

TREES AND SHRUBS

In the Wiluna Region

By Don Miller

For many newcomers to this area the vastness of the country and the stark beauty of the rock formations grab attention. But what grows here, apart from the occasional magnificent display of wild flowers, can seem dull and boring. It is all so different. “What are all those trees and shrubs anyway?” It’s hard to appreciate.

The country is classified as desert because the long-term average rainfall for Wiluna is a mere 200mm. But it doesn’t look like a desert. There are way too many trees and shrubs. As well, it actually has more diversity of plants, shrubs and trees, than in many other places in Australia - places that have far more rain.

This leaflet gives a bit of an idea as to why this desert is so flourishing. As well, it will help you to **recognise** some of the more obvious and interesting trees and shrubs. When you come to know this country, the vegetation has a fascination all of its own.

MAJOR LAND-TYPES - and how different things grow on them.

There are 3 major land-types, each one supporting a different range of vegetation.

Sand-plains



Things that grow on the sand-plains cope with this otherwise arid habitat by using the benefits of fire to enable them to sustain fairly rapid growth. The fires are caused either by lightning strikes over summer or by people – traditionally by indigenous groups and these days by pastoralists. *Spinifex* makes for big fires because of its resin. As well, giant willy-willies carry the fire over things like roads.

The next good rain and warm weather turns the red soil green. Quick growing Acacias begin sprouting from seed. Ash from the fire has changed the ph of the soil. This often allows a new range of short-term perennial plants to also appear. Many of these add nutrients, either by fixing nitrogen in the soil or by providing humus. These plants, in a period of 5 years or so, leach out the effects of the ash until a stage is reached when the *Spinifex* begins to grow again. This then quickly chokes out these other plants. It will be ready to burn again when the *Spinifex* plants have expanded to the point that they are physically touching each other, usually around 15 years after the last fire.

However, there are some long-term trees that live in this otherwise high turnover environment because they also appreciate the chance to grow vigorously. These trees have found ways to survive the fires. There are various types of Eucalypts. Some of these survive by sacrificing their above ground growth to the fire and sprouting again afterwards from the roots. Others grow tall enough for their canopy to only lose its leaves to the fire with its trunk being massive enough not to be damaged by the fast moving heat. *Corkwood*, a *Hakea*, survives the fire because the trunk is insulated by its thick bark. The *Kurrajong* is deciduous, gaining a new set of leaves after a fire. So, if you stop and look, you will see that the sand plains often have a good range of plants and trees.

Mulga country

The flora in this country survives the arid environment in completely the opposite way. It grows very, very slowly. The growth rings on a *Mulga* tree don't relate to years, but to good seasons. Many quite small looking trees could be very old, changing very little in appearance over decades. The dominant vegetation here are the Acacias - *Mulga*, *Gidgee*, *Bowgata*, and *Curara*, the Eremophilas, also with some Eucalypts like *kingsmillii*. Again, here is a good range of vegetation. *Mulga* trees will not carry a fire.



A raging *Spinifex* fire will burn right up to *Mulga* country in 40°C + weather and stop dead, only burning into it where there is *Spinifex* under the *Mulga* trees.

Spinifex and *Mulga* are always trying to take over each other's territory. The determining factor is the regularity of fire. If there hasn't been a fire in a long time *Mulga* will begin to grow in *Spinifex* country. If it has time, its canopy will eventually make too much shade causing the *Spinifex* to disappear. On the other hand, if a number of fires reoccur quickly, this will allow the *Spinifex* to infiltrate from the edge into *Mulga* country. This transition from one country type to the other is evidenced by obviously burnt charcoal tree roots showing at ground level in what otherwise appears to be long time *Mulga* country.

Rocky country



The poor soil conditions here don't allow *Mulga* to dominate. The result is that, while the vegetation is often fairly sparse, it is the country having the greatest diversity of shrubs and trees.

RECOGNISING THE SHRUBS AND TREES

You will see 4 main species of shrubs / trees in this area.

Acacias



“Wattle”, as pictured here, most easily identify Acacias. The flowers vary from ball to cylinder shape through the different varieties in the specie.

The leaves vary greatly in shape from small needles through to quite long wide leaves.

In size mature Acacias are large shrubs through to large trees.

Over 80% of the trees and larger shrubs in the Wiluna region are Acacias.



Acacia Aneura / mulga
Species / common name / indigenous name



is

If you are looking at a tree there is a high likelihood that it is a *Mulga*, as this is by far the most dominant tree in this region. But botanically it seems poorly defined. Both the trees pictured are *Mulgas*. They vary in height anywhere from 2 to 8m. On some trees the leaves are a long, green almost needle shape, on others a grey broad elliptical shape, with other varieties in between. It flowers opportunistically after substantial rain. The flowers are cylindrical and about 2cm long, 4mm across and are dark golden in colour. Historically the wood was used for fencing, examples can still be seen from as far back as the 1930's. For some kilometres around Wiluna, along with every other type of wood, it was clear felled to fuel the steam furnaces at the mines. However it has self-regenerated well, with the long-term effect not being particularly obvious.



