes over Acacia shrubs or with Ngalyanta (Grevillea wickhamii) on red pindan sand plains with Triodia epactia/T. schinzii hummock grassland.





Rosie Munroe threading bush clips in Martina Badal's hair.



Martina Badal with bush clips in her hair.



Augustine Radal Lindsay Hunter and Aguinas Nardi with small lukurtany tree

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 JUKURTANY - *Corymbia zygophylla*



YALAKURRA

Scientific Name: Corymbia? aspera (sterile)

Family: *Myrtaceae*

Common Name: Brittle Range Gum

Nyangumarta Dictionary (2008): Jarturtu.

BT

0

Traditional Uses: We collect the dried bark and burn it till it becomes ash - purnta. We then mix the ash with chewing tobacco. It makes the effect of the tobacco more strong!

Contributors: MB, RH, RM, NR

We cut a big slab out of the tree, dry it then shape it to make a crib for the baby.

Or it can be for carrying anything.

See the termite trail (under the tree) – we break open the tunnel and see its full of little white eggs – yandu (not listed Nyangumarta Dictionary) – we eat the eggs.

But first we have to yandi the eggs to get rid of the sand.

Contributors: IH, AB, MB, LH

Plant Description: Small tree with smooth white bark but sometimes scaly and rough bark at base of trunk. Leaves are opposite, have no stems and are roundish tapering to a point and feel rough. It was sterile at the time of the survey and therefore a positive identification could not be made.

Habitat/Occurrence: Yalakurtu was not commonly seen along the length of the Nyangumarta Highway (Kidson track) surveyed, but occurred generally in small populations

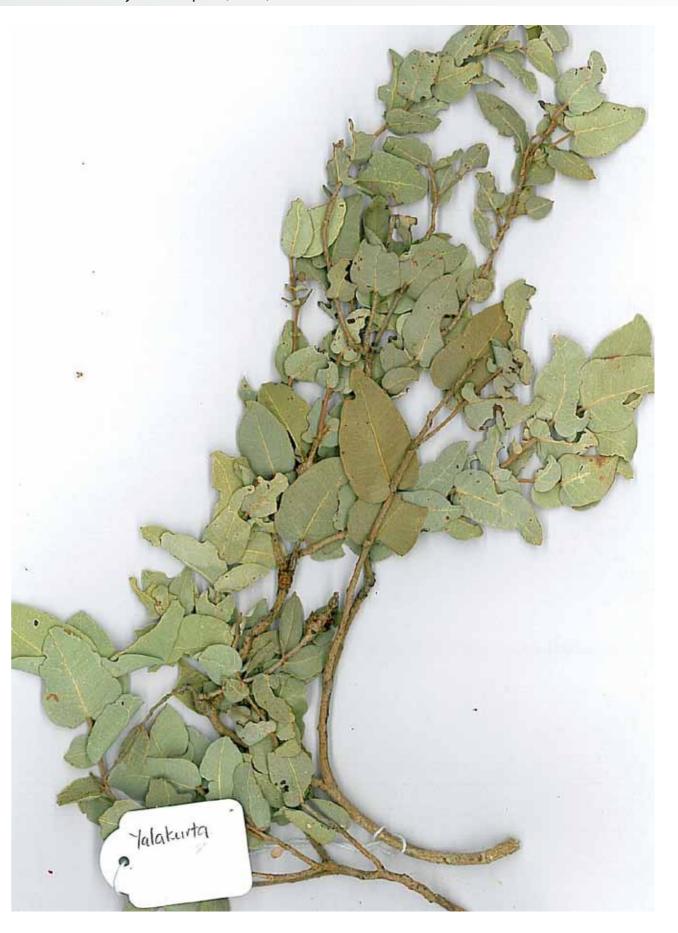


'alakurra with hollow in which there were budgerigars.



Aquinas Nardi checking out budgie hollow

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 YALAKURRA - Corymbia ? aspera (sterile)



Family: *Myrtaceae*

Common Name: Desert Bloodwood

Nyangumarta Dictionary (2008): Punara is listed for Eucalyptus centralis - now changed to C. opaca.

BM

BT

0

Traditional Uses: This is a medicine tree. We get the red sap – kilwa (Nyangumarta Dictionary – kilwa) – you usually find this sap somewhere oozing out of the bark or branches.

We boil up the kilwa – sap - in water – and you can add a bit of sugar – because it's a bit bitter. Then wait till it cools. Then you drink it.

But you must eat food first – you don't eat it on an empty stomach.

It cleans out the system.

Contributors: AB, IH, MB, RM

There are insects (case moths) on this tree. Inside that stick covering there is a grub which we eat. We prefer to cook it.

Contributors: LW, RM

We use the young leave as a whistle

Contributors: NH, AN

Plant Description: Small to medium tree with rough, tessellated (blocky) bark on trunk, light greybrown flaking off to orange-red beneath. Adult leaves are alternate 10-15 cm long x 2-3 cm wide. No flowers or nuts seen. Plant is nominally identified as *Corymbia opaca*.

Habitat/Occurrence: *C. opaca* favors red sandy and loamy soils and is found throughout inland northwestern Australia. This tree was not widespread. It occurred occasionally from approximately 180 km inland along the Nyangumarta Highway (Kidson track).



Lynette Wilridge with kilwa from Juluku tree



Kilwa oozing from bark



Case moth in lower branches of Juluka tree

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 JULUKU - *Corymbia?opaca (sterile)*



JUNYJU

Scientific Name: *Erythrophleum chlorostachys*

Family: *Fabaceae*

Common Name: Ironwood **Local Name:** "Poison Tree"

Nyangumarta Dictionary (2008): Not listed

0

We call this poison tree because if animals eat it they will die

Traditional Uses: It's poisonous so we don't have any use for it.

Contributors: RM, MB

Plant Description: Shrub or tree to 15 m high with dark grey fissured thick corky bark. Leaves are roundish and vary in size from 18-85 x 12 x 80 mm. Small white or yellowish flowers are clustered in a cylindrical spike. The seed pod can be brown or black and are thick, woody and oblong, 110-200 x 25-45 mm. Seeds are round and brown.

Habitat/Occurrence: Erythrophleum chlorostachys was not frequent along Nyangumnarta Highway (Kidson track). Individual trees or small populations of less than 10 trees were seen only occasionally. This tree is widespread from the Pilbara to the northern tip of the Kimberley and occurs on a variety of soils.



lunyju flower



Leaves and seed pod of Junyju

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 JUNYJU - *Erythrophleum chlorostachys*



MIRNTIRRJINA

Scientific Name: Persoonia falcata

Family: *Protaceae*

Common Name: Geebung **Local Name:** "Bush Mango"

Nyangumarta Dictionary (2008): Not listed

BT

Traditional Uses: We eat the fruit of this tree. It's more like a bush plum than a mango. It only has one seed and you eat the flesh around it. No need to cook it, you can eat it raw.

Contributors: IH

There are insects (case moths) on this tree. Inside that stick covering there is a grub which we eat. We prefer to cook it.

Plant Description: Small shrub or tree to 3-5 m high with rough, grey flaky bark. Leaves are smooth, leathery, mostly narrow 10-20 cm long x 0.5-2.5cm wide dull green, distinct mid rib. Flowers yellow, slightly tubular in dense clusters. Fruit smooth, roundish fleshy with small beaked tip. Greeny-yellow when ripe.

Habitat/Occurrence: Persoonia falcata was only seen once along the Nyangumarta Highway surveyed. This is the very southern most extent of its range, being more common north of Broome.



lan Hunter in front of Mirntirrjina



Mirntirrjina flower (Photo courtesy of Volker Mischker)



Mirntirrjina fruit (Photo courtesy of Volker Mischker)

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 MIRNTIRRJINA - *Persoonia falcata*



NGALYANTA

Scientific Name: *Grevillea wickhamii*

Family: Proteaceae

Common Name: Wickhams Grevillea **Nyangumarta Dictionary (2008):** Ngalyanta

BT

Traditional Uses: We don't use the tree – ngalyanta - itself but we use the minta – sap (Nyangumarta Dictionary – minta) that comes out of the tree. We eat the minta when it is clear or white. It's a pretty flower to decorate the countryside.

Contributors: RM, LW

Plant Description: *Grevillea wickhamii:* Small slender tree to 2.5 m with grey-green/ blue green prickly holly like leaves. Leaves and stems with fine silty hairs. Leaves 3-7 cm x 3-6 cm. Flowers deep red with yellow, showy often hanging down. Fruit is a smooth broadly oblong woody pod 1-2 cm long, light brown when ripe

Habitat/Occurrence: This small tree was commonly found along the Nyangumarta Highway (Kidson track) on red pindan sand plains and on low gravelly rises in typical vegetation of *Triodia epactia/T. schinzii* hummock grassland with patchy Acacia (A. ancistrocarpa, A. monticola) and Grevillea (G. wickhamii, G. refracta) shrubland. It is generally fire tolerant and always grows with spinifex.



Ngalyanta flower (Photo Mamoru Matsuki)



Minta oozing from fork in tree.



wiinta ironi rigaiyanta

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 NGALYANTA - *Grevillea wickhamii*



PAJINAWANTI

Scientific Name: Grevillea refracta

Family: *Myrtaceae*

Common Name: Silver-leaf Grevillea

Nyangumarta Dictionary (2008): Kanparrjiparrji; kanparrji

BT

Α

Traditional Uses: Rosie thought this may be used for honey – but she wasn't sure. But birds like the flower.

Contributors: RM

We make murntu– spears - from this plant. (Nyangumarta Dictionary – murntu).

Contributors: AB, IH

Plant Description: Shrub or small tree 1.2-4 m tall. There is a covering of very dense fine hairs on all parts, including the flowers themselves. The narrow leaves look silvery because of these hairs - the lower surface being more pale than the darker green upper surface. Veins and the small sharp tip on the top of the leaves are both obvious. Flowers are orange or red and yellow, curled and hairy. The pod is thick walled, dark-brown/black 2.5-3 cm x 2-2.5 cm

Habitat/Occurrence: Pajinawanti was common along the Nyangumarta Highway (Kidson track) from about 50 km in from North West Coastal Highway.



Pajinawanti flower



Woody pods of Pajinawanti



Augustine Badal and Aquinas Nardi with Pajiniwanti shrub

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 PAJINAWANTI - *Grevillea refracta*



WIRLINY

Scientific Name: Grevillea pyramidalis

Family: Proteaceae

Common Name: Caustic Bush

Nyangumarta Dictionary (2008): Wirliny

C

Traditional Uses: You can burn your skin with the resin on the new seed pods to make a tattoo. Long ago they (the men) used to use the resin to burn scars across their chests and their wrists – for ceremony. We use it now for dying the skin or painting the skin yellow for ceremony. You scrape off the inside of the bark and you boil it up. That gives you the yellow dye. You then paint your body with it. Or you can chew up the bark. When you chew it you make the yellow dye. You then spit it on your body for dancing. But you only get the yellow dye from older trees – this tree (the one we discussed) it too young.

Contributors: IH, RM, MB

You can also burn the outside of the bark and use the ash to rub on your skin for ceremony.

Contributors: MB

Plant Description: Small tree generally 2-2.5m with deep corky fissured grey bark and silvery foliage in canopy. The deeply divided silvery leaves are up to 30 cm long x 5-10 mm wide with fine hairy covering – often widening towards the top. Clusters of pale yellow-cream flowers. Fruit is roundish, woody pods to 2.5cm long covered by a corrosive caustic sticky resinous substance.

Habitat/Occurrence: Grevillea pyramidalis was not frequent along Kidson track. Individual trees or small populations of less than 10 trees were seen only occasionally. This tree is widespread from the Pilbara to the northern tip of the Kimberley and occurs on a variety of soils.



lan Hunter, Martina Badal, Lindsay Hunter with Wirliny

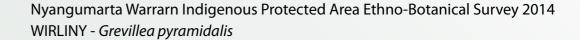


Yellow inner bark.



Wirliny flower







JUMPURR

Scientific Name: *Dolichandrone heterophylla*

Family: Bigoniaceae

Common Name: Lemonwood

Nyangumarta Dictionary (2008): Pungku-Pungku

C

Traditional Uses: We use this wood for corroboree. We carve the wood and make a shield out of it for ceremony dancing. We cut the wood from the trunk or a branch. We paint the shield with red ochre. It's a light wood. The flower smells nice.

Contributors: RM, IH

You can also make boomerangs from the branches. I make boomerangs from this tree.

Contributors: AB

Plant Description: A small tree or shrub, bark pale grey. Leaves are crowded in tight clusters on branchelets. Leaves are divided into 3-13 leaflets. The flowers are trumpet like, white and fragrant. It has a long, thin seed pod, 15-25 cm long, which is slightly curved.

Habitat/Occurrence: This small tree was occasional only for the first 60 km along Nyangumarta Highway (Kidson track). It is widespread in occurrence from Karratha to the northern Kimberley, generally favouring red sandy soils, sand dunes and plains.