Acacia Pruinocarpa / gidgee / jundera



Gidgees appear in these two quite different forms. The one on the left is rounded and conforms to the height of the surrounding trees. Although that tree is probably quite mature, the one on the right will be much older, has taken on this distinctive shape and rises well above the tree line. As such it is easy to recognise. The leaves are 17cm long and 2cm wide, gently curved with a blunt tip and grey – green, except when they form a new canopy of green leaves in mid spring. Their flower is globular and bright yellow and appears in Nov / Dec.



Acacia Linophylla / bowgada



These are 2 to 3m high and quite spreading. The leaves, which are held nearly vertically, are needle shaped, up to 13cm long, with a blunt end, being grey – green in colour. They usually flower in early spring. The flowers are cylindrical and 2cm long. The seedpods are distinctive being cylindrical up to 10cm long and 1cm wide. They have lines etched along the surface, which probably led to its botanical name.



Acacia Quadrimarginea

These are up to 4m high, with shiny dark green leaves. They grow in rocky country, especially in breakaways. They flower opportunistically. The seedpods are about 10cm long with 4 very distinctive raised edges along the pod, which led to its name.

Acacia Tetragonophylla / curara / gilka

These are up to 3m high. The leaves are needle shaped up to 3cm long with a very sharp tip. The local indigenous name comes from the sharpness of the point and means “splinter”. The flowers are globular and pale yellow. Many seedpods can form from a single flower. As they dry they twist - a large clump of seedpods then resemble a crown. When the pod matures it opens and sheds the seeds, which are black with a yellow halo.



Acacia Rhodophleia / miniritchie

These are around 2m high. The leaves are 5cm long and 1mm wide. It stands out because of its reddish bark, which is continually curling off in small strips. This bark typifies a *miniritchie*. It grows on a gravel hill-side. There is also a larger *miniritchie* - *grasbyi*

Sennas



This species grows to around 2m high with some varieties slightly higher. When in flower they can easily be recognised by their buttercup yellow flowers, which have 5 petals. The seedpods are long



and flattened and when mature rattle in the wind. A couple of varieties can grow in “gardens” on rocky hillsides. They also grow in *Mulga / Eucalypt* country. Another variety grows well in areas that are subject to flooding or in limestone country. Another grows singly in open *mulga* stands.

Eremophilas



Eremophilas are most easily distinguished by their flower, which is tube-like and ranges in colour from white through blue and green to pink and brown to red. They have a large range in size, some are prostrate – almost ground cover, others are as tall as *Mulga* trees, but the majority are 0.5 – 1.5 m high. Three varieties, *spectabilis*, *flavellata*, and *forrestii*, make up the largest

proportion of under story plants in *Mulga* country, making them the most common shrub type in this region.

Eremophila Spectabilis / Showy Poverty Bush

These grow 1 – 1.5 m high and have pale to dark blue/mauve flowers. The leaves are up to 8cm long and 7mm wide, green / silver in a good season, but are grey and dead looking in a dry season. They grow in clay soils under a dense *Mulga* canopy. In warmer weather it will flower in response to good rainfall.





Eremophila Flavellata

These grow 0.5 – 0.8 m high and have pale to dark blue / mauve flowers. The leaves are small diamond shaped, crinkled around the edges, less than 10mm by 10mm, and are mid green in a good season. They grow in clay soils under a more open *Mulga* canopy, and also flower in response to good rain in warmer weather.

Eremophila Forrestii Wilcox Bush

These grow up to 2 m high and have pale pink to light brown flowers. The leaves are up to 15mm long and 10mm wide, are greyish green, covered with fine hairs, which give them a dull appearance. They tend to grow in more open sandy country sandy under *Mulgas* and *Bowgadas*.



Eremophila Fraseri / Turpentine bush

These can be a 3 m high tree, but are more often tall shrubs to 1.8 m. The flowers are brownish red on the outside and pale lilac inside. The leaves are up to 8cm long and 2cm wide, shiny dark green, with a resin that smells like turpentine if disturbed, hence the common name for this shrub. They grow on stony plains and hills, floodplains and watercourses.

Eucalypts

Eucalyptus Camaldulensis / Red River Gum

These are one of the largest trees growing in this region, being up to 15 m high. They are easy to identify because of their white trunks, and their habit - the larger creeks and their flood plains. Although they only naturally occur in areas that often flood, they grow well when they are given artificial watering until they are established as larger trees. Hence it is the dominant tree in the townsite and at many station homesteads.