Jumpurr tree



KUMPALY

Scientific Name: Hakea lorea subsp lorea and Hakea macrocarpa*

Family: *Protaceae*

Common Name: Honey hakea (both plants)

Nyangumarta Dictionary (2008) Names: Kumpaly; Watamunga (H. lorea).

BM BT

*Note: two different Hakea species were collected but both had the same information.

Traditional Uses: When the flowers on this tree are ripe they have lots of walaja - nectar. We suck the nectar from the flowers. Its like honey walaja. It's an important plant to give us energy in the bush.

Contributors: IH

We also make a sweet drink from this. We put the flower in water and it makes the water sweet to drink.

Contributors: RM, LH

We use kumpaly for bush medicine. You scrape off the outer bark and burn it till its black. You use the ash for sores. You can also use the ash on a babies forehead if it has a temperature – or for anyone with a temperature.

Contributors: NR

If a baby cries and cries a lot you rub the ash down on its stomach. This will stop the baby crying.

Contributors: LH

Habitat/Occurrence: Kumpaly honey hakea shrubs are not commonly occurring along the Nyangumarta Highway (Kidson track). They generally appeared as individual plants on the pindan sand plain.

Plant Description: Hakea macrocarpa: Tall but sometimes straggly tree to 3 m. Leaves are long and narrow (not needlelike as in *H.lorea*), often curved with obvious veins, 8-30 cm long. Creamy-yellow flowers open from pale green hairy buds. Pods are woody and rough, to 3.5 cm long.

Hakea lorea subsp lorea: Small often twisted tree to 2.5 m and distinctive corky bark. It has smooth sharp tipped cylindrical leaves to 30 cm long which are dark green and shiny. It has very showy bright yellow flowers up to 12 cm long which eventually produce woody pods, slightly curved to 3.5 cm long.



lan Hunter with Kumpaly (Hakea lorea subsp lorea)



Kumpaly – Hakea macrocarpa



Kumpaly flower (Hakea lorea subsp lorea

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 KUMPALY - *Hakea lorea subsp lorea*



JIMPIRRINY

Scientific Name: Codonocarpus cotinifolius Common Name: Desert Poplar, Native Poplar

Nyangumarta Dictionary (2008): Jimpirriny; karntarangu

BM BT

Traditional Uses: We use the leaf and the bark. We boil the leaf and the bark up in water. You then cool the water and use it to wash the body for sores and for any itches. It stings. It stings away the itches.

(Winnie said she did not like using it).

Contributors: WC

We find pirna - witchetty grubs in the roots of this tree.

You dig out the roots.

But the trees must be very dry - the pirna are only found in the dry roots of this tree. The green roots are too hard.

Contributors: RM

Plant Description: Tall spindly often Christmas tree-shaped tree with pale grey or greyish pink smooth bark and open branches. Leaves are more or less oval shaped tapering into a stem. Has both male and female flowers (see photo above) which produce a bell-shaped fruit (see photo above).

Habitat/Occurrence: This tree occurred occasionally along the length of the Nyangumarta Highway Kidson track surveyed. Red pindan sand plain with *Triodia epactia*, *T. schinzii*, *T. pungens* with patchy Acacia and Grevillea.



Female flower and bell shaped fruit



Rosie, Ian, Augustine (with Alistair) viewing Jimpirriny



Pirna – witchetty grubs in roots. (Photo: Volker Mischker)

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 JIMPIRRINY - *Codonocarpus cotinifolius*



YURTURL¹

Scientific Name: *Melaleuca lasiandra*

Family: *Myrtaceae*

Common Name: Locally "Salt Tree"

Nyangumarta Dictionary (2008): Yurturl

0

1. Note: Although this species was also recorded during the 2015 survey, it has been retained here because it was considered by the group to be "unusual" because it was "out of place" here.

Traditional Uses: We wanted to show you this tree. It's interesting to us because this group of trees are the only ones we know of that are so far from where they occur on the coast (our block).

Contributors: IH, AB

Plant Description: Shrub or small tree 1.5-3 m high with dense fine silvery hairs on leaves and stems. Bark papery, whitish. Leaves small 1-4 cm x 1.5-6 mm, with 3 main veins and pointed at the end. Flowers greeny-yellow or cream, sometimes tinges with red.

Habitat/Occurrence: Usually in damp habitats but also on sand plains. This small grove of low trees was in a low area in a swale with more loamy sands which would retain more moisture than other areas. This was the only record of this species along the length of the track surveyed.



lan Hunter with Yuturl Salt Tree along Nyangumarta Highway (Kidson Track)



Yuturl. Photography by C.P. Campbell. Image used with the permission of the Western Australian Herbarium, Department of Parks and Wildlife (https://florabase.dpaw.wa.gov.au/help/copyright). Accessed on Wednesday, 6 April 2016.

28

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 YUTURL - *Melaleuca lasiandra*



KARLAYIN

Scientific Name: *Acacia drepanocarpa (variant)*

Family: Fabaceae
Common Name:

Nyangumarta Dictionary (2008): Not listed

BT

Traditional Uses: We eat the seeds of this plant. We collect the seeds, then we cook (roast) them in the coals of the fire, then we grind them up and eat them. Yes we eat them ground up.

Contributors: MB, LW

We also find witchetty grubs-pirna - in the roots of this plant.

Plant Description: Open branched, many stemmed shiny leaves shrub 1-3 m tall. Bark is smooth and grey. The branches of this shrub have fine yellowy-green resin "ribs" along the branches. Leaves are narrow 5-7 cm long, erect, and shallowly curved with 3-8 widely spaces, raised and resinous nerves running along them. Flower spikes are bright golden. Pods are flat, narrowed towards base and spring open from the top.

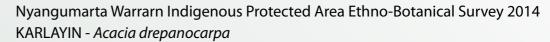
Habitat/Occurrence: Karlayin is one of the frequently occurring shrubs on the sandplains with Pulpi, (Acacia ancistrocarpa), Lirringkin (A. colei) especially from approximately 50 km in along the Nyangumarta Highway (Kidson track).



Vallerina Aspro and Kerri Hunter with Karlavin shrub



Karlayın (Mamoru Matsuki,





KAWARR

Scientific Name: Acacia monticola

Family: Fabaceae

Common Name: Curly Bark Wattle

Nyangumarta Dictionary (2008): Not listed

BM

Traditional Uses: We use the smoke to make medicine. We cut the branches, then we put them on the coals. You don't let them burn, you just heat them up and you will smell a lovely smell from the oil (resin) in the leaves.

You put the branches on the fire but don't let them burn, just singe them. Then put out with your fingers any bits that have caught on fire. Make sure the leaves are just warm and you put them on any aches, joint pain, arthritis or muscle pain.

Contributors: RM, NR, MB, IH

The ladies later demonstrated this at the camp fire. Lynette Hunter warmed the leaves and put them on Rosie Munroe's aching back. There was a mild warm aroma that came from the heated leaves. Rosie said it did help her back pain.

Plant Description: Sticky shrub or can be a small tree with a spreading open branched crown. Shrubs can be multi stemmed. Stems have distinguishing minni-ritchie bark (curling peeling red-brown bark). Leaves are 1-3 cm x 5mm-1cm wide, roundish, not quite symmetrical with 3-5 main veins. Flowers are round shaped, light yellow. Seed pods are sticky with small spreading hairs. They are flat but raised over each seed.

Habitat/Occurrence: On sand plains and more dense in swales with other Acacia species, more frequently occurring from 50 km in from North-West Coastal Highway.



lan Hunter with young regenerating kawarr on side of Kidson track.



Kawarr seed pods

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 KAWARR - *Acacia monticola*



PALMANGU

Scientific Name: Acacia melleodora

Family: *Fabaceae*

Common Name: Waxy Wattle

Nyangumarta Dictionary (2008) Name: Lungkun

BM

C

Traditional Uses: We use the smoke for smoking ceremony. We put the branches and leaves on the fire till they smoke, then we use it to keep away the evil spirits.

You can use it in your house or anywhere.

We use it to smoke new babies to keep them free of evil spirits. Or it can also be used to keep adults free from evil spirits too.

The smoke is also used for bush medicine. The smoke and smoked leaves are used for joint and muscle pain, for sore knees, bad back, arthritis, or any sore joint. You just breathe the smoke in.

Contributors: RM, MB, IH, LH

Plant Description: Non hairy, resinous "V" shaped shrub 1-3 m high usually with many stems which have some rough bark at the base of old stems but are otherwise smooth, light grey. New shoots are bright green and shiny – they may be sticky, older leaves turn grey green due to dried resin. Leaves are elongated oval shape 2.5-4 cm x 5-10 mm wide. They have 2-3 main veins linked with a netlike pattern of smaller nerves. There is often a whitish coating on the veins due to dried resin. Flower heads are round and bright yellow with a sweet scent. Pods are papery, flat and broad.

Habitat/Occurrence: Occurs on red sand, sandplains and dunes. It was recorded along the Nyangumarta Highway Kidson track from approximately 200 km in from NW Coastal Highway.



Rosie Munro with Palmangu shrub and branches

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 PALMANGU - Acacia melleodora



WAYALANY

Scientific Name: Acacia orthocarpa

Family: *Fabaceae*

Common Name: Needle-leaf Wattle, Straight podded wattle and locally as Broom wattle

Nyangumarta Dictionary (2008): Yartupu

C

0

Traditional Uses: We use the stems of this plant to make body decorations for dancing. We strip the bark from the red stems, then we shave the soft wood under the bark. This makes curls along the stem like tassels. This makes decoration for traditional dancing and ceremonies.

The men make long ones with many tassels and we wear them as a head dress or along the side of our arms. We tuck them into an arm band. Men wear them sticking upwards.

The women make smaller ones but the women wear theirs downwards.

The ash of burnt stems and branches is also used. You burn the stems then take the ash and mix it with chewing tobacco. You mix it with the tobacco, make a small ball and you chew it. It is a close relation to gurlangu.

Contributors: IH. WC

Plant Description: Multi-stemmed, resinous (but no sticky) non-hairy shrub, "V" shaped 1-2.5 m tall. Leaves are long and slender, needle like but not sharp, 6-15 cm long. Branchlets are red-brown or yellowish with resin along them. Flowers in cylindrical spikes 5-15 mm long, pale yellow to light golden. Pods linear (long and thin) 2-3 mm wide and thin textured. Seeds with a showy yellow or orange aril (fleshy cap).

Habitat/Occurrence: Wayalany was relatively common along the Nyangumarta Highway (Kidson track) often in small groves. It is widespread throughout the Pilbara and northwest Australia into the Northern Territory. It grows in a variety of habitats and soils.



Wayalany – Acacia orthocarpa



lan Hunter with Wayalany shrub



lan showing dance decoration



lan Hunter demonstrating how to shave the stems to make decorative tassels

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 WAYALANY - *Acacia orthocarpa*



WARRI WARRI

Scientific Name: *Acacia anaticeps*

Family: Fabaceae

Common Name: Duck Headed Wattle; Sandfire Wattle

Nyangumarta Dictionary (2008): Warri-warri

BT

Traditional Uses: We eat the seeds. You chuck them on the coals in the fire first then you can eat the seeds.

Contributors: RM

Plant Description: Bush shrub or tree 2-4 m high. Bark is grey and corky. Leaf shape is like a ducks head with a very rounded upper margin, the lower one being almost straight. Leaves are 4-7 cm long x 2-5 cm wide. Flowerheads are round, small, cream not showy. Pods are long and broad and raised over the seeds, curved and twisted. Seeds are large and dip in the centre.

Habitat/Occurrence: This shrub was only recorded along the first 60 km of Nyangumarta Highway Kidson track. It is not commonly occurring in the Pilbara but is more frequent from Nyangumarta Highway Kidson track to Broome.



Wari wari leave



Rosie Munro with seed pods next to Warri warri tree



Wari wari seeds

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 WARRI WARRI - *Acacia anaticeps*



PURNTAKARNU

Scientific Name: Acacia hilliana

Family: *Fabaceae*

Common Name: Hills Top Wattle

Nyangumarta Dictionary (2008): Puntangungu

BT

Traditional Uses: We don't eat the plant, we only eat the pirna - (Nyangumarta Dictionary - pirna) witchetty grub. The witchetty grubs like this plant.

We know there is a witchetty grub (beneath this plant) because it makes poos around the base of the tree, around the stems.

You dig with a digging stick around the roots. The grubs are in the roots close to the surface.

You can eat them raw or you can cook them.

Contributors: RM, MB, IH

Plant Description: Acacia hilliana: Low sprawling flat topped sticky wattle without hairs on leaves or branches. Plants can be 30 cm to 1 m high. Phyllodes (leaves) are needle like, bright green and shiny with resin and tend to curve upward. Flower spikes are cylinder shaped and bright yellow from 2-3 cm long. Pods are narrow, erect and woody. New pods often smell like lemon grass.

Habitat/Occurrence: This low shrub was commonly found along the Nyangumarta Highway (Kidson track) on red pindan sand plains and on low gravelly rises. Low shrubs were often found along the disturbed edges of the track in typical vegetation of *Triodia epactia/T. schinzii* hummock grassland with patchy Acacia (A. ancistrocarpa, A. monticola) and Grevillea (G. wickhamii, G. refracta) shrubland.



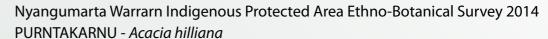
Pirna – witchetty grub are found in the roots just below the surface of the ground. They are good to eat raw or cooked.



lan Hunter with small Purntakarnu shrub



Purntakarnu flowe





Scientific Name: Jacksonia aculeata

Family: Fabaceae
Common Name:

Nyangumarta Dictionary (2008): Not listed

BM

C

Traditional Uses: We don't use this for anything, its just a pretty flower. Its pretty red and yellow flowers make the country look pretty.

Contributors: RM, MB

Plant Description: Widely spreading, somewhat spiny plant to 1 m high. Branches with "stripes" along them. Leaves are reduced to small scales that are sharp, spine-like. The small pea flowers are bright yellow and yellow-orange.

Habitat/Occurrence: On sand plains Acacia and Grevillea species, occurring more frequently from approximately 140 km in from North-West Coastal Highway.





Purarpurari

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 PURARRPURARR - *Jacksonia aculeata*



JULYUNGKU

Scientific Name: Gyrostemon tepperi

Family: *Gyrostemonaceae*

Common Name:

Nyangumarta Dictionary (2008): Not listed

0

Traditional Uses: The emus eat it. Its food for the emus.

Contributors: MB

Plant Description: Shrub to 1.5 m high with light green, soft, slightly sticky leaves. Bark is smooth and pinkish or yellowish. Leaves are very narrow, green to yellowy green with a pointed tip. Small pale yellow male and female flowers occur on separate bushes. Fruit are small roundish pods up to 8mm across.

The shrub is reported to be poisonous to camels – but apparently not to emus.

Habitat/Occurrence: Widespread from 150 km in along Nyangumarta Highway (Kidson track) but only rare in occurrence on red pindan sand plain.



Julyungku. Photography by G. Byrne, C.P. Campbell & R Davis. Image used with the permission of the Western Australian Herbarium, Department of Parks and Wildlife (https://florabase.dpaw.wa.gov.au/help/copyright). Accessed on Wednesday, 6 April 2016.

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 JULYUNGKU - *Gyrostemon tepperi*



KALAYAKALAYA

Scientific Name: Senna notabilis

Family: *Fabaceae*

Common Name: Cockroach bush

BT

Nyangumarta Dictionary (2008): Jina karlyay; Karlurlu karlurlu

BM

Traditional Uses: This is a medicine plant.

We boil up the leaves. Then we leave the water to cool a bit. Then we wash our sores, any sores on the skin, with the warm water. And we eat the sap (minta).

We still use this today.

Contributors: RM, MB

We also get pirna - witchetty grubs – from under this plant.

Contributors: IH, LB

Plant Description: Senna notabilis. Small dense shrub 30-80 cm high. Has soft green hairy compound leaves up to 15 cm long with up to 13 pairs of leaflets.

Has small yellow flowers to 0.5 cm across and flat ridged pods, 3.5 cm x 1.5 cm. These cover the shrub when fully ripe. The shape of the pods resembles cockroaches, hence the name, and they rattle in the wind.

Habitat/Occurrence: This low shrub was not common in the undisturbed Triodia dominated vegetation, but was found occasionally along the disturbed edges of the Nyangumarta Highway (Kidson track). It was also seen in more recent fire burnt areas.



Lindsay Badal and Ian Hunter with pirna from roots of kalaykalaya



Kalayakalaya bush with seedpod





Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 KALAYAKALAYA - *Senna notabilis*



Scientific Name: *Santalum lanceolatum*

Family: Santalaceae

Common Name: Northern Sandalwood **Nyangumarta Dictionary (2008):** Purtartu

BT

Traditional Uses: We eat the berries on this tree. But you must wait till they turn black. They start out green, then they turn purple then purple-blackish – that's when you eat them.

Contributors: IH

We also get pirna - witchetty grubs – from under this plant

Contributors: IH, LB

Plant Description: Small shrub usually about 2 m but up to 5 m tall with drooping foliage. It has semiparasitic roots (in this case probably on *Grevillea refracta* – Bluish-green leaves pointed at the tip, 3-5 cm long x 0.5-3cm wide. The cream to greenish-white flowers occur in clusters with 4 petals. The fruit is fleshy 0.7-1 cm diameter, green then purplish to black.

Habitat/Occurrence: Santalum lanceolatum was only recorded at one location during the survey on the edge of a shallow drainage gully. Widespread north of Geraldton in a variety of habitats and soils.



Purtatu fruit



lan Hunter and Augustine Badal in front of Purtatu



Purtatu flower

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 PURTATU - *Santalum lanceolatum*



Nyangumarta Dictionary (2008): Mirta = "grey" or "grey one". (This plant is covered with pale green-grey hairs).

0

Traditional Uses: We use the stringy bark from this plant to make bush sandals. You have to strip off the soft (flexible) bark in long strips. Then you bind it around your feet like sandals for walking in the desert.

This one isn't as good as its sister plant which grows nearer to the coast end of the track. (Referring to Mangarr *Crotalaria cunninghamii* which has the same name).

Contributors: NR, RM, AB, NH

Plant Description: An erect, open, furry pale greygreen plant to 1.5 m tall. Leaves are roundish and covered in furry white hairs. The pale mauve flowers are almost hidden in hairy lobes.

Habitat/Occurrence: Occurs on red Pindan sand, sandplains and dunes. It was recorded, but only rarely, along the Nyangumarta Highway Kidson track from approximately 200 km in from NW Coastal Highway.



Nyaparu Rose explaining how sandals are made from Mangarr



Augustine Badal stripping stringy bark from Mangarr shrub for sandals



Aquinas Nardi digging up Mangarr shrub watched by Lynette Wilridge



Mirtu leaves and flower

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 MANGARR - *Cullen martinii*



WAMULU

Scientific Name: Solanum diversifolium

Family: Solanaceae

Common Name: Bush tomato

Nyangumarta Dictionary (2008): Wamurla; pilirta

BM

Traditional Uses: This is bush tomato and it's a favourite bush food even still today.

Yes you can definitely eat this one but the fruit must be yellow and ripe.

You don't eat the whole fruit, it's too bitter. You have to carefully scrape out the seeds and the inner skin. Then you just eat the flesh beneath the outside skin. Otherwise it's bitter.

These bush tomatoes are important bush tucker and they keep for a long time. But when there is no rain there are not many (fruits) to be found.

Contributors: RM, MB,IH

Plant Description: Small shrub to 30-60cm with green deeply lobed leaves. It has many yellowy-green prickles to 1 cm on stems, leaves and calyx (holding fruit) and purple flowers. Plant most easily distinguished from other bush tomato in the vicinity by its deeply lobed leaves.

Habitat/Occurrence: Wamulu was recorded at several collection sites along the length of the Nyangumarta Highway Kidson track surveyed. It was observed on sand plains, gravelly rises and on fire burnt areas. It has been observed to regenerate well after fire in the Pilbara (V Long pers obs) and also on disturbed habitats, therefore was seen along the immediate verges of the track.



Fruit cut open showing seeds



Fruit prepared for eating



Kerri Hunter and Rosie Munro picking wamulu



Wamulu flowers, leaves and prickles



Wamulu on bush with prickly stems and calyx



Wamulu cleaned of prickles



JINYJIWIRRILY

Scientific Name: *Solanum sturtianum*

Family: Solanaceae

Common Name: Thargomindah Nightshade **Nyangumarta Dictionary (2008):** Jinyjwirrily

0

Traditional Uses: The berries are an important food for animals, birds, emu food and bush turkey. It's important that animals get good food too.

Contributors: MB, RM

Note: the berries on this don't seem to be eaten by the people themselves. They are reported to be toxic to stressed sheep and cattle (Flora of Australia Vol 29).

Plant Description: Erect plant to 50 cm tall, silverygreen to grey-green with dense, short hairs. There are usually no prickles on this plant and if there are, they are scattered only. Leaves are long and thin, 3-6 cm long x 5-15 mm wide. Flower is purple. Fruits are round 10-15 mm across, green, turning yellow then black, with thin skin that breaks easily.

Habitat/Occurrence: This plant was only recorded at one survey along the Nyangumarta Highway (Kidson Track) in a low area with some alluvial soils and gravels (with buffel grass, see MullaMulla sheet).



Jinyjiwirril



PERENNIAL HERB SPECIES - NYANGUMARTA HIGHWAY (KIDSON TRACK)

JINYJIWIRRILY¹

Scientific Name: *Solanum dioicum*

Family: Solanaceae
Common Name:

Nyangumarta Dictionary (2008): Jinyjiwirrily (see note in main text)

0

Traditional Uses: You can eat this one but its different (from Wamulu – (*Solanum diversifolium*). **Contributors:** RM

You can eat it but it's not our main source of food. The other one (Wamulu) is our main food. This one grows more on the rocky country – it's for the other mob.

You can eat this one but we eat the other one and leave this one for the spirits.

Contributors: NR, WC

Plant Description: Spreading greyish rusty green plant with densely hairy leaves. Long prickles, 5-10 mm long occur on stems and calyx of female flowers which are purple. The berry is yellowish green drying brown, round 20-30 mm across. It can be almost fully enclosed by a spiny calyx (lobes holding the fruit).

Habitat/Occurrence: *Solanum dioicum* was only recorded at one location in association with a small rock outcrop on red sand with gravels.

It generally occurs from the Nyangumarta Highway (Kidson track) area up through northern Australia.

¹ There was some discussion about this name – it is the same name given to *Solanum sturtianum* – at the group meeting 2nd August 2016. No conclusion was made so the name given during the field survey has been retained.



Jinviiwirrily plan

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 JINYJIWIRRILY - *Solanum dioicum*



PERENNIAL HERB SPECIES - NYANGUMARTA HIGHWAY (KIDSON TRACK)

MARRPARI

Scientific Name: Streptoglossa sp (sterile) & Streptoglossa macrocephala

Family: *Asteraceae*

Common Name: Stinkweed

Nyangumarta Dictionary (2008): Not listed

BM

Traditional Uses: *Marrpayi (Streptoglossa sp)*

We call this a medicine plant. Its like eucalyptus oil – and we use it the same way for colds and aches.

You grind up the leaves, then you can smell the oil strongly. You can just smell the oil and it will help you breathe easier if you have a cold.

Or you can rub the leaves and the oil on your chest – or rub it on any aches you have.

You can also boil up the leaves in water and then breathe in the steam.

Contributors: RM, WC, NR

We use this plant (marrpari – Streptoglossa macrocephala) the same as the other one.

A medicine for colds and aches – the same

Contributors: RM, MB

Plant Description: Both plants are highly aromatic, slightly sticky, hairy mid green herbs. The leaves of both clasp directly to the stems of the plant. Both have tubular, purple flowers which attach to the branch.

Streptoglossa sp (sterile) has small darkish green leaves, 10-20 mm long x 3-5 mm wide, slightly toothed.

Streptoglossa macrocephala has much larger bright green leaves to 30 mm x 10 mm wide, with very curvy margins.

Habitat/Occurrence: Known from gravelly plains and red sand. Rare - Only seen on disturbed sites (Camp site 2 and verge of Nyangumarta Highway - Kidson track).



Marrpari (Streptoglossa sp sterile) at Campsite 2.



Marrpari (Streptoglossa macrocephala)

MIRLPA MIRLPA

Scientific Name: Cyanostegia cyanocalyx

Family: Laminaceae

Common Name: Northern Tinsel Flower

0

Traditional Uses: Its just a pretty flower to decorate the countryside.

Contributors: RM, RH

Plant Description: A sticky low shrub to 1 m high with erect branches and bright shiny looking green leaves. The leaves are opposite each other and are an elongated oval shape, with very slightly toothed edges. The flowers are on stalks above the foliage and are therefore very showy. The flowering stalks can be from 20-30 cm long. The flowers are deep blue or purplishblue.

Habitat/Occurrence: Northern Tinsel Flower plants were found within 10 km of Great Northern Highway along the Nyangumarta Highway- Kidson track. It occurs in red sands on dunes and sandplains, and on disturbed sand areas from Nyangumarta Highway-Kidson track to north of Broome and east of Halls Creek. This is the only Cyanostegia species to occur in north-west Australia the other 4 species being found south of Geraldton.

Although they had no use for this plant, the ladies were keen to show it to me.



Mirlpa mirlpa Flower



Lynette Wilridge with Marlpa mirlpa



Mirlpa mirlpa flower

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 MIRLPA MIRLPA - *Cyanostegia cyanocalyx*



Family: Amaranthaceae

Common Name: Tall Mulla Mulla

Nyangumarta Dictionary (2008): Junu-junu; purarr-purarr

0

Traditional Uses: This is just a pretty flower – we don't use it for anything but it makes the country look pretty.