Eucalyptus Kingsmillii



These can best be recognised by the ‘nut’, which is a half sphere 2.5 – 3cm across, with very distinct ribs up the outside. The trees grow to 6 m high, on sand-plain country and its verges. Here they gain good nourishment from the additional nutrients caused by *Spinifex* fires. In a fire the tree sacrifices everything above ground and then re-grows vigorously from the undamaged roots. The tree pictured here had grown to over 4m in the 6 years after it was last burnt

Others of Interest



Triodia Basedoii / (hard) Spinifex

This grows to about 0.5 m high. The leaves are about 10cm long and are tightly curled along their length so that they appear to be cylindrical, and have a very sharp tip. When they are in seed a stalk grows a further 0.5 m above the leaves. In seed a plain of *Spinifex* takes on the appearance of a farmer's paddock of grain. It mainly grows on sandy plains, where it is dominant, but also can be mixed with *Mulgas* and Eucalypts. The *Spinifex* plant grows outwards and the centre will die away, often leading to a doughnut shape. The plant contains a lot of resin – put a match to it and it will readily burn while still very green. There are many other forms of *Triodia*, which have leaves of diminishing stiffness, quite a number of which grow in this area. One of these varieties of *Spinifex* has a resin in its roots which indigenous people used as a very strong glue and calking compound.

Solanum Lasiophyllum / Flannel bush

This is a perennial, which generally grows to just over 0.5 m high. The leaves are 5cm long and 4cm wide. The branches and leaves are densely covered with hair, giving it a light grey – green colour. The flowers are bright purple, 2cm across, with a raised yellow stamen.



The fruit is about 1cm in diameter, having a woolly covering. It grows in most types of country, but can often be most easily seen along the shoulder of a sealed road. Being a *Solanum*, it is part of the tomato family. There are many *Solanums* growing in this region, most of them occurring in sand-plain country. By cutting their fruit open they can be easily recognised as being part of the tomato family. Some of them were a part of the 'bush tucker' diet.



Ptilotus Obovatus / Cotton bush

This is a perennial, which generally grows to just over 0.5 m high. The leaves are 2cm long and 1cm wide. Being densely covered in hair, they have a light grey – green colour. It is a compact bush. When it flowers in September – October it becomes a mass of white to light pink flower heads. Growing in all but sand-plain country, it is the most prolific small shrub of this area.

Ptilotus exaltatus / purple mulla mulla

An annual, having many flower stalks growing from a single plant to 1 m high. The flower heads are conical and purple, maturing to mauve. They grow in most non-sandy locations, and especially where soil has been disturbed. There are a number of other members of the Ptilotus family growing in this region. Some of them have flowers similar to exaltatus.



Pittosporum phylliraeoides / Native Willow

This is a tree that can grow up to 6 m high with a mottled grey trunk. The leaves are 5 to 10cm long and 1cm wide, flat, and a shiny green colour hanging on thin drooping branches, hence the *Willow* common name. It also often grows near where water gathers. Its fruit is yellow orange and has red seeds.

Codonocarpus cotinifolius / Native Poplar

This tree can grow to 8 m high, has a thin trunk and is sparse in appearance, hence looking very much like a European poplar. The leaves are 5cm long, grey/green to green, and fairly rounded. It is short lived. It grows both in limestone country and *Spinifex* sand-plains.



Santalum acuminatum / Sweet Quandong

A tree, which can grow to 5 m high, but is often 2/3rds that size. The leaves are up to 6cm long, 3cm wide and grey / green often hanging from pendulous branches. This is most easily recognised by its fruit which when ripe are deep red, and up to 3cm in diameter. The edible part is like a thick skin around a large nut. They are a favourite 'bush tucker'. The tree is a parasite.

Santalum spicatum / Sandalwood

This tree can grow up to 4 m high but is often half that size. The leaves vary greatly in size but look like that of a broad-leaved mulga. It is most easily recognised by its nut, which is about 2cm in diameter and brown when mature. The nut has a skin, which is easy to peel off revealing a very hard casing. The kernel is quite tasty. The smoke from the dry wood is aromatic hence the trees are harvested to make incense sticks. It grows both in breakaway country, where it is a sparse looking tree, and *Mulga* country, where it looks much more prosperous. It is a parasite.



Hakea suberea / Corkwood

This tree generally grows to 5 m high and is easy to identify by its bark, which is up to 3cm thick, deeply fissured and when stripped of the tree resembles cork. The fruit are hard woody capsules, 3.5cm long and 2.5cm wide, which split back in two to drop out a single seed. It easiest to see on a sand-plain, where its bark protects it in time of fire, but it grows in many other habitats. It is one of a number of Hakeas in this area, many of which have similar woody capsules.

Callitris glaucophylla / Native Cyprus

This tree can grow to 5m high. It seems to grow in 2 very different habitats. When, as pictured here, it grows along the face of breakaways, it usually looks gnarled and very old, sometimes growing almost as a bonsai. It also grows on sand ridges, where it looks much more healthy, often in a more typical pine shape. In both instances it is growing in the same underlying rock, the sand hill is just covering breakaway type country. Its seeds are born in spherical hard woody capsules, up to 3.5cm in diameter. These have 3 large valves interspersed by 3 smaller ones. Its leaves and nut are recognisable as a *Cyprus*.



Grevillea striata / Beefwood

This is one of the largest trees in this area, growing up to 15 m high and can have a base over 0.6 meters in diameter. It usually has a single trunk and an open crown. The leaves are 10cm long and 5mm wide. Its wood is prized both by Indigenous artisans, who use its 'soft' wood for making large items, such as bowels and shields, and Western craftsmen, who like the rich beef colour.