Contributors: RM

The ladies were keen to show us this plant even though they had no real use for it.

Plant Description: Robust annual or short lived perennial herb 35-60 cm tall. Stems are thick and not hairy. Broad, smooth glossy green leaves attaching directly to stems. Flower spikes are conical when in full flower. Flowers are showy, pinky/mauve.

Habitat/Occurrence: This plant was only recorded at one survey area, in a low area that had possibly been disturbed at some time. The presence of a few buffel grass plants (ciliaris) – an introduced fodder grass species at this location also indicates disturbance.



Mullu Mullu

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 MULLU MULLU - Ptilotus nobilis





NGAMANGAMA

Scientific Name: Euphorbia australis

Family: Euphorbiaceae

Common Name:

Nyangumarta Dictionary (2008): Ngama-ngama (indicating the plant has milky sap)

0

Traditional Uses: This is bush medicine. It has a milky sap. You boil up the sap with water to wash your sores. Or use the sap to treat sores: skin sores, sore eyes or ears. You don't drink it. Only wash with it.

Contributors: MB, RM, TH

Plant Description: Rounded furry plant spreading flat over the ground. Had dense, compact roundish leaves attached to pink stems. All parts have soft short hairs.

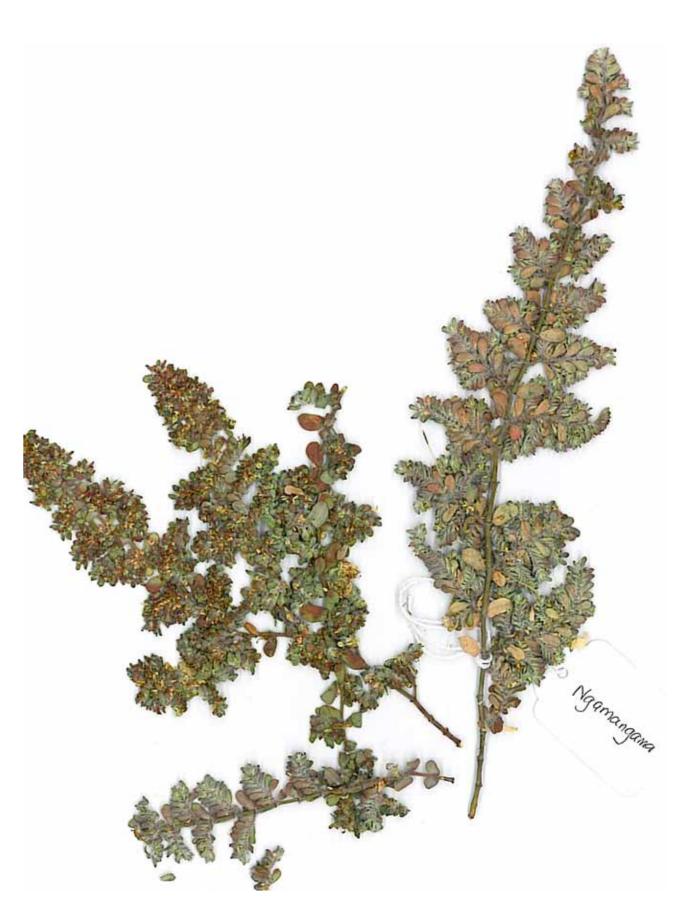
Habitat/Occurrence: Nganangama was only recorded on the track and disturbed sites (camp sites) where soils were somewhat firmer being more sandy loam with gravels.



Naamanaama



Ngamangama. Photography by G. Byrne & K.C. Richardson. Image used with the permission of the Western Australian Herbarium, Department of Parks and Wildlife (https://florabase.dpaw.wa.gov.au/help/copyright). Accessed on Wednesday, 6 April 2016.



VINES AND CREEPERS SPECIES - NYANGUMARTA HIGHWAY (KIDSON TRACK)

WIRLKARU

Scientific Name: Tinospora smilacina

Family: Menispermaceae
Common Name: Snakevine

Nyangumarta Dictionary (2008): Wanta karrpi-karrpi; Wurntarnta-wurntarnta

BT

Traditional Uses: We use stems of this plant for headaches or for other aches in the body. We wrap the vine around the head, or around any joint pain. You can crush the stems first there is some milky sap, then wrap it around the part that is aching.

No we don't eat the berries.

This is animal food. **Contributors:** MB

Plant Description: A woody climber, climbing up over trees and shrub, bright green. Leaves are not hairy, prominently veined and are broadly triangle shaped, curving in at stem at the base of the leaf. Small greeny-cream flowers are in clusters. Fruits are roundish, firstly green then becoming red to black when mature.

Habitat/Occurrence: This vine was found climbing over a small Gardenia plant near the start of the Nyangumarta Highway (Kidson track) (near Great Northern Highway). It was not seen at other collection ponts.

The plant is widespread in a variety of habitats in the Pilbara and Kimberley



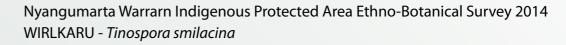
Wirlkaru – in fruit



Martina Badal with Wirlkaru



Wirlkaru flower





VINES AND CREEPERS SPECIES - NYANGUMARTA HIGHWAY (KIDSON TRACK)

YUKURLI

Scientific Name: Cassytha capillaris

Family: *Lauraceae*

Common Name: Dodder, Locally: "Berry Bush"

Nyangumarta Dictionary (2008): Yukurli is given for Cassytha filiformis (see 2015)

BT

There is no name for *C. capillaris* but perhaps all dodder species are given the name "Yukurli".

Traditional Uses: We eat the berries from this plant.

The berries are green but you have to wait till they are white before you eat them.

They turn your teeth brown. I don't know why they turn your teeth brown.

They taste between sweet and sour.

The berries come after the summer rains.

Contributors: MB, RM, LW

Plant Description: A leafless, twining parasitic vine which attaches to a host plant such as paru (Triodia) or acacia shrubs (eg. Pulpi as in the photo). Tiny white flowers turn into very small berry like fruits, similar to a currant. This fruit turns white when ripe. The vine can form thick mats over its host plant which eventually dies. When this happens – or during the dry season when host plants may have seasonally died off, the yukurli changes from green to purple, reducing its energy needs. It eventually moves on to a healthier plant or it will stay dormant until rain comes to revitalise the plant it feeds off.

Habitat/Occurrence: Yukurli was widespread along the surveyed section of the Nyangumarta Highway (Kidson track) but not abundant. It was observed growing on *Triodia* sp and various Acacia (wattle) shrubs, but most often on Pulpi (*Acacia ancistrocarpa*).



Yukurli growing through paru (Triodia)



Roberta Hunter with Yukurli growing on Pulpi (Acacia ancistrocarpa)

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 YUKURLI - *Cassytha capillaris*



Scientific Name: *Eragrostis eriopoda.*

Family: *Poaceae*

Common Name: Woolly butt grass

Nyangumarta Dictionary (2008): Ngujarna

BT

Traditional Uses: We collect the seed of this grass then we separate it – can rub it between your hands. We grind the seed to make damper.

We grind the seed with a flat stone. This makes flour. We mix the flour with water to make dough.

We cook the dough in the hot coals of the fire

Contributors: RM, WC, LW

We still make damper but we don't do this today, we buy

IOUI!!

Contributors: RM

Plant Description: A dense, erect tussock perennial tussock grass forming tufts about 35 cm high. Stems are slender and erect (except when dying back for the dry as in photo) with short, rigid narrow leaves. The plants have thickened white woolly butts at the base of the plant. Seeds are produced within 4-6 weeks after summer rain. Seeds are very small and reddish but they are soft and easy to grind.

Habitat/Occurrence: Ngujarna was widespread along Nyangumarta Highway (Kidson track), especially along the disturbed edges of the track. In undisturbed vegetation it was represented widely but not as abundantly as the Triodia (spinifex) grasses.



Ngujarna – dormant state



Rosie Munro with Yukurli growing on Pulpi (Acacia ancistrocarpa)



Ngujarna. Photography by G. Byrne & K. Coate. Image used with the permission of the Western Australian Herbarium, Department of Parks and Wildlife (https://florabase.dpaw.wa.gov.au/help/copyright). Accessed on Wednesday, 6 April 2016.

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 NGUJARNA - *Eragrostis eriopoda*



GRASS SPECIES - NYANGUMARTA HIGHWAY (KIDSON TRACK)

KARRARL

Scientific Name: *Triodia epactia/ Triodia schinzii/ Triodia pungens*

Family: Poaceae

Common Name: Soft spinifex (applies to each of these three soft resinous species) **Nyangumarta Dictionary (2008):** Karral; paru; resin = karral or milirr

Α

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Traditional Uses: We make shelter from the large grass hummocks – we pack it into a humpy, like an igloo. We build a frame to make the humpy, then we pack the

frame with the karrarl to make walls. It makes a shelter from the wind and sun.

Contributors: IH, AB, NH, TH
We can use this as a broom.
Contributors: NR

Karrarl - Resin

A sticky resin covers the stems and leaves to Paru, and tends to accumulate at the base of the paru hummock. A small black ant harvests this karrarl - resin - to cement the walls of their small anthill homes, usually found under the spinifex plant itself. The ants also cement small grains of sand to make delicate tunnels between plants and on the leaves of the plant itself. We collect the karrarl (resin) from the base of the paru or from the small anthill where it is found.

We melt it on the fire, carefully separating out some of the sticks and sand that may be in it.

We then take the melted 'glue' and use it to make spears and other implements. You put it around the head of the spear you are making and then it sets real hard.

Contributors: IH, NH

This is how we used to make spears and other artefacts. The glue sets harder than any glue you can buy Contributor and Demonstrator: Ian Hunter, also Aquinas Nardi

We use the sandy resin for newborn babies. You know the two soft plates of bone in the skull? We smear the resin over the scalp to help these two bones knit together well. **Contributors:** TH

Plant Description: Resinous (sticky) hummock grasses from 30 cm to 1.5 m -2 m tall.

Habitat/Occurrence: Paru was the dominant plant along the length of the length of the Nyangumarta Highway Kidson track) surveyed with *Triodia epactia* being the most widespread. *T. schinzii* tended to be found on deeper looser sands, where *T. epactia* and *T. pungens* were mosaicked and interspersed throughout the length of the sandplain. Hard spinifex occurred on the gravelly rises. Grasses were not flowering but could generally be identified from persisting bracts. Plants were sterile so no collections were made.



Karrarl (resin).



Melting karrarl in the coals



Applying glue to spear handle



lan Hunter with karrarl on spear handle

72

GRASS SPECIES - NYANGUMARTA HIGHWAY (KIDSON TRACK)

PARU

Scientific Name: Chrysopogon fallax

Family: *Poaceae*

Common Name: Ribbon Grass

Nyangumarta Dictionary (2008): Wartu-wartu (Paru in the Nyangumarta Dictionary is a general name for Triodia species)

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Traditional Uses: Paru – no not spinifex – we call most grasses "paru" – its just a word for "grass".

We pull out the whole plant (tussock), roots and all, and then we twist it around to make a flat basket – jirtatu (jartu is listed in Nyangumarta Dictionary as dish, coolamon). Like a donut ring. This then sits on your head and you can carry heavy loads in it. You can carry water for example. The water is in a kapara – like a shallow bowl – (kapara in Nyangumarta Dictionary) which you make from the hard wood of a tree like Parntarl (Owenia reticulata).

Contributors: RM

Plant Description: Perennial tussock grass with long, narrow, ribbon like leaves sometimes forming a loose mat on the ground. The seed heads are borne on long erect stalks 1 – 1.5 m high.

Habitat/Occurrence: Not commonly seen during the survey. Only along the Nyangumarta Highway (Kidson track) on lower areas on the sandplain and in lower swales. Occurs on sands, red clay and lateritic loam from Shark Bay latitude to the northern Kimberlely.



Large tussocks can form a loose mat on the ground. © Western Australian Agriculture Authority (Department of Agriculture and Food, WA)



Paru (Chrysopogon fallax) tussock in soft spinifex grassland with scattered Junyju trees.







PARNGURR¹

Scientific Name: Calvatia sp. Family: Lycoperdaceae
Common Name: Puff-ball

Nyangumarta Dictionary (2008): Wampakurla (= "puffball" but species not identified)

C

1 NOTE: this name was given to both fungi collected. The plants are used in the same way.

Traditional Uses: When the parngurr puffball is ready (ripe) it has a yellowy brown powder (spores) in it. We use this powder to colour the skin and the hair.

You can just rub the powder on the skin directly.

We use this to colour the skin for ceremony and dancing.

Contributors: RM, MB, IH, AN

Plant Description: Calvatia sp. Rounded-cube shaped puff-ball 9 cm x 8 cm with a short stout stem 2 cm. Unlike most mushrooms, the spores are created inside the fruiting body. The outer skin is white initially, then yellowish-cream as it ripens, smooth and thin breaking open at maturity to reveal browny-yellow / khaki spores which resemble a very fine powder.

Habitat/Occurrence: Puff-balls were not common, but participants did find them twice during out stops along the Kidson track.



Parngurr



Aquinas Nardi with puff-ball



Yellow-brown powder

76

PARNGURR

Scientific Name: *Podaxis pistillaris*

Family: *Podaxaceae*

Common Name: Black Powderpuff

Nyangumarta Dictionary (2008): Not listed



Traditional Uses: We use this plant to colour the skin and the hair – or your beard especially when it turns grey!

The powder in this is browny-black so it's good for dying your hair.

We also use it to make markings on the face. We use this for ceremonies but you can use it any time.

Contributors: RM, MB,NH, LH, TH, AN

Plant Description: Small stalked puffball to 15 cm. Has spores, which are black when mature, enclosed in initially white skin, turning pale brown with age. Does not have gills like other stalked fungi.

Habitat/Occurrence: Infrequent on sand plain along Kidson track.



Kerri Hunter coloured Teddy Hunter's beard with Parngurr



Black skin dye from powderpuff



Aquinas Nardi with Black powderpuff



Augustine Badal with dye face markings

PARNTARL

Scientific Name: Owenia reticulata

Family: Meliaceae

Common Name: Desert Walnut

Nyangumarta Dictionary (2008): Parntarl

BT

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Traditional Uses: The palungkurr nut on Parntar is important food for us. We burn the nut on the fire, then we break it open and it has a nut inside which we eat. Our people used to live on these nuts.

You can also cook the nut then crack it open and use the oil of the nut on your skin. You crush the nut up and use the oil.

We also eat the minta – sap of this tree.

Contributors: RM, RH

Plant Description: If you eat too much of the nut

you get a headache.

This species isn't as tasty as the one near to the coast.

Habitat/Occurrence: Not commonly seen during the survey but occurred nearer the coastal end of the Kidson track in red sands.

Its good wood for burning – for cooking lizard or whatever. Its slow burning wood. Its also good for making tools and things like kapara – shallow dish or bowl for carrying food or water.

Contributors: IH



Aquinas Nardi, Lynette Wilridge and Rosie Munro with Parntarl tree and nuts



Leaves and Palungkurr (nut) of Parntarl



Ripe palungkurr



Palungkurr – ripe for roasting and eating



Nathan Hunter showing us the thick "flesh" of the nut (2015)



Mirnta – sap for eating and Roberta Hunter with Palungkurr

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 PARNTARL - *Owenia reticulata*



JIKILY

Scientific Name: Bauhinia cunninghamii

Family: *Fabaceae*

Common Name: Bauhiniia

Nyangumarta Dictionary (2008): Jikily, Warilyangu, Karntimarta, Warimpi

BM

BT

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Traditional Uses: There is honey in the flowers – the nectar is like honey – jirrpiliny. We suck the honey out. Even the birds suck the jirrpiliny honey. Sometimes sugarbag in here; sugarbag is the same as honey.

Contributors: TH, RM, IH, AB (2014)

The wood is good for burning – for camp fire cooking. It burns for a long time, makes good coals.

The seed - can be used for revegetation in our community.

Contributors: AB (2014)

Plant Description: Spreading tree, often multistemmed to 8 m high with rough dark grey bark. The paired "butterfly" leaflets are dull grey-green, 1 – 3.5 cm long x 1-2.5 cm wide. When the leaves fall at the end of the dry season, they are replaced by velvety pink to red flowers are clustered together along stems. Flat woody pods are 7-21 cm long, 3-6.3 cm wide, and are red at first then turn dark brown with age.

Habitat/Occurrence: This tree was only recorded at the north-west end of the Kidson track where it meets the Great Northern Highway. It was not recorded further in along the track.

Kidson track is the southern most extent of its range – its more commonly is found north of Broome. It was also recorded nearer to the coast on coastal flats in 2015.

*Also collected and discussed in 2014.

This is good for bush honey – wurruja - from the flowers. We suck the honey – nectar from the flowers. It's very sweet.

Contributor: LW AB

You can eat the sap off the tree for a sore stomach – eat it directly off the tree.

Contributor: LW



Jikily flower



Bark and "butterfly" leaves. (Photo courtesy of www.kookynet.net)







Jikily flower

Gum from tree



81

MAKARTU / LAKURRU 1

Scientific Name: Ficus brachypoda

Family: *Moraceae*

Common Name: Rock fig

Nyangumarta Dictionary (2008): Yirra makartu

BT

Traditional Uses: We eat the figs of this tree – it's a bush fig. It grows in the rocky country. There is not much rock along this section of the track.

Contributors: NR (2014)

Plant Description: Spreading tree over rockpiles usually no more than 2.5 m high and spreading to 6 m, with aerial and clinging roots. Smooth pale grey bark. Leaves are alternate, this and leathery, can be smooth or slightly hairy above, finely hairy below with a distinct mid-rib. Fruit are small and round 0.8 – 1.4 cm diameter, yellow-green turning pink-red/purple when ripe.

Habitat/Occurrence: This rock fig was the only one recorded along the surveyed Nyangumarta Highway (Kidson track) – rockpiles were not common along the track (2014).

And on low inland limestone rise on the coastal plain on the landward side of 80 Mile Beach (2015).

We just eat the fruit. It starts green then it turns reddish brown and that is when it is ready to eat.

We don't cook it you just eat it raw.

Contributor: LW, SG (2015)



Nyaparu (Margaret) Rose with Makartu tree on rockpile (2014).

¹ Makartu was given for the plant found along Nyangumarta Highway (Kidson track) and Lakurru was the name given to the rock fig nearer to the coast. Both plants were *Ficus brachypoda*. At the meeting in 2016 it was agreed that both names were acceptable.





Rosie Munro and Teddy Hunter at rockpile



akurru on coastal limestone ridge (2015)



Darcy Hunter and Augustine Badal talking about lakurru (2015,





Ripe lakurru fruit

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 LAKURRU - *Ficus brachypoda*



TREE SPECIES - BOTH 2014 (INLAND) AND COASTAL / WALYARTA (2015)

WURTARR

Scientific Name: Gardenia pyriformis subsp keartlandii

Family: Rubiaceae

Common Name: Turpentine Tree

Nyangumarta Dictionary (2008): Not listed

BT

Traditional Uses: We eat the fruit of this tree. But it must first fall to the ground. It's ripe when it falls to the ground – it has to be yellow. The fruit has many seeds, we don't eat the seeds.

It's not sweet – it's like bush lemon. It has a beautiful white flower with a lovely perfume smell.

Contributors: RM, MB (2014)

Plant Description: Small low compact tree 0.6 to 6 m high. Bark smooth with mottled ochre-rusty and pale grey colouring. Leaves opposite, glossy oval shaped tapering at base. White trumpet like flower. Fruit roundish, becoming striped when dry.

Habitat/Occurrence: This shrub was only recorded near the junction of Kidson track and North-West Coastal highway.

During the 2015 survey it was found at the foot of a red pindan high sand dune ridge. This is the southernmost extent of it range. It extends from here to Halls Creek area.

Collected and discussed 2014 but in 2015 the plant was in flower so it was collected again for the "virtual" herbarium. Information is similar to 2014 but recorded here also.

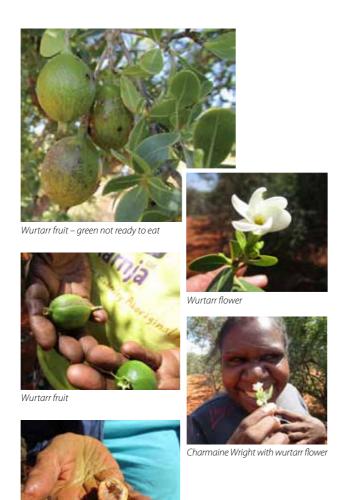
We eat the fruit when it gets ripe and yellow. You can eat the seeds and all*. It has a bitter/sweet taste.

Contributor: SG (2015)

*Note in 2014 the ladies reported it had lots of seeds but you didn't eat the seeds.



Rosie Munro, Lynette Wilridge and Martina Badal in front of wurtarr tree

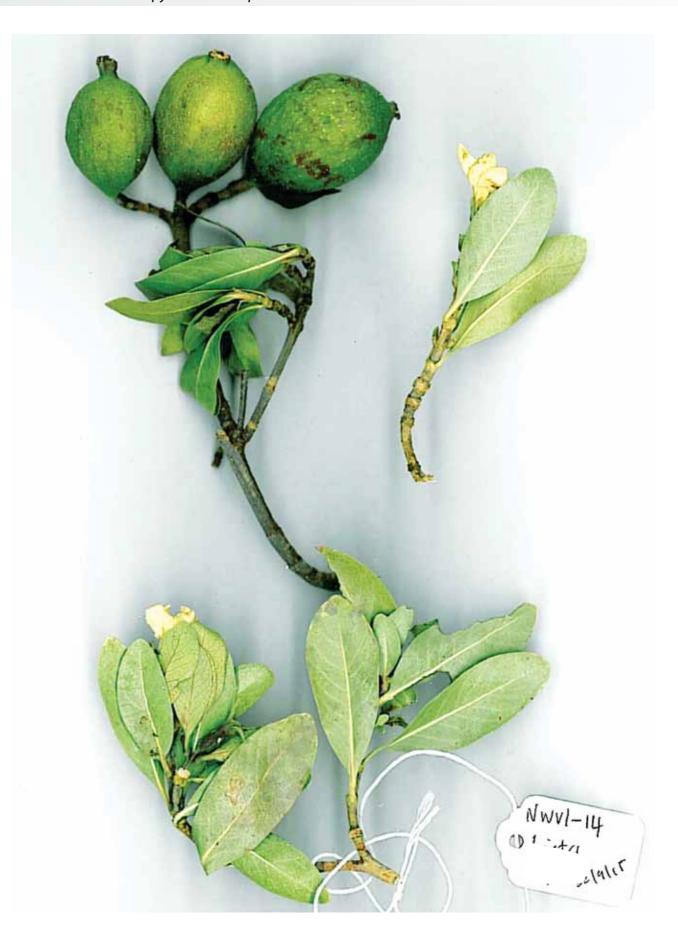


Wurtarr fruit – bitter like lemon



Wurtarr tree

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 WURTARR - *Gardenia pyriformis subsp keartlandii*



Scientific Name: Terminalia cunninghamii

Family: Combretaceae

Common Name: Pindan Quondong

Nyangumarta Dictionary (2008): Kumpaja

BT

Traditional Uses: This is good to eat but its hard work! You get the fruit – kumpaja - when it has fallen off the tree and dried. You collect it from under the tree.

The fruit is first green, then it turns black then it falls off the tree and dries hard. This is when you collect it.

Its hard to crack open – you need a rock or something hard. But when you get it open you can eat the nut. You can eat it raw. It tastes good.

This is a good food (Rosie).

Contributors: WC, RM, MB

Note: both the tree and the fruit were referred to as Kumpaja.

Plant Description: A shrub or small tree to 6 m high with brown to grey fissured bark. Leaves are spirally arranged, crowded towards the ends of branches. Leaves are elongated oval shape 2.5 – 8 cm long x 1-4.5 cm wide, usually no hairs present. Ends of leaves are rounded. Flower spikes are up to 8 cm long, cream. The fruit is succulent, roundish with a very short beak. Has an inner hard woody shell.

Habitat/Occurrence: A near coastal Terminalia which occurs occasionally from Sandfire Roadhouse to Broome, then again on the far northern coastline. Favours sand, sandstone outcrops and sand dunes. This tree was not found on the Kidson track but the Elders were keen to show it to me and have it included in this document. The tree was alongside Great Northern Highway.

Collected for flower in 2015 on red pindan sand dune within Mandora Marsh

Information given in 2015 was similar to 2014. This plant is obviously a favourite but all acknowledged it was very hard to crack open.

The nut is for eating, we call it "bush peanut". You can eat it raw but you have to crack it open hard with a good rock.

Contributors: SG, LW (2015)



Kumpaja – ripe but not ready for eating yet (2014)



Kumpaja from beneath the tree – ready to be cracked open. (2014)



Rosie Munro collecting Kumpaja from beneath the tree. (2014)



Winnie Coppin looking for Kumpaja (2014)



Kumpaja along Great Northern Highway (2014)



Lynette Wilridge with Kumpaja 2015



Kumpaja flower



Kumpaja nut and kernel

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 KUMPAJA - *Terminalia cunninghamii*



LIRRINGKIN

Scientific Name: Acacia colei

Family: *Fabaceae*

Common Name: Locally: "River tree" or Soap Tree Nyangumarta Dictionary (2008): Pani pirntarl, Mijily

BT

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Traditional Uses: When the seed of this tree turns ripe - black and yellow (aril) you can cook it up. You can eat the seed when it is cooked. Or you can grind up the seed and mix it with water. Its like a paste that you can make into small cakes. You cook them in the coals of the fire.

Pirna - witchetty grubs are found in the roots of this plant. You can tell that from the poos around the trunk of the tree.

Contributors: RM, WC, LW (2014)

There is an insect found on these trees its called ngukula. (Case moth). We eat the ngukula inside the case.

Contributors: WC

We call this the "river tree" because it indicates where water is to be found.

Contributors: Contributor: IH (2014)

We also call this the "soap tree" because you can use it as soap to wash your body. You use the pods when they are green or just starting to open.

You use it like soap, in water and it becomes soapy and you wash your body in it.

Contributors: MB RM IH LW (2014)

Plant Description: A spreading shrub 2-3 m tall with smooth grey bark. Leaves are silvery-grey green with tiny silvery hairs, and are slightly curved. There are 3-4 obvious main veins which merge together on the lower margin of the leaf. The top of the leaf has a tiny blunt knob on it. The flowers are bright yellow, cylindrical up to 4 cm long. The seed pods are curved and tangled (but not coiled as in the similar Acacia holosericea).

Habitat/Occurrence: This shrub is commonly occurring along the length of the surveyed Kidson Track. It occurs in swales – sometimes in thickets and also on the sand plains as a result of fire burning.

In 2015 it was collected from near an open water tank where there was some moisture in the soil.

Collected and discussed 2014 but in 2015 additional information was given and use demonstrated. Bush tucker information is similar to 2014 but recorded here also.

We cook the seed and eat it or you can make a sort of flour with it and make a paste with water and cook it.

Contributor: SG

This is soap plant, we use the green seed pods like soap. You rub them over your body or your hands and it's just like soap.

Contributor: AB

Augustine then went on to show us how to use the pods to wash our hands in the tank water. The pods did froth up like soap.

Cockatoos eat the seeds of soap tree – they feed their babies in the tree hollows

Contributor: LH



Lynette Wilridge with lirringkin branch showing flowers and seedpods. With Lindsay Hunter and Kerri Hunter





Seed pods - now dry and brown but can be used as soap when fresh and areen







Lynette Wilridge using soap plant

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 LIRRINGKIN - Acacia colei



SHRUB SPECIES - BOTH 2014 (INLAND) AND COASTAL / WALYARTA (2015)

JIMA

Scientific Name: Carissa lanceolata

Family: *Apocynaceae*

Common Name: Conkerberry

Nyangumarta Dictionary (2008): Jima

BM I

BT

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Traditional Uses: We eat the berries when they are ripe. They are initially green, but then they turn black and when they are black, that is when you can eat them.

Contributors: NR, IH (2014)

This plant is used for curing kids with stomach ache. You cut the branches then smoke them in the fire. You get the kids to inhale the smoke and that cures their stomach ache.

We use the spines on the branches to treat warts. You just stick the spine into the centre of the wart. Yes, this gets rid of warts.

Contributors: NR (2014)

We also use the smoke to repel mosquitoes.

Contributors: NR LH (2014)

Habitat/Occurrence: Jima was only recorded at this one location along the surveyed length of the Kidson track. It was in a low area with alluvial silty-clay loams with *Tephrosia aff supine* not recorded at other sample locations along the track. In 2015 it was recorded at the base of a high red pindan sand dune ridge.

The berry is green but then it turns black. When it turns black you can eat it; its sweet

Contributor: DH

You can smoke the roots, they are good for keeping the flies and mosquitoes away. You put the root in a tin and just let it burn slowly and smoke – its incense for flies and mosquitoes.

Contributor: AB, LW

We use the roots to make a tool to remove nits. You get a green one (root), make sure its supple then you split it a bit to make it like tweezers – you can use it for nits, to remove hairs – just like tweezers.

You can dry the roots also and put it in the fire, wait till it goes brown, it smells like incense. Then you shave it a bit into a point - not too sharp. Then you use the point that has been burnt to kill nits in your hair.

Contributor: DH, TH, NH, LW

When the big rains with lightening come, you grab this bush and light it on fire. The lightening will smell it and will stop - or go away.

Also you can smoke away the rain – you can even smoke away a cyclone with this shrub so it doesn't come to where you are living.

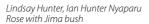
Contributor: DH

Plant Description: A small spreading, prickly, untidy looking shrub, usually 1-2 m high. Its leaves are leathery, narrow, opposite and dull green. There are small spines along the branches which have a milky sap when broken. It has small (4-7cm diam) perfumed creamy-white 5-petaled flowers which produce a small ellipsoid fruit. The fruits turn from green to red and finally black when mature.

Lynette Wilridge demonstrated how to shave off the outer "skin" of the root, then continued to shave the root until it became brown in colour. It had a pleasant fragrance even without burning it. She made this for an "incense" stick.

Nathan Hunter explained that if you wanted it to kill nits you would sharpen it more to a point, then burn the tip slightly and that is what you use to kill the nits.







Charmaine smelling jima incense.







Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 JIMA - *Carissa lanceolata*



91

Scientific Name: *Acacia stellaticeps*

Family: *Fabaceae*

Common Name: Poverty Bush

Nyangumarta Dictionary (2008): Pirrinyurru, Pitinyurru, Panmangu (Coastal), Pirrnyurru (Nyamal

BM C O

Traditional Uses: This is a smoke tree. We use it for healing. You smoke the persons backside – the rear end of the body to help healing.

The smoke is also used for joint pain and for arthritis. You breathe it in.

We use it for baby smoking. You smoke the new baby to keep evil spirits away and to build its body up – make it nice and strong.

We also use it for adults for smoking ceremony. For example when someone passes away, the family leaves the house. Then the house has to be smoked to clear it of evil spirits. This has to be done before the family can return to the house.

Contributors: AB, IH, MB (2014)

Plant Description: Low dense spreading light green shiny shrub 0.3-1 m high and 1-2 m across with many stems. Leaves are small, short and broad but not symmetrical 8-15 mm long x 4-12 mm long. Flower heads are bright yellow and round. Pods are erect, woody and open from the apex.

Habitat/Occurrence: Common in much of the Pilbara, especially near coastal in soft spinifex on red sand plains. It was widespread along most of the length of the Kidson track surveyed.

You smoke the branches and you stand in the smoke to cure you of colds or runny tummy.

Its good for new born babies – you smoke them then they won't get sick. We also smoke kids to make them fit and strong.

The smoke keeps evil spirits away and also lets the good spirits know we are here.

When we were little we used to make necklaces out of the dried seed pods. They curl up and we thread them to make a necklace.

Contributor: LW

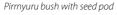


Augustine Badal with Pirrnyuru shrub.



Pirrnyuru shrub (Acacia stellaticeps)







Pirrnyuru (Photo courtesy of Volker Mischker)



Lyn Wilridge showing the seed pods-dried ones were used by kids to make necklaces

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 PIRRNYURU - *Acacia stellaticeps*



Family: Fabaceae

Common Name: Green Bird Flower or Sandhill rattlepod

Nyangumarta Dictionary (2008): Mangarr (Sandals and by association the shrub), Kalyjali (bark

used for making the sandals and by association the shrub), Piparn

0

Traditional Uses: We use this the same as mirta (*Cullen martinii*). You peel off the soft bark, the thin but strong flexible bark, and then you tie it around your feet. It acts like sandals and protects your feet from the hot sand.

This is a cousin of Mirta. **Contributors:** NR

Plant Description: An erect often untidy shrub to 2.5 m high with rounded leathery, velvet-like soft grey-green leaves. The plant has a fine covering of dense short hairs all over. The large pea flowers are bird-shaped and unusual green and yellow colour. They resemble birds all hanging by their beaks to the stems of the plant. The pods are large, covered is soft short hairs and almost rectangular. When mature the seeds in the pods rattle in the wind.

Habitat/Occurrence: This plant was found along Great Northern Highway near Kumpaja, although it is likely it occurs within the first 10 km along Kidson track (2014). In 2015 it was found on a high red pindan sand dune. It is widespread from Shark Bay to the northern Kimberley on sandy soils and in drainage lines.

We used the skin of this plant, the soft bit, to make sandals. This soft inner skin, you can also wrap it around your head for headaches, it feels cool and helps headaches. You can use wrap it around other pains too.

Contributor: DH (2015)



Nyaparu Rose with Mangarr shrub



Mangarr shrub







Mangarr flower - green bird flower (Photo courtesy of Volker Mischker)



Stripping the outer bark to get to the inner flexible layer to make sandals (2015) (J. Kalpers)



Soft inner "skin" of mangarr

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 MANGARR - *Crotalaria cunninghamii*



KARLUNKARLUN

Scientific Name: *Trianthema turgidifolia*

Family: Aizoaceae

Common Name: Coastal pigweed

Nyangumarta Dictionary (2008): Karlun (meaning samphire-type plant)

BM

Traditional Uses: This is a bush medicine. You just squeeze the leaves and use it for sores on your skin. Also you can squeeze the juice out directly into your ear if you have earache. You don't need to do anything – you just squeeze the juice onto your sores or into your ears.

Contributors: TH, MB, NH (2014)

BT

There is a witchetty grub in this plant – but its not the same as pirna - the other one we told you about. This is a long witchetty grub and it tastes better. Its called KARRUTU.

Contributors: TH, NH (2014)

Its got water inside but too salty to drink but we used to use this for our sores.

In the old days there were no nurses, no hospital and we had to use our own medicines.

Contributors: SG, DH (2015)

Plant Description: A succulent (fleshy) long lived herb which spreads over the ground. It has a woody short stem. The leaves are opposite, very fleshy and club shaped, 1-2 cm long x 5mm across. They are smooth. A single small pinkish-white flower grows from the base of the leaves.

Habitat/Occurrence: This plant was found along Great Northern Highway near Kumpaja. It grows on the dry edges of tidal flats or behind dunes and can cover large areas. It is unlikely it would occur along the Kidson track.



Martina Badal and Teddy Hunter with Karlunkarlun plant (2014)



Karlunkarlun flower and succulent leaves that you squeeze for healing liquid



Karlunkarlun plant at Salt Creek (2015)



Charmaine Wright at Salt Creek (2015)



KARTAWURRU

Scientific Name: *Acacia coriacea* subsp pendens

Family: *Fabaceae*

Common Name: Dogwood

Nyangumarta Dictionary (2008): Warntany

BM BT A C O

Traditional Uses: You can eat the seeds in the pods. Sometimes we roast the pirrkarla green pods and eat the seeds that way - in the pods. They (the seeds) have a bright orange cap (aril) when the seed is hard.

We also make beads from the seeds.

Contributors: RM (2014) This is a boomerang tree.

You make boomerang - karli - from the wood inside - or you can use it to make a mukurru – hitting stick.

Contributors: RM, IH (2014)

You can use the bark of this tree – you burn it then you rub it on your skin to colour the skin for ceremony.

This tree is important for Law. When a young man is going through the Law the wood is burnt by the mother of the boy. She must keep it burning while the boy is away for the initiation time – panijartu . She must keep it burning until he comes back.

Contributors: NR, IH (2014)

Plant Description: A small shrubby tree 3-6 m high with grey fissured bark. The long grey-greenish narrow leaves are strap-like 15 – 23 cm long, 1-4 mm wide. The crown can be quite bushy and pendulous (weeping). The flower heads are round and pale yellow. The long twisted pods are woody and twisted and narrow in between the seeds. The seeds are quite large, hard coated, black with a very bright orange fleshy "cap" (aril).

Habitat/Occurrence: Acacia coriacea subsp pendens was not frequent along Nyangumarta Highway (Kidson track). Individual trees were seen only occasionally.

It was also found nearer to the coast (2015). This tree is widespread in the Pilbara but the Kidson track marks the northern extent of its known range.

Collected and discussed 2014 but in 2015 because the group collected the seeds and demonstrated how they roasted them in the hot sand. Additional information collected 2015 is included here.

2015

We cook the seeds in the pods in the hot sand – you put them on the sand at the side of the fire or you can put them in the ashes. When they are cooked you split open the pods and eat the seeds.

Contributor: SG

You can burn the bark for ash and the ash is good for sores

Contributor: AB

This tree is good for making boomerangs and shields. But it has to be a good shaped tree – the shape of the tree tells you if it is a boomerang – karli- or a shield tree.

The cockatoos like the seeds from this tree – like to eat them and to feed their babies this seed.

Contributor: DH

Nathan, Augustine and Lindsay lit a fire on "the block" and demonstrated how the seeds were roasted.



Rosie Munro with seed pods and lan Hunter demonstrating how the bark is cut from this tree to burn for ash for body colouring



Rosie Munro with dried seed pods

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2014 KARTAWURRU - *Trianthema turqidifolia*



Kartawurru – Acacia coriacea subsp pendens



Nathan Hunter starting the fire



Darcy and Nathan Hunter preparing coals for roasting seed pods



Seeds and seed pods



Kartawurrutraa



Susie with seed pods for roasting



Coals are ready for cooking



Darcy roasts the seeds ensuring they don't burn



Seed pods on ashes



Enjoying roasted seed

JALKUPURTA (in forest at the springs) and YUMPI (on the coastal plain)

Scientific Name: *Melaleuca argentea*

Family: *Myrtaceae*

Common Name: Silver Cadjeput

Nyangumarta Dictionary (2008): Jalkupurta (also applies to *Melaleuca leucodendron*)

BM

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Traditional Uses: We boil the leaves, cool the water but leave the leaves in it till the next day. Then the next day you can wash all your body in it – or you can just put it on sores, scabies, itches or whatever.

You can wash babies in it for rashes.

It's not for drinking, just for bathing the body and skin.

You can also warm the leaves over the fire, warm them but don't burn them – it brings out the oils, the smell. You can then smell it to clear your nose, rub in on your forehead for headache or you can rub it on your chest for a cough – or any aching part of the body. LW demonstrated this.

Contributors: DH, LH SG, AB

Other: We use the bark for bedding and to make a humpy. When the rainy season comes we take the skin (bark) off and you make a shelter to keep you dry from the rain. You light a fire just outside the humpy.

Contributors: DH. TH

We get water from this tree. You have to find a lump in the skin (bark) like a boil on your skin. You find a strong small twig and poke it – poke a hole in the lump – until the water comes out.

Contributors: LH, AB, DH – LH and AB gave a demonstration on how to extract water from the tree.

DH then explained that the rainwater gets trapped in the bark. It trickles down till it finds a pocket where it gets trapped and is stored there until you find it to use it later.

We talked about these trees at Lil Yalla Spring.

We also use it for decoration for traditional dancing – like pom-poms.

It's good for a bush plate. When you cook your kangaroo you can put your meet on it when it's cooked to stop it getting dirty.

Plant Description: A medium to large tree with thick layers of papery whitish, cream and pale brown bark. Leaves hang downwards with 3-5 veins. Young leaves are covered with fine silvery hairs. Leaves are aromatic when crushed. Flowers are yellow-cream coloured in spikes 5 to 15 cm. Fruits are shortly cylindrical 3-4 mm. This tree can adapt itself to survive floods and strong currents so it is found along the inner edge of river banks as well as around springs.



Jalkupurta forest at Lil Yalla Spring



Heating yumbi leaves over the fire



Martina Badal and Teddy Hunter with



Lynette treating Charmaine for her



Lynette and Lindsay Hunter looking for water in bark of Jalkupurta

M. argentea on coastal sand plain - it doesn't belong here – it's a river tree. TL This tree they called YUMPI

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 JALKUPURTA - *Melaleuca argentea*, YUMPI - *Melaleuca argentea*



NGALINYMARRA

Scientific Name: Sesbania formosa

Family: Fabaceae

Common Name: White Dragon Tree / Swamp Corkwood

Nyangumarta Dictionary (2008): Pijangarra

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Traditional Uses: This tree needs water all the time – you only see it in the spring area or beside a river.

It's got a pretty flower (Pupu)

Contributors: SG

Plant Description: Tree to 5 m with pale grey, deeply furrowed and corky bark. The leaves, to 40 cm long, are made up of up to 20 small pairs of leaflets. It has very showy large white or cream coloured pea flowers 7 cm to 12 cm long which hang in clusters from the ends of branches. It is found along the banks of rivers and creeks, and in association with soaks and springs on the marsh.

Most parts of this tree are used by Aboriginal people elsewhere but no use was given by the Nyangumarta people this visit.



Ngalinymarra tree in outer fringes of Saunders Spring



Canopy of Nyalinymarra



lgalinymarra flower



Lynette Wilridge recording plant name



Fissured bark of Nyalinymarra



KURNTURUNGU

Scientific Name: Avicennia marina

Family: *Acanthaceae*

Common Name: White Mangrove **Locally:** Salt tree **Nyangumarta Dictionary (2008):** Yikara, Walunga

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Traditional Uses: These trees only grow here because of the salt water. This is a dangerous place. If you go in the water the snake will smell you and be angry. The snake will know there are strangers on his country – it will follow you in a cloud.

These stories have been passed down to us for many generations. It may be OK to swim here but we tell everyone it's a dangerous place because that is what has been passed down to us. There are other stories too.

Contributors: DH,TH

The one on the coast, we use the dried wood to cook dugong and turtle. Or you catch a salmon and chuck it in the coals of the mangrove fire. But we would use this wood here for inland animals like kangaroo, emu, bush turkey, lizard and snake.

Contributors: DH, TH, NH, LH

Plant Description: A low densely foliated tree usually growing in coastal locations (inlets, shoreline). As its common name implies it has distinctive white bark. It has opposite leaves, glossy green above, and dull grey below, often salt encrusted. Beneath the tree are many pencillike pneumatophores – respiratory roots which help the tree to "breathe". The small flowers are orangey-cream and clustered together. They have a sweet scent.



Salt Creek lined with kurnturungu (Avicennia marina)



Pneumatophores beneath kurnturungu along Salt Creek



Discussing kurnturungu



RANYJAMAYI

Scientific Name: Ficus aculeata var indecora

Family: Moraceae

Common Name: Sandpaper Fig

Nyangumarta Dictionary (2008): Japuri

BT

Bush Tucker: We call this Ranyjamayi tree. We eat the fruits – when they turn purple.

Contributor: LW

When asked if the leaves were used as "sandpaper", Teddy Hunter said No, we don't use the leaves for anything.

Plant Description: A low tree with dark brown fissured bark. Twigs produce a watery, milky sap. Leaves are roundish with a very rough upper surface and with small prickly type hairs on the surface. The underside of the leaf has a more "furry" feel. The figs are green becoming blackish-brown when mature. They feel slightly prickly.



Leaves and fruit (green) of Ranyjamayi



Ranyjamayi tree on "the block"



Ranyjamayi fruits – almost ripe



Family: *Tamaricaceae*Common Name: Tamarisk

Nyangumarta Dictionary (2008): Not listed'

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Other: This isn't a traditional plant but we have used it for many generations, since it was here. It makes a good night fire for smoking away the mosquitoes, sand flies and flies. You light it up and then let the coals smoke.

Contributor: LW

Plant Description: An evergreen large tree to 10 m high (usually less in the north-west where they are pruned by cyclones). Grey-green with slender branches, leaves are scale like 1-2 mm long and overlap each other along the stem. Dense masses of tiny pink flowers occur on the ends of branches. Considered a major invasive weed species.



Tamarix tree



Leaves and branches

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 TAMARISK - *Tamarix aphylla*



KULINYJIRR

Scientific Name: *Melaleuca alsophila*

Family: *Myrtaceae*

Common Name: Saltwater Paperbark

Nyangumarta Dictionary (2008): Kurlinyjirr, Yurturl

BT

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Traditional Uses: We get honey, wurruja from this tree, but usually when the tree is big (author's note: this comment applies to *Melaleuca argentea*.

The honey flies (bees) - warrayi - make a hole in the bark, so you find the honey in there, but usually in the bigger tree (probably referring to *M. argentea*).

When you are cooking bush goanna – or can be kangaroo or bush turkey, you break the branches up and stuff them in the gut. That stops the sand – the sand from the fire – going into the gut while it's cooking.

It also adds flavour to the meat. **Contributor:** SG, LH, NH, TH

Plant Description: A shrub or small tree with a dense crown, often multi-stemmed. Two specimens collected had different leaf sized (see attached scan) ranging from 2 cm to 10 cm long, flat with 5-7 nerves, with a pointed end. They are arranged spirally around the stem. It has thick grey-white bark. Occurring both in the outer fringes of springs and in isolation on the marsh itself.

We also use the leaves to put on top of a billy of water. You boil the water up then let it cool. You put the leaves over the billy to cover it up and it also keeps the water cool.

Contributors: LH, LW

We make a shovel wanu from Kulinyjirr and dig out the bog hole. Then we make like a basket kapara from the leaves of Kulinyjirr and we put the basket into the hole. The water comes up through the basket and that makes the water nice and clean.

Contributor: DH



Nathan Hunter discussing Kulinyjirr



Kulinyjirr ba



Sheltering under small Kulinyjirr on Mandora Marsh



Kulinyjirr flower



LOW TREE or SHRUB SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

YURTURL

Scientific Name: *Melaleuca lasiandra*

Family: *Myrtaceae*

Common Name: Inland Paperbark
Nyangumarta Dictionary (2008): Yurturl

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Other: Honey from the flowers is for the birds – same as the other one (meaning *M. glomerata*).

Contributors: LW

Plant Description: A shrub to 2-4 m high with whitish-grey papery bark. Its leaves are a narrow oval shape with a pointed end, dull dark green, alternate 10-50 mm long x 1.5 – 10 mm thick. The flowerheads are greeny-yellow or white in loose cylindrical spikes. Capsules are 2-3 mm long and occur along the branches in loose clusters.



Yurturl (M. lasiandra) Photo courtesy of Mark Marathon

*Note: This was also the name given to *Melaleuca glomerata*



Yurturl (M. lasiandra) Photo courtesy of Mark Marathon

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 YURTURL - *Melaleuca lasiandra*



LOW TREE or SHRUB SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

YURTURL

Scientific Name: Melaleuca glomerata

Family: *Myrtaceae*

Common Name: Desert Honey Myrtle Nyangumarta Dictionary (2008): Yurturl

0

Other: Honey in the flower but only the birds use it. Contributor: SG

Plant Description: A shrub to 4 m high with whitishgrey papery bark. Its leaves are dull dark green, alternate and linear, 10-50 mm long and mostly 1-2 mm wide with a finely pointed end. The flowerheads are in round clusters, pale yellow-cream and the fruits are roundish and persist along the branches.







Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 YURTURL - Melaleuca glomerata



Family: Bigoniaceae

Common Name: Lemonwood

Nyangumarta Dictionary (2008): Pungku-pungku

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The information below is additional to that given for Jumpurru in 2014. (Kidson Track survey)

We burn the bark of this tree and mix the ash - Purlkaru (purlku Dictionary 2008) - with tobacco. You mix them together and then you chew it and then leave it in the corner of your mouth.

You can use bush tobacco or you can buy tobacco from the shops.

Contributor: DH, LH

Plant Description: A small tree or shrub with pale grey bark. The leaves are crowded in tight clusters on brachlets. The leaves are made up of 3 to 13 leaflets, opposite along the stem with one terminal (end) leaf. The flowers are white, trumpet like and have a fragrant smell. It has a long thin seed pod, 15-25 cm long, which is slightly curved.



Bark of Jumpurru – burnt for ash



Leaves of Jumpurru



lumpurru flowei



Bark of Jumpurru

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 JUMPURRU - *Dolichandrone heterophylla*



Scientific Name: *Acacia ampliceps*

Family: *Fabaceae*

Common Name: Salt wattle

Nyangumarta Dictionary (2008): Yirtirl, Nyiwily, Munturu

BM

BT

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Traditional Uses: The sap is called minta.

You can boil it up with water and drink the water or you can eat the sap directly off the tree.

We don't eat the seeds or pods off this tree but we know we can find witchetty grubs pirna. The witchetty grubs like this plant.

We know there is a witchetty grub (beneath this plant) because of the droppings around the base of the tree.

You can eat it (the witchetty grub) raw or you can cook it in the coals, it tastes like chicken or raw eggs.

You can eat it (the sap) for a sore throat or if you have a cough.

Other: The cockatoos katatu eat the seeds of this tree. Contributor: SG, LH, LW, AB

The caterpillar nest in the tree is called Kurturnkurturn - it is the caterpillar with the hairs all over it and it makes you itch. Don't touch this caterpillar - it will make you very itchy.

Contributors: LH, LW

Plant Description: Dark green bushy but untidy shrub or small tree with weeping foliage. The phyllodes (modified leaves) are long and weeping (to 20 cm long) with obvious midnerves, often insect damaged. The flower heads are pale cream to light yellow balls, usually appearing in winter and early summer. The pods are long and narrow, hard and brittle. Seeds are black with a deep red fleshy "cap" (aril).



Munturu shrubland on the outer fringes of Saunders Spring



Minta – sap used for sore throats and coughs



Munturu Flower – Photo source worldwidewattle.com B R Maslin



indsay Hunter talking about Kurturnkurturn nest in munturu shrub behind him



Minta on trunk of chruh



Evidence at the base of the tree that a witchetty



Seed with bright red aril

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 MUNTURU - *Acacia ampliceps*



SHRUB SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

PIRRPUKU

Scientific Name: *Grevillea stenobotrya*

Family: *Proteaceae*

Common Name: Sandhill Spider Flower
Nyangumarta Dictionary (2008): Wayarlany

BT

0

Traditional Uses: We suck the nectar out of the flower. We use it in a cup of tea for sugar.

This is a bush ashes tree. We just use the dried leaf, we burn it to ash then we mix it with tobacco from the shops and chew it.

You wait till the ash gets white and mix it with tobacco. It makes the shop tobacco stronger! Gives you a bit of a kick. We still use it.

Contributors: TH, DH, LW

Plant Description: Erect or spreading shrub with smooth bark. Leaves are very narrow, 5-25 cm long with pointed ends. Margins of leaves tend to roll inwards. Cream or yellowish-cream flowers are clustered in spikes erect on the ends of branches. The fruits are hard, flat and roundish and have a small beak. It grows on red pindan sand dunes and red sand areas.



Pirrpuku on sand dune





Pirrpuku flower



Pirrpuku seed pod

SHRUB SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

WUMULMUL

Scientific Name: Scaevola spinescens

Family: Goodeniaceae

Common Name: Maroon Bush or Currant Bush Nyangumarta Dictionary (2008): Not listed

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Note: This language name and use was also given to *Lawrencia glomerata*.

This plant is turkey food – bush turkey. They like the berries. Sometimes the emus eat it too.

Contributors: NH, DH, AB

Plant Description: A small shrub with stiff erect branches. It has clusters of thin oval shaped leaves that grow off the main stems and these can have spines. The small flowers are creamy-white with petals that spread like an open hand – the flower are quite hairy. After the flowers come small purplish berries or "currants".



Wumulmul flower



Wumulmui



Wumulmul berries favoured by bush turkey

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 WUMUMUL - *Scaevola spinescens*



Name not known

Scientific Name: *Lawrencia glomerata*

Family: Malvaceae
Common Name:

Nyangumarta Dictionary (2008): Not listed

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This is bush turkey food – when the fruit is ripe the bush turkey eats it.

Contributors: SG

Plant Description: Perennial herb to 30 cm tall with erect stem and main branches. The lower leaves have slender stems, leaves are narrow-oval shaped and slightly toothed. Upper leaves can be 3-lobed. The flowers are tiny, white-green with some red-brown and are clustered in narrow spikes.



Image courtesy of plantnet.rbgsyd.nsw.au



Lawrencia glomerata. Photography by A.S. George. Image used with the permission of the Western Australian Herbarium, Department of Parks and Wildlife (https://florabase.dpaw.wa.gov.au/help/copyright). Accessed on Wednesday, 6 April 2016.



Flower spike



Samphire on marsh with rarely occurring L. glomerata



MARRPARI

Scientific Name: Stemodia grossa

Family: *Plantaginaceae* Common Name: Vicks Plant

Nyangumarta Dictionary (2008): Kartu pulyarr

BM

Traditional Uses: This is used for colds, you rub it on your chest or you can breathe it in. Crush the leaves and breath it or steam it and it clears your head. For head

Contributors: RM, WC (2016 meeting)

Note: Plants were found near our camp site, on a low limestone chenier on the salt marsh area, with fine limestone silty soil over limestone base. There was a population of about 30 plants with *Triodia longiceps* hummock grass with scattered Acacia ampliceps/ Melaleuca alsophila. Considered an unusual habitat for this species.

Plant Description: A sticky, very aromatic medium green perennial herb to 40 cm. All parts with sticky glandular hairs. The leaves are opposite each other in tight whorls, generally with shallow teeth along the edges. The flowers are purple-blue with white stripes in the throat, with a two lobed upper lip and 3 lobed lower lip.



Marrpari Plant





Marrpari in Triodia near camp site



PERENNIAL HERB SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

JINYJIWIRRILY

Scientific Name: *Solanum esuriale*

Family: Solanacae

Common Name: Bush Tomato

Nyangumarta Dictionary (2008): Jinyjiwirrily

BT

Traditional Uses: This one is a bush tomato, you can eat this one and animals can eat it too. It's a sweet one, smaller than the other one (*Solanum diversiflorum*) but we still eat it.

Contributors: SG, LW

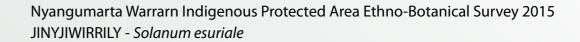
Plant Description: Small grey-green perennial herb, 20-30 cm tall, generally without any prickles (if they do occur there are just a few at the base of the plant) The grey-green leaves are long and narrow, have pointed tips and have soft velvety hairs. The leaf margins can be slightly wavy. The flowers are purple to mauve with 5 petal lobes. Flowers are in groups of 2-6 in the upper stems. The fruit is yellow to yellow-brown and round, 10-15 mm diameter.



Jinyiwirrily "tomatoes"



Jinyjiwirrily flower





VINES AND CREEPERS - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

WALJURU

Scientific Name: *Ipomoea pes-caprae*

Family: Convolvulaceae

Common Name: Beach morning glory

Nyangumarta Dictionary (2008): Not listed

0

Traditional Uses: We use the stems like rope - rope for tying anything really.

It has a fruit on it – looks like bush banana but we don't eat this fruit. It has little hard black seeds, we don't eat the seed either.

Contributors: AB

Plant Description: A robust perennial glossy green vine with trailing stems which spread out further from nodes thus forming dense mats on coastal, especially disturbed, areas. Its large green leathery leaves are slightly indented at the tip forming two kidney shaped shallow lobes. The showy pink /purple trumpet like flowers are present for most the year.

Plant described from "Two Rocks" - Pimpyarranya / Kunyjartijirri-jukujuku

Two slightly different stories were related about the origin of the Two Rocks:

Susie Gilbert: Two kids were eating the vine bush banana and enjoying it so much they forgot the tide was coming in. They got carried out to the sea and they turned to the two rocks you can see there now.

Darcy Hunter: Two little boys were eating the shell from the reef. They wandered further out on the reef without realising how far they walked. The tide came in but they were too far so they turned into the two rocks.



Waljuru – showing leaves and ropelike stems



Valjuru flower



Augustine with Warnjurru rope

VINES AND CREEPERS - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

YUKURLI*

Scientific Name: Cassytha filiformis

Family: Lauraceae

Common Name: Love Vine – known to Nyangumarta as Bush Berry

Nyangumarta Dictionary (2008): Yukurli

BT

Traditional Uses: We eat the berries off this vine. (**Note:** the vine itself is poisonous – causes cramps and fatal if in quantity).

Contributors: AB

*this is the same name given for *Cassytha capillaris* in 2014. The berries from that vine are also eaten.

Plant Description: A slender parasitic vine, stem diameter less than 2 cm. Leaves, if present, small and scale like, young shoots with reddish hairs. Flowers are tiny, 2.5 mm diam, cream. Fruits are 4-10 mm diameter with tiny lobes (from flower) persisting at the top of the berry.



Yukurli vine



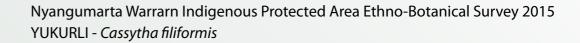
Yukurli berry

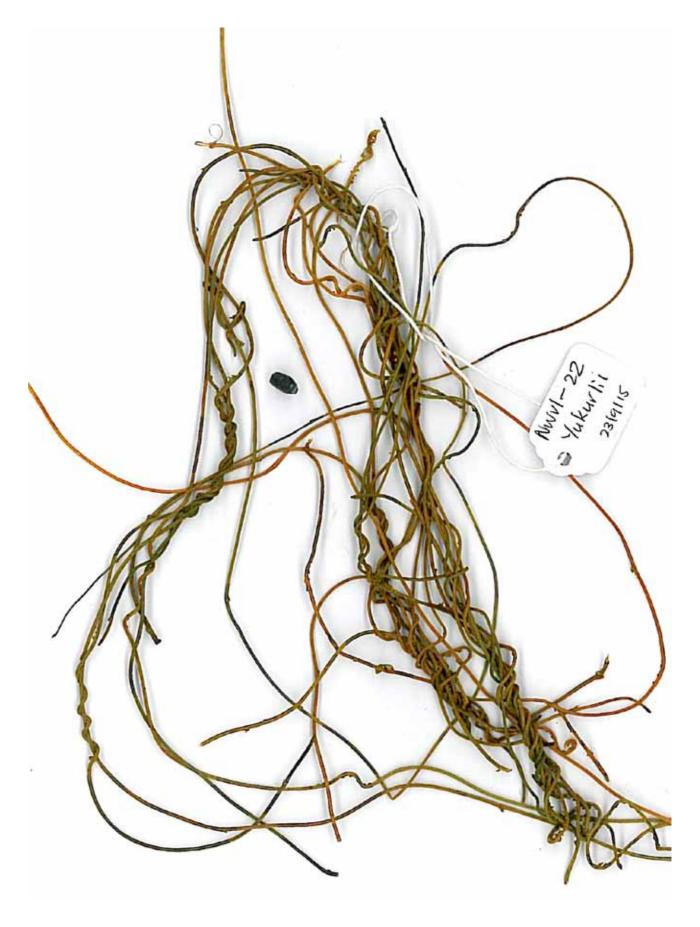


/ukurli herries



Berries ripe for eating





VINES AND CREEPERS - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

JINYJARLKURINY

Scientific Name: Abrus precatorius

Family: Fabaceae

Common Name: Crabs Eyes but known to Nyangumarta as "Snake Vine"

Nyangumarta Dictionary (2008): Not listed

0

Traditional Uses: Snake vine seed is poisonous – so you don't eat the seed.

Contributors: DH

We string it together to make a necklace.

Contributor: SG

Plant Description: A twining plant with compound leaves – each leaf has up to 20 pairs of small narrow oblong leaflets. Small rose to purple flowers are in clusters at the end of stems, giving way to short pea-like seed pods. These pods split open revealing shiny seeds which are bright red-scarlet but black at the base. The seeds are extremely poisonous.

Note: Root, leaf and seed all used in India and Africa for a wide variety of medicinal applications – despite the seeds being extremely poisonous.

Note: local name "snakevine" also used in 2014 for *Tinospora smilacina*.



linviarlkuriny nlan



Jinyjarlkuriny seed and leaf



Jinyjarlkuriny seeds in old pods

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 JINYJARLKURINY - *Abrus precatorius*



GRASS SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

RUKU RUKU

Scientific Name: Spinifex longifolius

Family: Poaceae

Common Name: Beach Spinifex

Nyangumarta Dictionary (2008): Kurlkurarra, Ruku ruku

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Traditional Uses: We can use this grass to make a plate. You wind the stems around to make a plate. We use the beach grass or we use the mangrove leaves for when we catch fish or rays from here (Waru Creek) – like a plate to put them on. The mangrove leaf also has salt on it so it salts the fish.

Contributors: AB, LH, LW

Plant Description: A tall stout perennial tussock grass with woody stems to 90 cm tall. It has leaves to 50 cm tall which have a silvery surface. Plants are either male or female: the females produce many attractive large round flower-heads which turn from green to straw coloured when mature.



Discussing plants at Waru Creek



Waru Creek



Ruku ruku female flower



Ruku ruku male flowe

Nyangumarta Warrarn Indigenous Protected Area Ethno-Botanical Survey 2015 RUKU RUKU - *Spinifex longifolius* (female & male)



PARTALYU

Scientific Name: Fimbristylis ferruginea

Family: Cyperaceae
Common Name:

Nyangumarta Dictionary (2008): Not listed

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Traditional Uses: We use stems for cleaning the water from the bog hole. You gather lots of stems and put them around the edge of the bog hole (where the spring breaks through). You put a big mob of them (the stems) over the bog hole and push down and the water comes up through the stems nice and clean.

You also use Kulinyjirr this way.

Contributors: DH, TH, LH, LW

Plant Description: A tufted perennial grass-like sedge with smooth, strong stems to 50 - 80 cm tall. Stems usually erect but bending over with age. The inflorescence is erect, medium brown, 3 to 5 cm long. Found under Kulinyjirr (Melaleuca alsophila) and Ngalinymarra (Sesbania formosa) forest around the spring with Acrostichum speciosum (fern).



Partalyu growing in Kulingjirr/Ngalinymarra forest



Discussing the use of Partalyu at the bog hole



Bog hole



Seed head



SEDGE SPECIES - WALYARTA (MANDORA MARSH) AND COASTAL SPECIES

JULAMARTA

Scientific Name: Cyperus bulbosus

Family: Cyperaceae

Common Name: Bush Onion

Nyangumarta Dictionary (2008): Jurlamarta, Ngarlku

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Traditional Uses: These bush onions are usually found along the back of the sand dunes, the plants have little "onions" at the end of their roots. You have to dig beneath the soil for them. You dig them when the plant has dried. You can eat them raw, or you can cook them up on the ashes.

Contributor: AB

Plants were dead but Augustine showed us how you dig them up.

Other: You must get the dry one – must wait till they are dry. If you pick them when they are green the lightening will strike during the rainy time.

Contributor: SG

Plant Description: A small deep green glossy sedge with strong stems and leaves as long as the stems. A cluster of chestnut-brown or dark red-brown flower heads occurs on the ends of stems. Has a very small "onion" type tubers at the base of the stem or on stolons beneath the soil, which is dark-brown to blackish.



Julamarta (photo of plant on Airlie Island)



Augustine digging out bush onion, julamarta



Waru Creek: bush onion was found along the creek dunes

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